

# **Data Collection Survey on Economy and Major Sectors for Sustainable Economic Growth in Pacific Countries**

## **Final Report**

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# 1. Fiji

## 1.1. Overview of Fiji (Geography, Population, Domestic Politics, Diplomacy, etc.)

### 1.1.1. Geography and Population

Fiji is an oceanic island nation consisting of 332 islands (some of which 222 are uninhabited), including small islands a few meters in diameter, with 18,270 km<sup>2</sup>, about the same as Shikoku area in Japan. The capital is Suva, located in the southeast of the country's main island, Viti Levu. The official language in Fiji is English, and Fijian language and Hindi are also spoken. The Fijian dollar is the most widely used currency in the country.

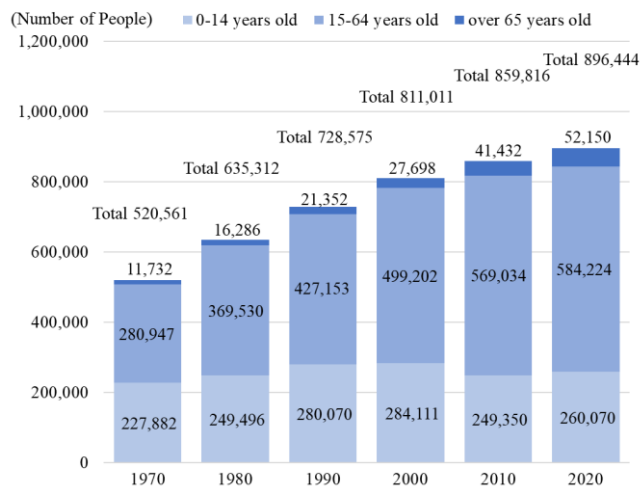
The main island, Viti Levu, is located about 3,100km northeast of Australia and 2,100km north of New Zealand, while the nearest Pacific island country is Tonga, 770km to the east. Because of its geographical location in the center of the Pacific island countries, it plays a role as a regional hub, with the Pacific Islands Forum (PIF) Secretariat and the University of the South Pacific (USP) being established there. The second largest is Vanua Levu with an area of 5,538km<sup>2</sup>, followed by Taveuni Island. Fiji is located on the south 12 latitude to 21 degree, east 177 longitude to west longitude 175, with the 180-degree meridian running through the eastern end of Vanua Levu Island and Taveuni Island.

In terms of population, the country has about 890,000 in 2020, the second largest population in the Pacific island countries. In 2020, the working-age population aged 15-64 will account for 65% of the population, which means that the potential working population will account for a high percentage of the population. 57 % of the population lives in urban areas such as Suva (World Bank, 2020).



Source: Ministry of Foreign Affairs of Japan

Figure 1 Location of Fiji



Source: World Bank Open Data

Figure 2 Demographics of Fiji

### 1.1.2. Domestic Politics, Diplomacy, etc.

The political and diplomatic situation in Fiji is shown in the table below. The Head of State is President Ratu Wiliame Katonivere, who assumed office in November 2021. The Fiji First Party's Josaia Voreqe Bainimarama is the Prime Minister and Minister of Foreign Affairs. As the chair country and host country of major conferences, it has hosted the ADB General Assembly (2019)<sup>1</sup>, the 34th FAO Asia-Pacific Regional Conference (2006)<sup>2</sup>, the 55th Conference of Directors General of Civil Aviation (2017)<sup>3</sup>, and COP23 (2017).

Table 1 Politics and Diplomacy of Fiji

Form of government	Republic
Ruler	President Ratu Wiliame Katonivere (inaugurated in November 2021)
Legislation	Unicameral system (number of 51 members, term of office: 4 years)
Administration	Josaia Voreqe BAINIMARAMA Prime Minister and Minister for iTaukei Affairs, Sugar Industry, Foreign Affairs and Forestry The following ministries are under the Office of the President and the Prime Minister's Office ( <sup>4</sup> iTaukei Ministry of, Ministry of Sugar, Ministry of Foreign Affairs, Ministry of Forestry, Office of the Attorney-General, Ministry of Economy Ministry of Economy, Ministry of Housing and Community Development, Ministry of Civil Service, Ministry of Communications, Ministry of Defence, National Security and Policing, Ministry of Rural and Maritime Development and Disaster Management, Ministry of Commerce, Trade, Tourism and Ministry of Infrastructure, Meteorological Services, Ministry of Lands and Mineral Resources, Ministry of Health and Medical Services, Ministry of Women, Children and Poverty Ministry of Health and Medical Services; Ministry of Women, Children and Poverty Alleviation; Ministry of Waterways and Environment; Ministry of Agriculture; Ministry of Education, Heritage and Arts; Ministry of Local Government and Arts, Ministry of Local Government, Ministry of Employment, Productivity and Industrial Relations, Ministry of Youth and Sports, Ministry of Fisheries)
Local system	It is divided into 4 administrative regions, which are further divided into 14 prefectures. The provincial councils formulate bylaws such as tax rates with the approval of the iTaukei Affairs Board. There is also a traditional chiefdom system. In addition to the above administrative divisions, Rotuma Island is a self-governing territory with its own parliament and legislative authority over most matters.
Justice system	The judiciary consists of the Supreme Court, the Court of Appeals, the High Court, and the Magistrates Court.

<sup>1</sup> <https://www.fiji.gov.fj/Media-Centre/News/FIJI-TO-HOST-55TH-CONFERENCE-OF-DIRECTORS-GENERAL-?rss=news>

<sup>2</sup> <https://www.adb.org/publications/highlights-2019-annual-meeting>

<sup>3</sup> <https://www.fao.org/asiapacific/news/detail-events/en/c/1071914/>

<sup>4</sup> iTaukei is the name of the main indigenous people of the Fiji Islands.

National defense	In addition to the 3,500 regular military personnel (including the army, navy, and PKOs), there are also some 5,600 regional military personnel registered to prepare for emergencies.
Member international and regional organizations, trade agreements	International organizations: ADB, CTBTO, FAO, ICAO, IMF, IOM, ITSO, ITU, OIE, OPCW, UN, UNESCO, WB, WHO, WMO, WTO, etc. Regional Organizations: ACP, APCC, APPU, APT, The British Commonwealth of Nations, ESCAP, FFA, Melanesia Spearhead Group, PICTA, PIDF, PIDP, PIF, SOPAC, SPC, SPREP, etc.

Sources: Ministry of Foreign Affairs of Japan website, PIC website, Fiji Parliament website, websites of various agencies and agreements.

Fiji is a society consisting mainly of indigenous Fijians called iTaukei and Indians who migrated to Fiji during the British colonial period. Fiji has experienced several coups d'état since its independence.

The conflict between the Fijian Qarase government, which was re-elected in the May 2006 general election, and the Commander-in-Chief of the National Armed Forces, Bainimarama, became serious, and in January 2007, the Commander-in-Chief of the National Armed Forces became the interim Prime Minister and formed an interim cabinet. At the PIF Summit held in Tonga in October 2007, the interim government pledged to hold general elections by March 2009, but in June 2008, the interim prime minister declared that the pledge was unworkable, and on May 2, 2009, Fiji's eligibility to participate in PIF-related meetings was suspended. In September 2009, Fiji was suspended by the Commonwealth for failing to respond to the Commonwealth Ministerial Action Group's (CMAG) call for a democratic process.

The Fiji First Party, led by Prime Minister Bainimarama, won a single majority of seats in the House of Representatives in September 2014, and Prime Minister Bainimarama, the leader of the Fiji First Party, took office. Since the general election, Fiji has rejoined the PIF (participation in the General Assembly at the Heads of State level began in 2019) and the Commonwealth.

## 1.2. Fiji Economic Analysis

### 1.2.1. Economic Overview and Structure, Employment and Wages, Prices

#### 1.2.1.1. Economic Growth

Fiji has set a government target of investing in infrastructure equivalent to 25% of GDP since 2008, and the increase in infrastructure-related public spending, mainly in transportation, water and sanitation, and the attraction of private investment resulted in a positive GDP growth rate of 3.8% for the 2018. Despite the damage caused by Tropical Cyclone Winston in February 2016, which amounted to about 20% of GDP, mainly in the agricultural sector such as sugarcane production, the GDP growth rate remained positive at 2.4% in 2016. After the COVID-19 pandemic, economic growth will be negative, at -0.4% in 2019 and -15.7% in 2020 (see details in 1.6). As for the consumer price inflation rate, the report by the Ministry of Economy predicts -2.6% in 2020 and -1.1% in 2021<sup>5</sup>. The IMF has identified tourism as a sector that will drive economic growth in 2021 and beyond<sup>6</sup>. The table below shows the key economic indicators for Fiji.

Table 2 Macroeconomic Indicators for Fiji

	2015	2016	2017	2018	2019
Real GDP growth rate (%)*1	4.5	2.4	5.4	3.8	-0.4
Total nominal GDP (million USD)*1	4,682	4,930	5,353	5,581	5,497
Nominal GDP per capita (USD)*1	5,385	5,620	6,049	6,272	6,144
Consumer price inflation (annual average, %)*1	1.3	3.8	3.3	4.0	1.7
Unemployment rate (%)*1	5.5	5.5	4.5	4.5	4.5
Current account balance (USD million)*1	164	-179	-360	-470	-697
Trade balance (million USD)*2	-176	-191	-266	-425	-566
Export value (million USD)*2	2,275	2,300	2,462	2,674	2,645
Exports to Japan (million yen)*3	5,635	4,098	4,788	44,96	4,614
Import value (million USD)*2	2,451	2,491	2,727	3,099	3,212
Import value to Japan (million yen)*3	7,494	12,398	8,143	10,603	8,349
Balance of external debt (million USD)*.4	888	939	1,007	979	1,020

Sources: \*1 World Economic Outlook Database (IMF), \*2 World Bank Open Data, \*3 Statistics Handbook 2020 (PIC), \*4 Key Indicators for Asia and the Pacific 2021 (ADB)

<sup>5</sup> Ministry of Economy, Medium Term Debt Management Strategy FY 2021-2023, p.12

<sup>6</sup> IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Republic of Fiji



### 1.2.1.2. Economic Structure

Looking at the economic structure of Fiji by industry, in 2019, the proportion of manufacturing, wholesale and retail trade, auto repair, and agriculture, forestry, and fisheries was high, in that order. The manufacturing sector is dominated by the production of sugar and clothing, agriculture, forestry and fisheries by fish and wood chips, and wholesale and retail trade by services, mostly related to tourism.

As for the economy as a whole, the primary and secondary industries account for a total of about 20%, with the tertiary industry accounting for a large share. There has been no significant change in the percentage of GDP accounted for by each industry from 2015 to 2019.

Table 3 Industry's Share of GDP<sup>7</sup> (%)

	2015	2016	2017	2018	FY2019
Primary industry	8.0	6.9	7.3	7.3	7.6
Secondary industry					
Mining and quarrying	0.8	0.8	0.6	0.5	0.5
Manufacturing industry	10.8	11.2	10.7	10.6	10.4
Construction industry	2.3	2.5	2.6	2.7	2.9
Tertiary industry					
Electricity and gas supply services	1.0	1.1	1.4	1.9	1.9
Water, sewerage and water management	0.5	0.5	0.6	0.5	0.6
Wholesale and retail trade, auto repair	8.8	9.3	9.0	8.4	8.6
Transportation and warehousing	5.7	5.0	5.2	5.0	4.5
Accommodation and food services	5.0	4.4	4.4	4.5	4.9
Information and communication	4.5	4.7	4.3	4.2	4.1
Finance and insurance	7.6	7.2	7.2	7.0	7.1
Real estate business	3.1	2.7	2.8	2.8	2.8
Professional and Technical Services	1.8	1.8	1.8	1.8	1.8
Management support services	1.6	1.4	1.4	1.4	1.4
Public administration and defense	7.7	7.7	7.5	7.6	7.4
Education	5.9	6.0	6.0	5.9	6.0
Health and social welfare	1.9	1.9	1.8	1.9	2.1
Arts & entertainment	0.3	0.3	0.3	0.3	0.3
Other service industry	1.0	0.9	0.9	0.9	0.9
Domestic activities (with job)	No data	No data	No data	No data	No data
Taxes on production and import <sup>8</sup>	21.9	23.5	24.2	25.0	24.3

Source: ADB, Key Indicators for Asia and the Pacific 2021

<sup>7</sup> FY2014 real price basis (based in FJD)

<sup>8</sup> Amount after deduction of subsidy

### 1.2.1.3. Employment, Wages and Prices

#### (1) Employment

As for the employment situation in Fiji, the unemployment rate has been hovering between 4.5% and 5.5% from 2015 to 2019. Since the spread of COVID-19 in 2020, there have been some effects such as bankruptcies of domestic companies and increased unemployment in the informal sector where most of the working population is engaged<sup>9</sup>.

According to information provided by the Ministry of Employment, Productivity and Industrial Relations (MoEPIR) on the dynamics of the labor force over the past 10 years or so, the country's labor force has shifted mainly to the construction, automobile, and manufacturing industries due to the growth of vocational and technical institutions and increased demand. The movement of labor out of Fiji is gaining momentum due to factors such as recruitment by the British Army, sports-related activities, and temporary and seasonal work in neighboring Australia and New Zealand. There has also been an increase in the number of Fijian nurses finding jobs in the United Arab Emirates. Asian workers are also increasingly migrating to Fiji and are being employed in construction, manufacturing (such as Ram Sami Fiji, Fiji's largest egg producer), and seafarers.

As for the development plan for employment and labor force, according to the information provided by MoEPIR, the National Development Plan has set targets for (1) reducing unemployment, (2) gender equality in the labor force, (3) good governance, (4) social development, (5) structural reform, and (6) improving labor market standards. In addition, the Ministry has also formulated a Strategic Plan 2018-2022 in line with the National Development Plan. The issues recognized by the ministry are: (1) increasing labor participation and self-employment of people with special needs such as the elderly, (2) improving education and training programs to meet the needs of the labor market, (3) increasing full-time employment of women in line with the National Gender Policy, and (4) developing information systems on the labor market. With regard to collaboration with international organizations, MoEPIR held a workshop with the International Labor Organization (ILO) on the review of the national employment policy (November 2021), conducted a review of the effectiveness of the National Occupational Safety and Health Policy (November 2021), and held a session on decent work.

#### (2) Wages

The minimum wage is FJD 2.68 as of December 2021, and GDP per capita is over USD 6,000 in 2019. The GNI per capita (Atlas method) is USD 4,720 (World Bank, 2020), and the country is classified as a middle to high-income country by the World Bank according to income level.

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<sup>9</sup> According to the information provided by MoEPIR, the unemployment rate has been hovering around 5.5% for the past several years, but the latest data is not available because the statistical office that compiles the data is not functioning due to COVID-19.

### (3) Cost-of-living

After the COVID-19 pandemic, the RBF adopted a monetary policy of maintaining sufficient foreign exchange reserves to control inflation, and actually maintained foreign exchange reserves of USD 2.2 billion as of October 2020, enough to cover 8.2 months of imports, which was successful in reducing inflation to -2.6% in 2020. On the other hand, from January to August 2021, prices rose by 6.5%, especially for fresh food and other foodstuffs and fuel<sup>10</sup>.

### (4) Immigration

As for the immigration policy, according to the information provided by MoEPIR, the Migration Governance Profile for Fiji<sup>11</sup> is being developed in collaboration with the International Organization for Migration (IOM) for both outbound and inbound migrants. According to the hearing as of December 2021, a draft version of the report has been prepared and is under final review by the Ministry. In the report, Migration Governance Indicators are being compiled as economic indicators related to migration, and a long list of 90 indicators has been presented. As for the current migration-related plans, the Strategic Plan 2018-2022 and the Operational Plan 2019-2020 are in place, but have not progressed due to COVID-19. Issues related to immigration policy include complaints of non-payment of wages and problems with employment contracts for migrant workers in Fiji, which are being addressed under the Employment Relations Act 2007. Another major challenge is the absence of a National Diaspora Policy to provide for more comprehensive diaspora involvement in contributing to Fiji's development. Consular services for Fijians working abroad also include assistance during crises such as civil unrest and disasters, but there is no specific mechanism to protect their rights.

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<sup>10</sup> Fiji Sun, October 23-24, 2021, What is Behind the Surge in Food, Fuel Prices?

<sup>11</sup> The objective is to assess the comprehensiveness of each country's migration governance structure and to identify future priorities and support well-managed migration policies. It will also assess whether existing migration management structures are functioning adequately.

## 1.2.2. Financial Situation and Public Debt

### 1.2.2.1. Financial Situation

According to the Reserve Bank of Fiji (RBF), Fiji's fiscal situation has been solid until the pre-COVID-19, supported by tax revenues such as value added tax and customs duties, but infrastructure reconstruction spending due to repeated tropical cyclone damage has become a major burden, and the deficit has been widening in 2020.

In terms of revenue, tax revenue accounts for about 80-90%, of which indirect taxes such as value added tax (VAT), tariffs, Environment and Climate Adaptation Levy (ECAL), and Service Turnover Tax (STT) account for about 70%. On the other hand, the share of direct taxes is around 30%, which includes corporate income tax, income tax, and the road use levy paid to the Land Transport Authority (LTA). As for expenditures, capital expenditures for rebuilding various infrastructures such as roads, bridges, and water and sewerage systems have remained high at around 30% of total expenditures due to the damage caused by tropical cyclones such as Winston in 2016 and Josie in 2018. In addition, the majority of the employer compensation is the payment of salaries to public servants, which accounts for about 30% of the total expenditure. Subsidies and grants cover the operating costs of the public sector, including the LTA and the Fiji Revenue and Customs Service (FRCS), and are a source of fiscal pressure.

Table 4 Revenue and Expenditure Breakdown (2016-2020) (million FJD)

	2016	2017	2018	2019	2020
Total revenue	2,908.3	2,837.4	3,239.5	3,183.0	2,716.3
Tax revenue	2,427.3	2,579.2	2,831.6	2,819.8	2,194.0
Donation	21.7	18.8	49.1	42.0	67.6
Other	267.3	228.4	358.8	297.2	236.4
Total expenditures	3,292.0	3,060.2	3,742.0	3,599.0	3,352.9
Employer compensation	837.8	854.0	959.6	1,016.9	987.8
Expenditure on goods and services	120.9	140.3	151.3	161.6	171.3
Interest expense	292.4	276.7	291.5	326.7	357.0
Grants and subsidies	482.8	518.4	680.6	685.5	623.3
Capital expenditure	1,263.0	1,025.6	1,382.0	1,132.0	988.0
Other	295.1	245.2	277.0	276.3	225.5
Fiscal deficit	383.7	222.8	502.5	416.0	636.6

Source: RBF website statistical data<sup>12</sup>

<sup>12</sup> <https://www.rbf.gov.fj/statistics/economic-and-financial-statistics/#1595821800900-2f8c5a08-2fc0>

### 1.2.2.2. Public Debt

With regard to Fiji's public debt, as mentioned earlier, the country has been in a constant state of budget deficit, and since 2016, the fiscal situation has worsened due to infrastructure reconstruction expenditures resulting from the damage caused by the tropical cyclone. In response, government bonds and T-Bills have been issued, and as a result, the government's outstanding public debt and its ratio to GDP have continued to increase.

Table 5 Breakdown of Fiji's Outstanding Domestic Public Debt (million FJD)

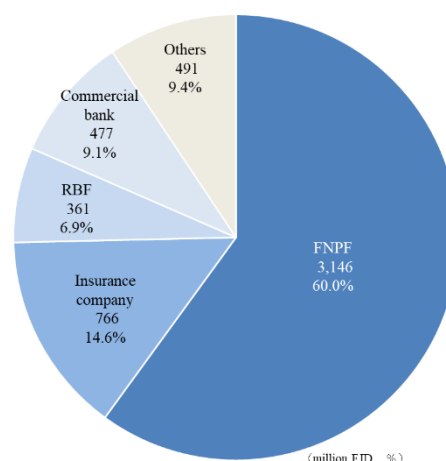
	2017	2018	2019	2020	2021
Public debt in percentage of GDP	30.7	33.2	36.8	48.7	54.6
Total public debt	4,671.7	5,220.5	5,735.2	6,686.0	7,663.7
External public debt	1,370.9	1,457.5	1,456.8	1,709.5	2,422.5
Domestic public debt	3,300.8	3,763.0	4,278.5	4,976.5	5,241.2
Government bonds	3,204.4	3,575.5	3,971.0	4,681.0	4,967.7
Fiji Development bonds	1,864.1	1,752.7	1,545.1	1,415.6	1,235.8
Fiji Infrastructure bonds	1,304.6	1,680.3	2,278.6	3,019.3	3,488.0
Fiji Green bonds	-	100.0	100.0	100.0	100.0
COVID-19 Response bonds	-	-	-	90.0	90.0
Viti bonds	35.7	42.5	47.3	56.2	54.0
T-Bills	96.4	187.5	307.5	269.7	273.5
Borrowing (FNPF loan)	-	-	-	25.7	-

Note: As of the end of each July (Actual data)

Source: Information provided by the Ministry of Economy and Annual Debt Report 2020-2021, p.6

#### (1) Holders of Public Debt

In terms of the percentage of domestic public debt holders as of July 2021, the Fiji National Provident Fund (FNPF) holds 60% of the debt, while insurance companies, RBFs, and commercial banks are also creditors, and others include global bonds issued in 2006.



Source: RBF statistical data<sup>13</sup>

Figure 3 Domestic Holders of Fiji Public Debt

<sup>13</sup> <https://www.rbf.gov.fj/statistics/economic-and-financial-statistics/#1595821800900-2f8c5a08-2fc0>

## (2) Contingent Liabilities Assumed by the Government

In addition to public debts such as government bonds and loans, contingent liabilities such as government guarantees for state-owned enterprises and international organizations are also managed as liabilities owed by the government. For state-owned enterprises that are subject to contingent liabilities, industry and financial analyses (including cash flow projections) are conducted every year, and risk assessments are conducted for each 3stage. As of July 2021, the companies assessed as high risk were Fiji Airways, Fiji Sugar Corporation, and Fiji Development Bank<sup>14</sup>. The company's contingent liabilities and their breakdown are as follows.

Table 6 Breakdown of Contingent Liabilities Owed to the Government of Fiji (million FJD)

	2017	2018	2019	2020	2021
Total contingent liabilities	1,067.6	1,173.2	1,264.6	1,561.6	1,646.9
In % of GDP	9.9	10.3	10.9	15.3	17.2
Government guarantee	562.2	586.7	673.3	939.0	1,051.0
Fiji Airways	-	-	-	279.0	421.7
Fiji Development Bank	190.6	200.0	291.9	307.8	308.8
Energy Fiji Ltd	99.2	94.5	53.9	50.2	-
Fiji Hardwood Corporation Ltd	5.1	5.2	3.6	1.7	0.7
Fiji Pine Ltd	2.5	1.8	-	-	-
Fiji Sugar Corporation Ltd	178.2	210.2	241.3	199.2	216.9
Housing Authority of Fiji	69.4	59.7	68.0	90.2	102.2
Fiji Broadcasting Corporation Ltd	14.6	12.6	10.5	8.3	-
Pacific Fishing Company Pte Ltd	2.6	2.7	4.1	2.5	0.8
Other contractual guarantees, etc.	423.8	505.2	516.4	510.6	504.8
IBRD	229.9	303.0	312.2	305.9	300.6
ADB	193.9	202.2	204.2	204.7	204.2
Contingent liabilities not specified in contracts <sup>15</sup>	81.7	81.3	74.8	112.0	91.1

Note: As of the end of each 7 month

Source: Information provided by the Ministry of Economy and Annual Debt Report 2020-2021, p.7

## (3) Sovereign Rating

In terms of Fiji's sovereign rating, Standard & Poor's has assigned a B+/Stable (September 2021) and Moody's has downgraded Fiji's sovereign rating to B1/Negative (April 2021). In Moody's analysis, the impact of COVID-19 on tourism is having a significant impact on Fiji's employment

<sup>14</sup> Fiji Airways and Fiji Development Bank were affected by the impact of COVID-19 on the tourism industry and the resulting increase in concerns over loan collections. This is because Fiji Sugar Corporation is financially dependent on government support and has liquidity and profitability issues.

<sup>15</sup> Not a contractual obligation, but a moral obligation, etc. that may result in a guarantee, etc.

and tax revenues, and the sluggish economic and fiscal recovery is expected to increase the debt burden<sup>16</sup>, and the outlook is negative. On the other hand, Standard & Poor's downgraded Fiji's credit rating due to the impact on tourism, but maintained the outlook as higher vaccination rates and a recovery in tourism due to the reopening of borders will contribute to higher tax revenues and lower debt burden<sup>17</sup>, and the outlook is stable.

#### (4) Public Debt Management in the Medium Term

As for the future management of domestic public debt, according to the Medium Term Management Strategy FY2021-2023, the government intends to maintain the ratio of domestic debt to external debt at 7:3. In addition, to support the development of the domestic bond market, the government will gradually reduce T-Bills and issue short- to medium-term bonds (2-5 years) from 2022 onward to reduce refinancing risks and diversify the investor base for government bonds, while continuing to issue 10-20 year long-term bonds. For domestic public debt financing in 2021-2022, a total of FJD 711.9 million of government bonds and treasury bills will be issued<sup>18</sup>.

The counting of Fiji's medium-term fiscal targets is shown in the table below, which reflects the reopening of the country's borders to foreign tourists in December 2021 and the revenue growth associated with the recovery of the tourism industry<sup>19</sup>.

On the revenue side, the report recognizes the need for revenue reforms aimed at expanding the tax base, moderately increasing taxes, and simplifying the tax policy structure in order to restore tax revenues to pre-COVID-19 levels. At the same time, the timing and sequence of revenue reforms must be carefully chosen so as not to adversely affect the fragile economy, according to the report.

On the expenditure side, the report states that zero-based budgeting and careful evaluation and selection of projects are important to improve the quality and effectiveness of public spending, as well as the reduction of government spending (including the reduction of civil servants' salaries and personnel adjustments, and the sale of state enterprises).

With regard to debt management, the report states that the focus will be on concessional financing through multilateral and bilateral development partners, with a focus on prudent borrowing at the lowest possible cost, while managing the fiscal risks arising from contingent liabilities. Policy-based development finance, subject to economic and financial management reforms, will also continue to be pursued with development partners such as the World Bank, ADB, AIIB and JICA.

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<sup>16</sup> [https://www.moodys.com/research/Moodys-downgrades-Fiji-to-B1-outlook-remains-negative--PR\\_442620](https://www.moodys.com/research/Moodys-downgrades-Fiji-to-B1-outlook-remains-negative--PR_442620)

<sup>17</sup> <https://www.fjitimes.com/ratings-lowered-to-b/>

<sup>18</sup> BDO Fiji, Budget Brief 2021-2022, p.21

<http://www.fia.org.fj/getattachment/Library-Resources/BDO/BDO-Budget-Brief-2021-2022.pdf.aspx?lang=en-US>

<sup>19</sup> The results for the first 1 quarter of 2021-2022 show the fiscal deficit as a percentage of 4.8 GDP, which is more favorable than the target for the same period of 8.7% of GDP, 2021/10 according to information provided by the Ministry of Economy.

Table 7 Fiji's Medium Term Fiscal Targets (2022-2036) (million FJD)

	2022	2023	2024	2025	2026	2027	2030	2033	2036
Annual revenue	2,085	2,966	3,096	3,268	3,450	3,644	4,295	5,070	5,992
Tax revenue	1,598	2,696	2,832	3,002	3,182	3,373	4,018	4,785	5,699
Other	488	270	236	266	268	270	278	285	293
Annual expenditure	3,691	3,494	3,568	3,643	3,716	3,925	4,630	5,469	6,467
Budget deficit	1,605	528	472	375	265	281	335	399	485
In % of GDP	16.2	4.7	4.0	3.0	2.0	2.0	2.0	2.0	2.0
Sovereign debt	9,061	9,590	10,062	10,437	10,702	10,983	11,932	13,061	14,407
In % of GDP	91.6	85.3	85.3	83.4	80.7	78.2	71.3	65.5	60.7
Nominal GDP	9,890	11,238	11,799	12,507	13,258	14,053	16,738	19,935	23,743

Source: Information provided by the Ministry of Economy and Chapter 4: Medium-Term Fiscal Strategy, p.45

### 1.2.3. Balance of Payments and External Debt

#### 1.2.3.1. Balance of Payments

Fiji's current account<sup>20</sup> has been in deficit for many years. A large excess of imports has resulted in a trade deficit structure, with imports consistently more than double the value of exports. Part of this large trade deficit is offset by the services balance, most of which is tourism income. Secondary income includes remittances from overseas residents to their home countries and financial contributions from international organizations, which contribute to the narrowing of the current account deficit. As for the financial balance, it has been consistently negative due to the steady growth of inward direct investment in tourism-related and other sectors.

While the impact of COVID-19 is expected to result in a decrease in tourism revenue due to a decline in the number of tourists, overseas remittances are expected to continue to see an increase in inflows from personal remittances<sup>21</sup>. Inward FDI into Fiji is also expected to be on a downward trend due to the global reluctance to invest, and the negative financial balance is expected to narrow<sup>22</sup>.

The current account balance in 2021 is projected to be -13.1% of GDP (-13.2% for the previous year). According to the Ministry of Economy, foreign exchange reserves have been stabilized due to increased loan disbursements by other governments and external agencies, lower import payments, and FDI in the Fiji Electricity Company, and as of July 2021, the reserves have covered a 10.8 month's worth of imports (about USD 1,430 million)<sup>23</sup>.

The table below shows the IMF's forecast for the balance of payments and its ratio to GDP, which is expected to remain in current account deficit.

<sup>20</sup> The current account balance represents the sum of the trade and services balance, the primary income balance, and the secondary income balance. The primary income balance represents the balance of payments of interest and dividends arising from external financial claims and debts, while the secondary income balance represents the balance of payments relating to the provision of assets without consideration between residents and non-residents.

<sup>21</sup> Migration in the Republic of Fiji A COUNTRY PROFILE 2020, International Organization for Migration

<sup>22</sup> UNCTAD, World Investment Report 2021

<sup>23</sup> Ministry of Economy, National Budget Address 2021-2022



Table 8 Trends in Fiji's Balance of Payments

				→Forecast (million USD)					
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Current account balance	-470	693	-604	-727	-445	-393	-414	-491	-547
Trade balance	-1,351	1,387	-660	-687	-943	-1,126	-1,298	1,428	-1,530
Export	1,013	1,031	817	925	967	1,010	1,076	1,142	1,239
Import	2,365	2,418	1,477	1,612	1,910	2,137	2,374	2,570	2,749
Service income	927	820	-76	-272	396	762	946	1,050	1,116
Primary income	-360	-451	-279	-232	-354	-423	-493	-542	-588
Secondary income	315	323	411	464	455	394	431	430	455
Private	221	239	310	302	342	277	309	302	321
Balance of capital transfer	5	3	4	4	4	4	4	4	4
Financial balance	-672	-649	-347	-841	-627	-493	-468	-479	-434
Direct investment	-475	-357	-227	-349	-273	-332	-435	-473	-504
Portfolio Investment	34	-17	177	105	29	32	35	38	40
Other investments	-232	-275	-297	-597	-383	-193	-68	-44	29
Errors and Omissions	-333	138	236	0	0	0	0	0	0
Changes in foreign currency reserves	125	-96	13	-137	-185	-104	-58	8	109

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Republic of Fiji, p.25

Table 9 Fiji's Current Account Balance in Percentage of GDP

				→Projections (%)					
	2018	2019	2020	2021	2022	2023	2024	2025	2026
Current account balance	-8.4	-12.6	-13.4	-15.7	-8.8	-7.0	-6.7	-7.4	-7.8
Trade balance	-24.2	-25.2	-14.7	-14.8	-18.7	-20.0	-21.1	-21.6	-21.8
Export	18.2	18.8	18.2	19.9	19.1	17.9	17.5	17.3	17.7
Import	42.4	44.0	32.9	34.7	37.8	37.9	38.5	38.9	39.5

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Republic of Fiji, p.25

### 1.2.3.2. External Debt

As for external debt, it has been on the rise in recent years as shown in the table below. The largest share of external debt is held by the ADB, followed by the World Bank, EXIM China, and JICA. In January 2022, the Ministry of Economy reported that JICA has exceeded the percentage of EXIM China due to the formation of new yen loan projects through disaster stand-by recovery loans and other loans. The increase in the World Bank's and ADB's debt in 2021 was due to the refinancing of global bonds issued for the first time in 2006 by both banks<sup>24</sup>. In addition, the Government of Fiji is participating in the Debt Service Suspension Initiative (DSSI) for COVID-19 implemented by the

<sup>24</sup> <https://www.rbf.gov.fj/understanding-inflation/>

G20 member countries and the Paris Club, and the debt owed to the Export-Import Bank of China has been deferred. The debt to the Export-Import Bank of China is eligible for deferred repayment. The debt to JICA is also eligible for deferred repayment only for the re-extension (Phase 3, July-December 2021), and the agreement is under preparation for signing as of March 2022<sup>25</sup>.

Table 10 Trends in Fiji's External Public Debt and its Breakdown (million FJD)

	2017	2018	2019	2020	2021
Total public debt	4,671.7	5,220.5	5,735.2	6,686.0	7,663.7
Domestic public debt	3,300.8	3,763.0	4,278.5	4,976.5	5,241.2
External public debt	1,370.9	1,457.5	1,456.8	1,709.5	2,422.5
Government Bonds (Global Bonds)	402.3	420.3	433.0	424.3	-
Borrowing	968.6	1,037.2	1,023.8	1,285.27	2,422.5
ADB	344.3	383.6	389.3	525.4	932.4
AIIB	-	-	-	-	104.2
Exim China	501.3	489.3	462.0	409.0	444.9
JICA	13.2	11.5	9.7	50.9	290.3
World Bank Group	107.6	150.6	160.3	297.6	650.1
IFAD	2.1	2.2	2.5	2.3	0.7

Note: As of the end of each 7 month

Source: Information provided by Ministry of Economy and Annual Debt Report 2020-2021

As for the financing of external public debt from 2021 to 2022, the table below shows the planned financing.

Table 11 Planned External Public Debt Financing (2021-2022) (million FJD)

Name of Institution	Amount procured
World Bank	349.1
ADB	327.9
Bilateral borrowing (breakdown unknown)	327.9
European Investment Bank	15.7

Source: BDO Fiji, Budget Brief 2021-2022, p.21<sup>26</sup>

<sup>25</sup> <https://www.worldbank.org/en/topic/debt/brief/covid-19-debt-service-suspension-initiative>

<sup>26</sup> <http://www.fia.org.fj/getattachment/Library-Resources/BDO/BDO-Budget-Brief-2021-2022.pdf.aspx?lang=en-US>

## 1.2.4. Debt Sustainability Analysis

### 1.2.4.1. Summary

According to the IMF's Debt Sustainability Analysis (DSA)<sup>27,28</sup> based on the Article IV Consultation published in December 2021, Fiji's public debt rose to 70.8% of GDP by the end of 2020, up about 22%, due to record economic contraction and large budget deficits caused by the COVID-19 pandemic. It is also expected to rise to 86% of GDP by the end of 2021. The public debt-to-GDP ratio is projected to decline in the medium term, based on the following assumptions.

- ✓ Steady recovery in economic growth
- ✓ Implementation of a phased fiscal consolidation plan with the goal of achieving a small primary surplus by 2026
- ✓ No new major economic shocks

However, even if the above three assumptions hold, public debt could still exceed 75% of GDP by 2026, depending on the speed of economic recovery and the extent of revenue and expenditure reforms. Fiji is vulnerable to macroeconomic shocks, especially those related to natural disasters and contingent liabilities, and the debt is sustainable under a scenario in which the Fijian authorities undertake an ambitious fiscal consolidation<sup>29</sup> at least as ambitious as that envisaged by the IMF in its baseline scenario.

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<sup>27</sup> <https://www.imf.org/en/Publications/CR/Issues/2021/12/03/Republic-of-Fiji-2021-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-510770>

<sup>28</sup> The coverage of debt under the DSA is based on the premise that it will cover almost all public sector debt, including general government (central government, state and local governments, social security funds, etc.), non-financial state-owned enterprises, financial state-owned enterprises (including the central bank), general government long-term debt such as unfunded liabilities of social security funds, contingent liabilities (e.g., restructuring of financial institutions, fulfillment of guarantees in PPPs, etc.), and liabilities guaranteed by the public sector to the private sector. In addition, both external and domestic debt will be covered. With regard to the central bank, external debt contracted on behalf of the government, such as loans from the IMF, will constitute public debt, while central bank debt issuance and foreign exchange swaps for the purpose of monetary policy and foreign exchange reserve management will be excluded from external public debt. Government bonds held by the central bank and advances to the government are also included in public debt. For state-owned enterprises, all available information on the debt of non-financial state-owned enterprises must be included. Exceptions may be considered if the entity has low financial risk (e.g., can borrow without a government guarantee, has a positive operating income, etc.) or if there are restrictions on access to information.

<sup>29</sup> Increasing certain tax and excise rates, reducing tax holidays, expanding the tax base, and increasing the efficiency of revenue collection IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Republic of Fiji, p.9

#### 1.2.4.2. Assumptions of DSA

Since Fiji is classified as a Market Access Countries (MAC) under the IMF category<sup>30</sup>, the DSA analysis will follow the framework for MACs.

#### 1.2.4.3. DSA's Macroeconomic Forecast (Baseline Scenario)

In conducting the DSA, macroeconomic projections and various scenarios are prepared up to 2026 in which the economic events expected at the time of analysis are incorporated, and the future dynamics of public debt are projected based on these projections. The main assumptions underlying the baseline scenarios are as follows

- ✓ Although the GDP growth rate will be negative 4% in 2021, it will recover to 6.2% in 2022 and 8.3% in 2023, mainly due to the recovery of tourism.
- ✓ A phased revenue reform plan will be implemented from 2022 to 2026, which will result in an increase in revenue of about 4.3% over 2021.
- ✓ Expenditure, especially current expenditure, will be restrained to a certain extent, falling by about 2.2% of GDP in 2026 compared to 2019, the year before the COVID-19 pandemic.

Based on the above assumptions, the movements of major economic indicators, public finances, and public debt under the baseline scenario are as follows.

Table 12 Key Macroeconomic Indicators and Fiscal Projections for Fiji (Baseline Scenario)

(in % of GDP unless otherwise indicated)

	Actual			Projections					
	2010-2018	2019	2020	2021	2022	2023	2024	2025	2026
Nominal gross public debt	46.3	48.9	70.8	86.0	88.7	85.3	81.7	79.3	77.4
Public gross financing needs	9.3	7.6	20.4	18.8	16.7	11.6	8.9	7.7	6.9
Real GDP growth (%)	3.7	-0.4	-15.7	-4.0	6.2	8.3	6.4	4.5	3.4
Inflation (GDP deflator, %)	4.0	2.4	-2.6	1.2	2.5	3.0	2.8	2.7	2.5
Nominal GDP growth (%)	7.5	1.9	-17.9	-2.9	8.9	11.5	9.4	7.3	5.9
Effective interest rate (%)	6.8	6.1	-6.2	5.3	5.1	4.9	4.8	4.9	5.1

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Republic of Fiji, p.34

<sup>30</sup> When the IMF analyzes DSA, it categorizes the countries into either Market Access Countries (MACs) or Low Income Countries (LICs) and uses different frameworks for each.

Table 13 Fiji's Public Debt Projections and Drivers of Change (Baseline Scenario)

(in percent of GDP)

	Actual			Projections					
	2010-2018	2019	2020	2021	2022	2023	2024	2025	2026
Change in gross public sector debt	-0.6	2.5	21.9	15.2	2.7	-3.4	-3.6	-2.4	-1.8
Identified debt-creating flows	-1.2	1.7	22.7	15.2	2.7	-3.4	-3.6	-2.4	-1.8
Primary deficit	-0.6	1.6	9.1	11.2	7.0	2.5	0.2	-0.6	-1.2
Primary (noninterest) revenue and grants	25.2	25.5	20.3	20.6	22.2	23.8	25.0	25.4	25.7
Primary (noninterest) expenditure	24.7	27.1	29.5	31.8	29.2	26.3	25.2	24.7	24.5
Automatic debt dynamics <sup>※1</sup>	-0.2	1.9	13.6	6.0	-3.0	-5.2	-3.5	-1.8	-0.6
Real interest rate	1.2	1.7	5.0	3.1	1.9	1.3	1.5	1.6	1.9
Real GDP growth	-1.6	0.2	9.4	2.9	-4.9	-6.6	-5.0	-3.4	-2.5
Exchange rate depreciation	0.2	0.0	-1.8	...	...	...	...	...	...
Other identified debt-creating flows	-0.4	-1.9	0.0	-2.0	-1.3	-0.7	-0.2	0.0	0.0
Financing: Foreign Financing: Privatization (negative)	-0.4	-1.9	0.0	-2.0	-1.3	-0.7	-0.2	0.0	0.0
Contingent liabilities, etc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Residual, including asset changes	0.6	0.8	-0.8	0.0	0.0	0.0	0.0	0.0	0.0

※1 Derived as  $[(r - \pi(1+g) - g + ae(1+r)] / (1+g+\pi+g\pi)$  times previous period debt ratio, with  $r$  = interest rate;  $\pi$  = growth rate of GDP deflator;  $g$  = real GDP growth rate;

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Republic of Fiji, p.34

In addition to the baseline scenario, Fiji's DSA includes various alternative scenarios<sup>31</sup> that consider the impact of macroeconomic events and natural disasters, and stress tests them, the constant primary balance scenario<sup>32</sup>, the historical scenario<sup>33</sup>, the natural disaster scenario<sup>34</sup>, and the contingent liability shock scenario<sup>35</sup> are mentioned as follows.

- ✓ In the constant primary balance scenario, if the government's fiscal position remains at the 2021 level, the debt-to-GDP ratio will increase rapidly, reaching 123% of GDP by 2026, and debt sustainability is assessed to be difficult.
- ✓ In the historical scenario, the ratio of public debt to GDP reaches 91% in the medium term, which is about 14% higher than the baseline scenario.
- ✓ In the natural disaster scenario, the public debt-to-GDP ratio reaches 95% in 2022 and 84% in 2026, putting debt sustainability at risk. Given Fiji's vulnerability to frequent natural disasters, this underscores the fact that building fiscal buffers for disaster preparedness is a major policy priority.

<sup>31</sup> Stress tests include standard scenarios common to all countries that reflect changes in various macroeconomic indicators (scenarios are created for real GDP growth, primary balance, exports, exchange rate depreciation, and changes in a combination of these factors. There are three types of stress tests: standard scenarios that reflect changes in various macroeconomic indicators, tailored scenarios that reflect the impact of contingent liabilities and natural disasters, and customized scenarios that reflect events specific to the target country.

<sup>32</sup> This scenario assumes that the primary balance estimated for 2021 will remain constant over the medium term.

<sup>33</sup> This is a scenario in which the average of macroeconomic variables (GDP growth and primary balance) from 2011 to 2021 are stretched over the forecast period.

<sup>34</sup> This scenario assumes a one-time damage caused by an extreme natural disaster. It is assumed that an extreme disaster occurs in 2021, the GDP growth rate declines by 4% in 2022, and the primary budget deficit increases to 8.9% of GDP.

<sup>35</sup> This scenario considers the risk of fulfilling the guarantee obligations that the government has granted to state-owned enterprises. Given that guarantee liabilities reached 16.8% of GDP as of April 2021, up from 11% of GDP before the COVID-19 pandemic, it is assumed that 70% of these contingent liabilities will materialize between 2022 and 2023. Note that the debt owed by state-owned enterprises themselves is not included in the DSA.

In the contingent debt shock scenario, the debt-to-GDP ratio jumps to 110% in 2023 and reaches 101% in 2026. Aggregate financing needs will rise to 23% of GDP in 2022 and 20% in 2023, well above the benchmark of 15%.

#### 1.2.4.4. Trends in External Debt

The ratio of external debt to GDP increases by 15.5% over five years, from 23.4 % in 2016 to 38.8% in 2020, with loans accounting for about 81% of external debt in 2020. In the baseline scenario, the ratio is expected to be 55.3% of GDP in 2022, but is expected to decline to 45.8% in 2026, supported by a limited share of foreign currency-denominated debt, large external asset holdings (about 37.4% of GDP in 2020), and improvements in GDP growth and the non-interest current account balance. It is expected to decline to 45.8% by 2026, supported by improved GDP growth and non-interest current account balance.

Table 14 Fiji's External Debt Projections and Drivers of Change (Baseline Scenario)

(in percent of GDP unless otherwise indicated)

	Actual					Projections					
	2016	2015	2018	2019	2020	2021	2022	2023	2024	2025	2026
External debt	23.4	23.4	25.5	29.1	38.8	51.2	55.3	53.5	50.7	48.5	45.8
Change in external debt	-1.8	0.0	2.0	3.7	9.7	12.4	4.1	-1.8	-2.8	-2.2	-2.7
Identified external debt-creating flows	-5.9	-2.4	-1.0	6.5	14.9	9.6	1.5	-3.0	-3.5	-1.9	-0.9
Current account deficit, excluding interest payments	1.9	5.5	7.2	11.1	11.1	13.2	6.3	4.7	4.7	5.5	6.3
Deficit in balance of goods and service	3.9	5.0	7.6	10.3	16.4	20.7	10.8	6.5	5.7	5.7	5.9
Exports	46.6	46.0	47.9	48.1	27.5	23.1	38.0	43.9	45.5	46.1	46.9
Imports	50.5	50.9	55.5	58.4	43.9	43.7	48.8	50.3	51.2	51.8	52.8
Net non-debt creating capital inflows (negative)	-8.2	-7.2	-8.5	-6.5	-5.0	-7.5	-5.4	-5.9	-7.1	-7.2	-7.2
Automatic debt dynamics※1	0.5	0.7	0.3	1.9	8.8	4.0	-0.4	-1.8	-1.1	-0.2	0.0
Contribution from nominal interest rate	1.7	1.2	1.2	1.5	2.3	2.5	2.5	2.3	2.0	1.9	1.5
Contribution from real GDP growth	-0.6	1.2	-0.9	0.1	5.6	1.5	-2.9	-4.1	-3.1	-2.1	-1.5
Contribution from price and exchange rate changes	-0.7	-0.7	-0.1	0.3	0.9	...	...	...	...	...	...
Residual, incl. change in gross foreign assets※2	4.1	2.4	3.1	-2.9	-5.2	2.8	3.6	1.2	0.7	-0.3	-1.8

※1 / Derived as  $[r - g - r(1+g) + ea(1+r)] / (1+g+r+gr)$  times previous period debt stock, with  $r$  = nominal effective interest rate on external debt;  $r$  = change in domestic GDP deflator in US dollar terms,  $g$  = real GDP growth rate,  $e$  = nominal appreciation (increase in dollar value of domestic currency), and  $a$  = share of domestic-currency denominated debt in total external debt.

※2 For projection, line includes the impact of price and exchange rate changes

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Republic of Fiji, p.39

#### 1.2.4.5. Fijian Authorities' Opinion on Debt Sustainability

According to information provided by the Fiji Ministry of Economy, the current account deficit for 2020-2021 is 10.6% of GDP, lower than the revised target of 11.5% and the initial target of 20.2%, and debt is 79.8% of GDP compared to the initial target of 83.4%. As for the measures to ensure fiscal soundness after COVID-19, the basic policy is to restructure public finances with the aim of putting the debt-to-GDP ratio on a downward trend. Specifically, the government will expand the tax base, implement moderate tax hikes, and simplify the tax structure, while striking a balance with economic recovery to achieve fiscal sustainability over the medium to long term. If revenues are likely to fall below the budget, some public expenditures will be reduced (specifically, FJD 200 million for unemployment assistance, FJD 200 million for the COVID-19 reconstruction credit guarantee scheme, FJD 40 million for the Fiji reconstruction rebate package, FJD 47 million for sugar cane price support, FJD 23.1 million for preparations for the 2022 general elections, FJD 5 million for Stronger Together Employment Support Scheme, FJD 4 million for Jobs for Nature, etc.). In terms of debt management, the Ministry will focus on the prudent use of low-cost concessional financing from international organizations and other development partners, while paying attention to the risk of contingent liabilities.

According to the information provided by RBF, RBF is not pessimistic about the debt sustainability, although the public debt to GDP ratio has increased from about 50% until about 4 years ago to about 80%, partly due to COVID-19, as the border will be reopened in December 2021 and tax revenues are expected to increase due to economic recovery. The amount of debt itself is by no means excessively borrowed, and it is perceived to be maintained at a certain level while considering the delicate balance with economic policies such as employment measures. As for the government's funding sources, funding from FNPF, the largest institutional investor in Japan, is considered to be the best from a safety standpoint. On the other hand, there is a need for external debt to some extent due to limited domestic sources of financing and the need to maintain a certain level of foreign exchange reserves to reduce financial risks. Therefore, it is recognized that it is important to utilize concessional funding from international organizations such as the ADB, JICA, the World Bank, and the AIIB. In addition, lending from China has been decreasing, and the government has indicated that it will not accept lending from China in the future.

### 1.3. Development Policy and Investment Policy

#### 1.3.1. Development Policy and Sectoral Development Policy

##### 1.3.1.1. National Development Plan 2017-2036

The National Development Plan 2017-2036: (NDP) is Fiji's comprehensive national development plan that is consistent with the SDGs and the Paris Agreement. The NDP has the following strategic approaches: the NDP 2017-2036 and NDP 2017-2021, which provides specific policies and a detailed action agenda in line with the plan. According to the information provided by the Ministry of Economy, the post-2022 plan is under review, including the setting of realistic economic targets based on the economic impact assessment of COVID-19 (e.g., performance assessment of each sector before and after COVID-19). The timing of preparation has not yet been decided.

#### 1. Inclusive Social and Economic Development

Ensure that all social and economic rights enshrined in the Constitution are realized. Inclusiveness is at the heart of growth and development, ensuring that the benefits of prosperity are spread as widely as possible in order to improve the social welfare of all citizens. No one will be left behind, regardless of geographic location, gender, ethnicity, physical or intellectual ability, or social or economic status.

#### 2. Strategic Drive for Change

Future-oriented policy shifts to expand the frontiers of development and support the vision of transforming Fiji. Fostering emerging growth sectors, improving domestic and international connectivity, adopting new technologies, maximizing productivity, accelerating human capital development, and green growth will be important guiding principles in the implementation of this plan.

The following key Goalsal targets have been set in the NDP 2017-2036

Table 15 Goals of the National Development Plan 2017-2036

	2015	2021	2026	2031	2036
<b>Inclusive socioeconomic development</b>					
Adequate access to clean and safe water (% of population)	78	90	95	100	100
Adequate access to clean and safe water: rural areas (% of population)	58	85	90	100	100
Adequate access to clean and safe water: Urban areas (% of population)	98	100	100	100	100
Access to central sewerage system (% of population)	25	40	50	60	70
Access to central sewerage system: urban area (% of population)	25	40	50	60	70
Access to central sewerage system: Rural areas (% of population)	0	40	50	60	70



	2015	2021	2026	2031	2036
Access to electricity (% of population)	90	100	100	100	100
Percentage of the population that primarily uses wood fuel for cooking (%)	18	12	6	<1	0
Energy intensity (MJ/FJD of imported fuel consumption per unit GDP)	2.89	2.86	-	2.73	-
Energy intensity (electricity consumption per unit GDP kWh/FJD)	0.219	0.215	-	0.209	-
Renewable energy as a percentage of total electricity generated (%)	67	81	90	99	100
Share of renewable energy in total energy consumption (%)	13	18	-	25	-
Increase in households with a home (% of total households)	43	50	TBD	TBD	TBD
Share of domestically procured food in total available food (%)	32	42	TBD	TBD	TBD
Net enrollment rate in early childhood education (%)	80	95	100	100	100
Net enrollment rate in primary education (%)	99	100	100	100	100
Net enrollment rate in secondary education (%)	82	86	90	90	90
Perinatal mortality rate per total live births 1,000	12.7	< 10.7	<10	<9	<8
Neonatal mortality rate per 1,000 live birth	13.8	< 8	<8	<7	<6
Under 5age mortality rate per 1,000 live birth	18	< 12	<10	<8	<6
Male life expectancy (years)	67.1	68.1	68.9	69.7	70.5
Female life expectancy (years)	71.9	73.0	73.9	74.8	76.0
Deaths from non-infectious diseases (under 70 age) (%)	68.2	49.7	34.9	20	<20
Number of physicians per 1,000 population	0.7	1	1	1	1
Poverty incidence: Overall (%)	28.4	25	20	14	10
Poverty incidence: rural areas (%)	36.3	35	32	18	10
Poverty incidence: urban areas (%)	20.8	15	13	10	5
Gini coefficient	0.32	-	-	0.16	-
<b>Strategic drive for change</b>					
Port traffic of containers (t)	1,755,670	1,865,836	TBD	TBD	TBD
Average GDP growth rate over the period (%)	3.6	4-5	4-5	4-5	4-5

	2015	2021	2026	2031	2036
Per capita income (\$)	10,617	-	21,233	-	42,466
Investment (% of GDP)	25	25	25	25	25
Private sector investment (% of GDP)	20.9	>15	>15	>15	>15
Public debt (% of GDP)	48.7	47.7	45	40	35
Unemployment rate (%)	6.2	4	4	4	4
Merchandise trade (% of GDP)	68.1	68.6	TBD	TBD	TBD
Tourism revenue (% of GDP)	17	20	TBD	TBD	TBD
Increased penetration of wired and wireless networks in Fiji (%)	95	100	100	100	100
<b>Environment</b>					
Reduction in greenhouse gas emissions from baseline in 2013 (%)	-	-	-	30	TBD
Establishment of marine protected areas for 30% of Fiji's waters (%)	1.8	30	-	-	-
Area of forest preserved in the long term (%)	3	5	-	-	16

Source: Ministry of Economy, 5-Year & 20-Year National Development Plan

In order to achieve the above national goals, the NDP 2017-2021 is divided into 29 sectors, and the policies, strategies, programs based on the policies, strategies, and annual Goalsal targets for each sector are organized.

Table 16 29 Sectors and Development Goals in the National Development Plan 2017-2021

Sector	Development Goals
<b>Inclusive social and economic development</b>	
Water and Sanitation	Provide all households in Fiji with adequate quantities of clean and safe water and proper and adequate sanitation.
Energy	A resource-efficient, cost-effective, and environmentally sustainable energy sector
Housing Development	Accessible and appropriate housing for all.
Food and nutrition security	All Fijians have access to adequate food of acceptable quality and nutritional value.
Education	Quality Education for all
Health and Medical Services	Access to quality health facilities and medical services, including reproductive health care, necessary for good health
Social inclusion and empowerment	Socially Inclusive Fiji and Empowered Fijians
Youth and sports development	Empowering youth to be agents of change, promoting sports for development
Women in Development	Empowerment of women to maximize their development potential

Sector	Development Goals
Culture and heritage	Protecting and promoting the unique Fijian cultural heritage for sustainable development
National Security and Rule of Law	Fiji is inclusive, safe, secure, stable and prosperous.
Strategic drive for change	
Modernization of land transportation	Access to transportation through an efficient and sustainable transportation network
Inter-island network	Safe, efficient, reliable, and affordable transportation services
Domestic Airline Services	Unleashing economic potential through stable and reliable domestic air services
International connectivity (airports and seaports)	Enhance Fiji's status as a vibrant, modern regional and international hub for the movement of people and goods
Modernizing the business institutional environment	A sound regulatory environment for inclusive and sustainable private sector development
Micro, Small, and Medium Enterprise Development	Promoting an entrepreneurial culture through sustainable micro, small, and medium enterprises
Manufacturing and commerce	Building sustainable and globally competitive manufacturing and commerce
Financial Services	A deep, competitive, and stable financial system
Sustainable cities and towns	Creating a vibrant and environmentally sustainable urban center
Expansion of rural economy	Promoting equal opportunity, access to basic services, and building resilient communities
Sugar	Sustainable Sugar Industry
Agriculture other than sugar	Competitive, sustainable, and value-added agriculture
Fishing (industry)	Sustainable fishery resource management
Forestry	Sustainable management and development of forest resources
mining industry	Sustainable Mining
Tourism industry	A world-class tourist destination that adds value to the local economy
Improving international trade and foreign relations	Expanding the trade base and economic engagement in the global community
ICT	Universal access to information and competitive telecommunications services provided on a secure platform

Source: Ministry of Economy, 5-Year & 20-Year National Development Plan

## 1.3.2. Investment Policies and Systems for Attracting Foreign Capital

### 1.3.2.1. Investment Policy

Investment Fiji is the government agency responsible for the promotion, regulation and management of foreign investment in Fiji. In addition to assisting in the registration and implementation of foreign investment projects, it organizes seminars for foreign business delegations and participates in foreign investment missions.

### 1.3.2.2. System

#### (1) Investment Incentives and Regulations

According to information provided by Investment Fiji, one of the major changes after the implementation<sup>36</sup> of the Investment Act 2021, which was promulgated in Jun 2021, is that domestic and foreign investors will be treated on equal terms. Specifically, they will no longer be required to apply for a Foreign Investor Registration Certificate and will be subject to the same reporting requirements as domestic investors. In addition, the Act allows the Fijian government to impose restrictions on investment in critical infrastructure (energy, transportation, telecommunications, data storage, financial infrastructure, etc.) and access to and control of confidential information. The “Your Guide To Investing In Fiji” for foreign investors will also be amended, and the Investment Fiji Act will also need to be amended, which will significantly change the role of Investment Fiji itself. Specifically, the role of the Regulatory Body will be eliminated and replaced by the Investment Promotion Agency, which will be primarily responsible for organizing investment promotion events, following up on FDI promotion projects, promoting dialogue between the government and the private sector, and organizing stakeholder meetings.

After the implementation of the Investment Act 2021, the Foreign Investment Act and the Foreign Investment Regulation will be repealed<sup>37</sup>. Matters arising prior to the enactment of the new Act will continue in accordance with the intent of the previous foreign investment laws and regulations. The following is a partial list of the foreign investment laws and regulations that were in place prior to the implementation of the new law, and the areas where activities are restricted to Fijian citizens and foreign investors.

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<sup>36</sup> It is proposed that the law will be enacted in January 2022, but the details have not yet been determined. Information provided by Investment Fiji.

<sup>37</sup> Investment Act 2021, p.77, <http://www.parliament.gov.fj/wp-content/uploads/2021/06/Act-5-Investment.pdf>

Table 17 Activities Restricted to Fijian Nationals

<ul style="list-style-type: none"> <li>• Milk stand or cafeteria business</li> <li>• Cab Business</li> <li>• Kava Business</li> <li>• Retailing through food stalls and markets</li> <li>• Handcraft Business</li> <li>• Dressmaker's store</li> <li>• Repair of personal property and household items</li> <li>• Piping business</li> <li>• Electricity business</li> <li>• Gardening and tree planting</li> <li>• Day care center</li> <li>• Internet cafes and entertainment and game centers</li> <li>• Private accommodation services</li> <li>• Bakery businesses other than those located near hotels/resorts and/or operated by foreign hotels/resorts</li> <li>• Backpacker business</li> <li>• Nightclubs that are not located near a hotel/resort and/or operated by a foreign hotel/resort; and</li> <li>• Liquor bars that are not located near a hotel/resort and/or operated by a foreign hotel/resort.</li> </ul>
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Source: Foreign Investment Regulation

Table 18 Areas and Details of Restrictions on Foreign Investors' Activities

Restricted sector		Restrictions
Fishing (industry)		<ul style="list-style-type: none"> <li>• The percentage of equity held by Fijian nationals must be greater than or equal to 30%</li> <li>• Foreign investors must have their own contribution or paid-up capital of at least FJD 500,000 after commencement of operations and the full amount must be brought into Fiji within the implementation period.</li> </ul>
Forestry		<ul style="list-style-type: none"> <li>• Foreign investors should add value.</li> <li>• After commencement of operations, foreign investors must have their own contribution or paid-up capital of at least FJD 500,000, which must be brought into Fiji within the implementation period.</li> </ul>
Manufacturing industry	Cigarettes	<ul style="list-style-type: none"> <li>• Foreign investors must use at least 75% locally grown and processed tobacco for domestic tobacco production.</li> <li>• After commencement of operations, foreign investors shall have their own contribution or paid-up capital of not less than FJD 500,000, which shall be fully brought into Fiji within the implementation period.</li> </ul>
Tourism industry	Cultural heritage	<ul style="list-style-type: none"> <li>• For any investment activity in the cultural heritage of the Fiji Islands, after commencement of operations, to have its own contribution or paid-up capital of not less than</li> </ul>

Restricted sector		Restrictions
		FJD 500,000 and to be fully brought into Fiji within the implementation period.
Service sector	Real estate management	<ul style="list-style-type: none"> <li>• Foreign investors engaged in property management and property agency business shall have their own contribution or paid-up capital of not less than FJD 1,000,000 after commencement of operations and the entire amount shall be brought into Fiji within the implementation period.</li> <li>• Foreign investors engaged in real estate management need to be certified under the Real Estate Agents Act.</li> <li>• Foreign investors engaged in the real estate business of renting out houses, villas, apartments and buildings to tourists shall have their own contribution or paid-up capital of not less than USD 250,000 after commencement of operations and the entire amount shall be brought into Fiji within the implementation period.</li> </ul>
	Real estate development	<ul style="list-style-type: none"> <li>• After commencement of operations, foreign investors must have their own contribution or paid-up capital of at least USD 5,000,000 and the full amount must be brought into Fiji within the implementation period.</li> </ul>
Construction industry		<ul style="list-style-type: none"> <li>• After commencement of operations, the company must have its own contribution or paid-up capital of at least FJD 1,000,000, and the full amount must be brought to Fiji within the implementation period.</li> </ul>
Civil engineering industry		<ul style="list-style-type: none"> <li>• After commencement of operations, the company must have its own contribution or paid-up capital of at least FJD 1,000,000, and the full amount must be brought to Fiji within the implementation period.</li> </ul>
Inter-island shipping and passenger services (excluding tourist support services)		<ul style="list-style-type: none"> <li>• After commencement of operations, the company must have its own contribution or paid-up capital of at least FJD 500,000, and the full amount must be brought to Fiji within the implementation period.</li> </ul>

Source: Foreign Investment Regulation

The Fijian government is moving forward with PPPs and foreign investment is starting to enter the market. In January 2019, the Fiji government signed its first public-private partnership agreement with FNPF and Australian company Aspen Medical to develop, renovate and operate the country's 2 main hospitals, Ba Hospital and Lautoka Hospital, in the Western Region for 23 years<sup>38</sup>. In March 2021, the Japan Bank for International Cooperation (JBIC) and The Chugoku Electric Power

<sup>38</sup> <https://www.aspenmedical.com/news/news/aspen-medical-signs-contract-manage-two-hospitals-over-next-two-decades-part-fiji%E2%80%99s-public>

Company jointly signed<sup>39</sup> the Shareholders Agreement with the Government of Fiji, the largest shareholder (51% owned), to invest in Energy Fiji Limited.

According to the information provided by Investment Fiji, Aitken Spence PLC, a Sri Lankan company, has acquired a part of the shares in Fiji Ports Corporation Limited.

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<sup>39</sup> <https://www.energia.co.jp/press/2021/13062.html>

## (2) Methods and Procedures for Companies to Enter the Market

Prior to commencing business in Fiji, foreign investors are required to apply to and obtain approval from the agencies listed in the table below. Application forms for the issuance of a Foreign-Investment Registration Certificate are available on the Investment Fiji website and the application fee is FJD 2,725 (inclusive of VAT). Investors are required to secure the name of the company/business from the Registrar of Companies before submitting the FIRC application form.

When Japanese companies set up operations in Fiji, Investment Fiji will not introduce individual companies in Fiji, but can share agency lists<sup>40</sup>.

Table 19 Organizations to Which Foreign Investors Must Apply and Obtain Approval Before Commencing Business and the Nature of the Application

Name of Institution	Application details
Registrar of Companies Office	Register your company/business name.
Investment Fiji	Foreign-Investment Registration Certificate
Fiji Revenue & Customs Authority	Register for tax and VAT
Department of Immigration	Work permit
Reserve Bank of Fiji	Issuance of shares and partnership interests
Fiji National Provident Fund	Employer/Worker registration

Note: Depending on the nature of the business, foreign investors may also require approvals, permits, or licenses from related agencies other than those listed above.

Source: Investment Fiji, Your Guide to Investing in Fiji 2021

## (3) Trade, Taxation

Fiji has tax treaties with Australia, Japan, Malaysia, New Zealand, Papua New Guinea, Republic of Korea, Singapore, United Arab Emirates, and the United Kingdom.

## (4) Challenges for Foreign Investment and Potential Areas of Cooperation

In terms of potential sectors, the Sector Profiles<sup>41</sup> prepared by Investment Fiji lists tourism, agriculture, energy, ICT/BPO, audiovisual, forestry, fisheries, insurance/pharmaceutical, manufacturing, and mining/groundwater as 10 potential investment sectors<sup>42</sup>. In particular, it is looked forward to investing in the ICT and BPO sectors (call center, accounting, finance, etc.), while tourism is declining due to COVID-19.

<sup>40</sup> Information provided by Investment Fiji

<sup>41</sup> <https://www.investinfiji.today/wp-content/uploads/2021/12/Invest-in-Fiji-Sector-Profile-2021.pdf>

<sup>42</sup> <https://www.investmentfiji.org.fj/investment-opportunities/investment-incentives>



As for potential areas for PPPs, there are social infrastructure (hospitals, prisons, schools, public housing, etc.), economic infrastructure (airports, ports, roads, energy, water, sewerage, etc.), and municipal services (solid waste management, convention centers)<sup>43</sup>.

From Japan, there are many inquiries about investment, especially in the energy and waste management sectors. China is active in the service sector (especially wholesale and retail), while New Zealand and Australia are active in the real estate, tourism, and service sectors.

As for cooperation needs from Japan, it is expected to host investment promotion events and missions in Fiji.

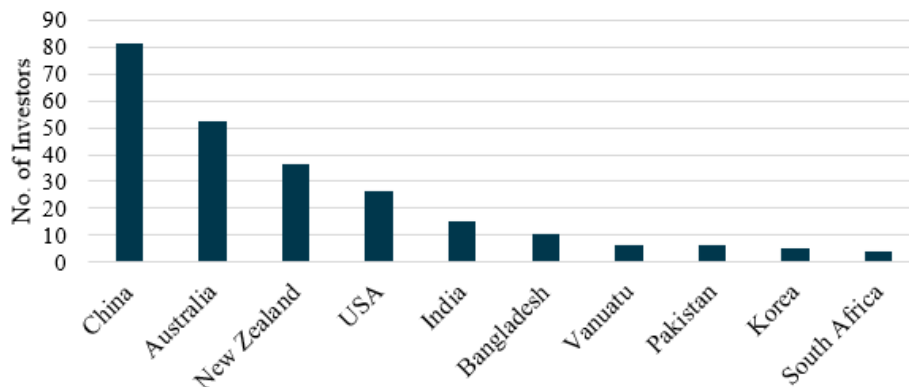
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<sup>43</sup> Information provided by Investment Fiji.

## 1.4. Private Investment

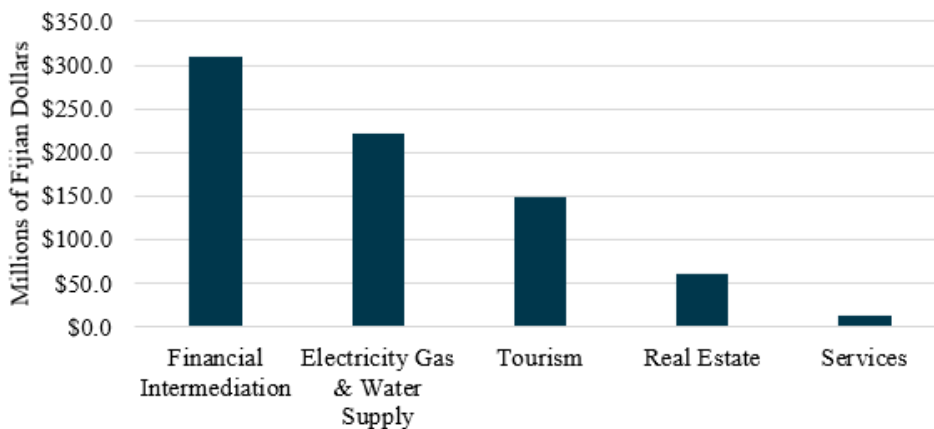
### 1.4.1. Current Status and Trends of Private Investment

In terms of investment in Fiji, China had the largest number of investors in January 2021, followed by Australia, New Zealand, the United States, and India. In terms of industries, financial intermediation was the most common, followed by gas and water, tourism, and real estate.



Source: Information provided by Investment Fiji

Figure 4 Number of Investors in Fiji (as of January 2021)

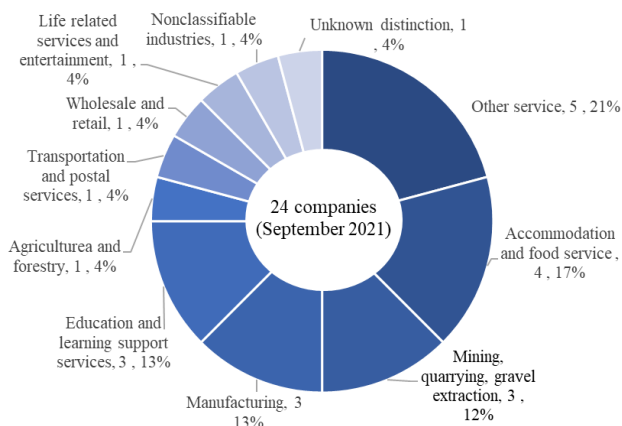


Source: Information provided by Investment Fiji

Figure 5 Amount of Investment in Fiji by Industry (as of January 2021)

As for the trend of Japanese companies expanding into Fiji, the number of Japanese companies operating in Fiji from 2012 to 2020 has been hovering around 16 to 24, with an increasing trend every year since 2017. In terms of the breakdown by industry, of the 24 companies with bases in Fiji as of September 2021, the majority are in the service-related industry, including accommodation and food and beverage services, suggesting that many companies are entering Fiji in the tourism-related sector. Three companies have also entered the mining industry (development of the Namosi mining area). In addition, JOGMEC has signed a JV agreement with Thunderstruck for the Korokayiu

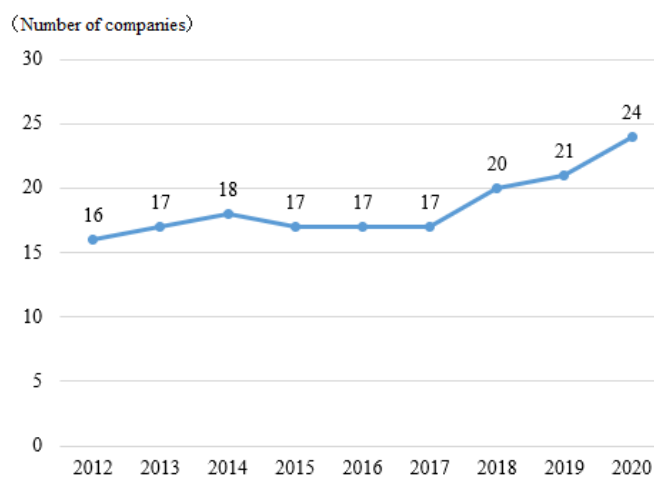
Block.) In addition, the Pacific Islands Center (PIC), an international organization, has sent trade and investment missions to the country to promote private economic activities.



Note: "Service industries" are those not classified as "Accommodation, food and beverage services" or "Lifestyle-related services and entertainment".

Source: 2021 Annual Survey of Japanese Residents Abroad, Ministry of Foreign Affairs of Japan (as of October 2020)

Figure 6 Breakdown of Japanese Companies by Industry (Number, Percentage)



Source: 2021 Annual Survey of Japanese Residents Abroad, Ministry of Foreign Affairs of Japan (as of October 2020)

Figure 7 Number of Japanese Companies in Japan (as of each 10 month)

#### 1.4.2. Private Investment Policies and Institutions

As mentioned earlier, Fiji's domestic industry has developed mainly in the service sector targeting exports and foreign tourists, and the policy for the development of domestic industry is based on the premise of exports. Therefore, Fiji's industrial development plans are designed to attract investment from domestic and foreign companies. The government agency responsible for private sector investment policy in Fiji is the Ministry of Commerce, Trade, Tourism and Transport. According to the Investment Policy Statement on the Ministry's website, the private sector is positioned as a means to improve the country's wellbeing, and the quantitative target is to increase public investment to 25% of GDP and private investment to 15% of GDP by 2036. To achieve these goals, the country is currently implementing two policies: the National Development Plan, a medium- to long-term national development plan announced in 2017, and the Fijian Trade Policy Framework, a comprehensive trade policy for the period up to 2025, which was prepared in 2015. In line with these two policies, a comprehensive investment policy has been prepared (as of January 2022), and the following five principles have been adopted<sup>44</sup>.

<sup>44</sup> <https://www.mcttt.gov.fj/divisions/trade-unit/investment-policy-statement/>

Table 20 Fiji Government's5 Commitment to Investment Principles

Principle	Overview
Non-discrimination against domestic and foreign investors.	Treat all foreign and domestic investors and investments as favorably as other investors or investments in similar circumstances with respect to establishment, expansion, management, and protection of investments.
Investor rights and investment protection	Provide investors with the freedom to invest, the freedom to manage their own businesses, access to freely convertible currency, and the opportunity to transfer funds under reasonable conditions. The government undertakes to protect all investments from expropriation or measures to the same effect. Subject to compensation and due process of law, except for public purposes, and subject to appropriate, effective, and prompt payment.
Transparency and good regulatory practices	Ensure that all laws, regulations, administrative guidelines, and policies related to investments are enacted after proper notice and consultation and are publicly available in a timely, transparent, and easily accessible manner
Maintain environmental and social standards	Ensure that all labor, health, safety, and environmental regulations are complied with by domestic and foreign investors.
Facilitation of investment and provision of aftercare	Promote investor confidence and ensure that investments are sustainable.

Source: Investment Policy Statement, Ministry of Commerce, Trade, Tourism and Transport website.

In the context of these investment policies, tax deductions are one of the incentives to attract private investment. First of all, the corporate tax rate is fixed at 20%<sup>45</sup>, which is lower than the average rate of 28.43%<sup>46</sup> in Oceania countries in September 2021. The corporate tax rate is 10% for companies listed on the South Pacific Stock Exchange, the country's stock exchange. In addition, companies operating in certain regions of the country are entitled to various tax holidays if they meet certain conditions.

As for the procedure, it is necessary to obtain a Taxpayer Identification Number (TIN) according to the type of business for tax purposes, which can be applied for online<sup>47</sup>.

<sup>45</sup> According to a hearing conducted with the FRCS in December 2021, the corporate tax rate, which was previously 35%, has been reduced to 20%, and the difference in tax rates between foreign and local companies has been abolished. In addition, the procedures have been greatly simplified.

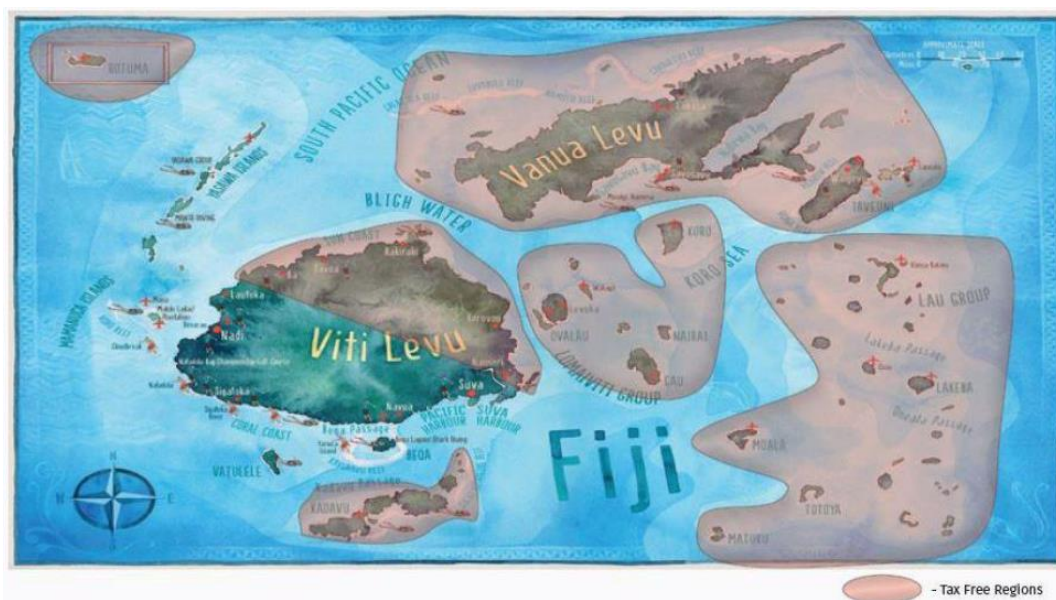
<sup>46</sup> <https://home.kpmg/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html>

<sup>47</sup> Information provided by FRCS.

Table 21 Conditions Related to Corporate Tax Exemption Areas and Incentives

Item	Contents
Tax Free Region	The entire northern region (including all of Vanua Levu and the islands of Taveuni, Ravi, and Kioa), Rotuma, Kadavu, Lomaiviti, Lau, and Viti Levu islands (from the Rewa River on the Nausori International Airport side to the Matawalu River on the Ba province side). River on the Ba province side)
Tax exemption	Corporation tax
Conditions	<ul style="list-style-type: none"> <li>Newly established corporations for new businesses.</li> <li>A corporation that has declared that it will operate mainly in a duty-free zone</li> <li>Invest a minimum FJD 250,000.</li> </ul>
Incentives	<p><u>Before starting business</u></p> <ul style="list-style-type: none"> <li>Exemption from customs duties on raw materials, equipment and facilities (including parts) necessary to start a business.</li> </ul> <p><u>After commencement of business</u></p> <p>The tax exemption period varies depending on the amount of capital investment:</p> <ul style="list-style-type: none"> <li>FJD 250,000 to FJD 1,000,000: consecutive 5 years</li> <li>FJD 1,000,000 to FJD 2,000,000: consecutive 7 years</li> <li>FJD 2,000,000 or more: consecutive 13 years</li> </ul>
How to apply	<ul style="list-style-type: none"> <li>If you wish to apply, you must submit to the FRCS audited documents certifying the amount of capital investment and the date of commencement of business before you incorporate and start business. After approval, the applicant is required to start business within 18 months.</li> </ul>

Source: FRCS website<sup>48</sup>



Source: FRCS website

Figure 8 Tax Free Zone

<sup>48</sup> [https://www.frcs.org.fj/wp-content/uploads/2018/11/Tax-Talk\\_Tax-Free-Zone\\_V2\\_sr161118\\_.pdf](https://www.frcs.org.fj/wp-content/uploads/2018/11/Tax-Talk_Tax-Free-Zone_V2_sr161118_.pdf)

In addition to the above-mentioned incentives for companies located in specific regions, various incentives are also applied to private companies that provide specific industries, goods and services (as of September 2021). Since the eligibility and conditions of the incentives are changed every year, it is necessary to check the FRCS website regularly for the latest information<sup>49</sup>.

Table 22 List of Incentives for Private Sector in Fiji

Industry/Product/Service	Conditions	Incentives
Agriculture	Agroprocessing	Agriculture and agro-processing projects initiated and approved within the period from January 1, 2009 to December 31, 2028.
	Biofuel production	Projects to produce biofuel from agricultural products started during the period January 1, 2009 to December 31, 2028 and approved by the CEO of FRCS.
Logistics	Warehouse Operations	Projects of corporations whose main business is the construction of

<sup>49</sup> According to the information provided by the FRCS as of December 2021, the latest incentive details will be available after the December 6 2021.

Industry/Product/Service	Conditions	Incentives
	warehouses for the purpose of lease-out, with a capital investment of at least FJD 250,000 (including the cost of peripheral infrastructure and consultants, but excluding the cost of land purchase), and which will start operation within 2 year from the August 1, 2019	<p>facilities required for construction.</p> <p><u>After commencement of business</u></p> <p>Corporate tax exemption applies for different periods depending on the level of capital investment.</p> <p>FJD 250,000 to FJD 1,000,000: consecutive 5 years</p> <p>FJD 1,000,000 to FJD 2,000,000: consecutive 7 years</p> <p>FJD 2,000,000 or more: consecutive 13 years</p>
	Warehouse construction	<p>The amount of capital expenditure multiplied by the following rate will be deducted from the taxable amount of corporate income tax</p> <p>FJD 1,000,000 to FJD 2,000,000: 50% of total capital expenditure</p> <p>FJD 2,000,000 or more: 100% of total capital expenditure</p>
Real Estate	Village for retirees and facilities for the elderly	<p><u>Before starting business</u></p> <p>Exemption of import duties and 9% VAT on raw materials, equipment, and facilities required for construction for corporations engaged in the construction of villages and facilities.</p> <p><u>After commencement of business</u></p> <p>Corporate tax exemption applies for different periods depending on the level of capital investment.</p> <p>FJD 250,000 to FJD 1,000,000: consecutive 5 years</p>

Industry/Product/Service		Conditions	Incentives
			FJD 1,000,000 to FJD 2,000,000: consecutive 7 years FJD 2,000,000 or more: consecutive 13 years
Tourism	Development of hotels and integrated tourism facilities (standard incentives)	Construction of a new hotel, renovation or improvement of an existing hotel, or development of an integrated tourism facility to be started within 2 years after approval within a year and a day from April 1, 2022 to December 1, 2022	25% of the total investment will be deducted from the corporate income tax. However, the incentive applies only to the hotel business or income from hotel facilities.
	Short Life Investment Package (SLIP)	Construction of hotels and general tourism facilities (including facilities for retirees and medical tourism) with an investment amount of FJD 250,000 or more, with construction starting from April 1, 2020 and to be completed within 24 months of approval. Or an apartment not intended for a stay of more than 6 months with an investment of at least FJD 7,000,000.	<u>Before starting business</u> Exemption from import duties on capital goods, plant and equipment, building materials, room furniture and fitting equipment, amenities, kitchen and dining equipment, tableware, cooking utensils, water sports equipment raw materials, equipment and facilities that cannot be procured in Fiji at the time of facility construction. <sup>50</sup> <u>After commencement of business</u> Corporate tax exemption applies for different periods depending on the level of capital investment. FJD 250,000 to FJD1,000,000: consecutive 5 years FJD 1,000,000 to FJD 2,000,000: consecutive 7 years FJD 2,000,000 or more: consecutive 13 years
	Facility management	Hotels and resorts managed by local	Import duty on building materials not manufactured or

<sup>50</sup> <https://www.frsc.org.fj/wp-content/uploads/2018/09/tariff-classification.pdf>



Industry/Product/Service		Conditions	Incentives
	for backpackers	operators with annual gross revenues of less than FJD 1,000,000.	<p>available in Fiji, room furniture and fitting equipment, equipment including front office, room amenities, kitchen and dining related equipment and utensils reduced to 5% if Fiscal Duty<sup>51</sup> is 10% or more, Import Excise<sup>52</sup> and 9% VAT exempt.</p> <p>Import duty on building materials not manufactured in Fiji and not available in Fiji, room furniture and fitting equipment, equipment including front office, room amenities, kitchen and dining related equipment and utensils reduced to 3% if Fiscal Duty is 5% or more, Import Excise and 9% VAT exempt.</p> <p>Construction equipment required for project development and re-exported after completion is exempted from import duties and 9% of VAT.</p> <p>5% of Fiscal Duty and 9% of Import Excise and VAT exemption for import of jet skis by approved companies engaged in water sports and other tourism related businesses.</p>
Construction	Modernization of existing buildings	Construction work (interior) to restore the impression and appearance of commercial facilities (excluding hotels and apartments) more than 5 years after construction,	25% of the total capital investment is exempt from corporate tax.

<sup>51</sup> Information provided by FRCS.

<sup>52</sup> A national tax imposed by the government on certain types of goods (e.g., alcohol and tobacco). information provided by FRCS.

Industry/Product/Service		Conditions	Incentives
		<p>renovation, extension, and exterior renovation, with a capital investment of at least FJD 250,000 FJD (excluding the cost of land acquisition), to be completed within 2 years approval. In addition, the redevelopment and renovation will include green technologies and technologies to reduce the environmental impact of human activities, as well as the installation of streetlights to brighten the visibility of roads at night and facilities for the disabled.</p>	
Medical care	Pharmaceutical Manufacturing	<p>Facilities to be constructed with a minimum investment of FJD 250,000 by a corporation approved by the Fiji Pharmacy Board for the manufacture of pharmaceutical products, and capable of commencing operations within 2 years after August 1, 2019</p>	<p><u>Before starting business</u>  Exemption from import duties and 9% VAT imposed on ethanol imports.  Exemption from import duties and 9% VAT on all raw materials imported for the manufacture of approved drugs.  Exemption from import duties and 9% VAT imposed on equipment and parts used to manufacture pharmaceuticals.  <u>After commencement of business</u>  Corporate tax exemption applies for different periods depending on the level of capital investment.</p>

Industry/Product/Service		Conditions	Incentives
			FJD 250,000 to FJD 1,000,000: consecutive 5 years FJD 1,000,000 to FJD 2,000,000: consecutive 7 years FJD 2,000,000 or more: consecutive 13 years
Telecommunications	ICT business in general	ICT businesses approved on or after January 1, 2009 (i.e., software development, call centers, customer contact centers, research and development, animation and content development, distance learning, market research, human resource development services, legal services, compliance and risk services, purchasing services, and other admin Services (but excluding Internet cafes, retailing or wholesaling of ICT-related equipment, repairs, sales, and services for similar related products),)	<u>All industries listed on the left</u> Annual corporate tax exemption from the date of approval for 13 years <u>Research &amp; Development</u> Investment in R&D multiplied by 250% is deducted from corporate income tax. <u>Certified ICT training facilities</u> The amount of expenditure multiplied by 150% is deducted from corporate income tax. Internationally accredited training institutions are exempt from annual corporate tax from the date of approval by the FRCS CEO for 13 years. <u>Application design and software development</u> Deduction from corporate income tax of 150% of the amount spent by start-ups for application design and software development. ICT/BPOs, accredited training institutes and start-ups engaged in application design and software development are exempted from import duty and VAT on computers, computer parts and accessories, special equipment, equipment and fittings, special furniture and other goods required for carrying on ICT business. 9% VAT exemption

Source: FRCS website, "Incentives.

The trade agreements to which the country is a party (or is negotiating) are listed below. The countries and regions with which the country has concluded agreements are mainly Australia, New Zealand, or the EU, which are the largest trading countries, and in addition, there are agreements to facilitate trade within the Pacific region.

Table 23 Trade Agreements That Fiji Has Signed and Their Overview

Trade Agreements				
	Name	Situation	Member Year	Overview
	UK-Pacific economic partnership agreement <sup>53</sup>	Already in effect	2019	In response to the UK's withdrawal from the EU, this agreement is being applied to Fiji and Papua New Guinea in order to continue the trade agreement between Fiji and the UK that was previously within the framework of IEPA. Since this is a post-withdrawal transitional measure, the content that was applied at the time of IEPA is applied.
	EU-Pacific Interim Partnership Agreement (IEPA)	Already in effect	2009	The European Commission is promoting an EPA between EU countries and Pacific countries, which has been signed by Fiji, Papua New Guinea, Samoa, and Solomon Islands (as of September 2021). Fiji will not impose tariffs or quotas on imports from the EU. Fiji committed to eliminate tariffs on 87% imports from the EU within 15 years <sup>54</sup> .
	Pacific Island Countries Trade Agreement (PICTA)	Already in effect	2003	However, only 14 countries including Fiji have announced their readiness to trade under the agreement, and negotiations are underway to apply the agreement in the region.
	Melanesia Spearhead Group Trade Agreement (MSGTA)	Already in effect	1996	A regional free trade agreement with Papua New Guinea, Solomon Islands, Vanuatu, and Fiji in the Melanesian region. The ultimate goal is to liberalize not only goods but also investment, trade in services, and labor among the countries in the region in 2017
Preferential Trade Agreements				
	Name	Situation	Member Year	contents
	South Pacific Regional Trade and Economic Co-operation	Already in effect	1981	Preferential tariffs applied by Australia and New Zealand to imports from countries that are members of the Pacific States Forum. Goods from member countries are duty free

<sup>53</sup> <https://www.gov.uk/government/collections/uk-pacific-economic-partnership-agreement>

<sup>54</sup> <https://trade.ec.europa.eu/access-to-markets/en/content/eu-pacific-states-interim-economic-partnership-agreement>

Agreement (SPARTECA)			and can be exported to Australia and New Zealand without import quotas (sugar exports in Australia are excluded).
Generalised System of Preferences (GSP)	Already in effect	1971	A system under which developed countries (such as Japan, Australia, New Zealand, Canada, and the United States) apply tariff rates lower than general tariff rates (called “preferential tariffs”) to agricultural and mineral products imported from developing countries, including Fiji.
<b>Trade Agreements under Negotiaon</b>			
<b>Name</b>	<b>situation</b>	<b>Member Year</b>	<b>contents</b>
China-Fiji Free Trade Agreement	In preparation	-	Against the backdrop of an increase <sup>55</sup> in 219% imports from China <sup>56</sup> and 763% increase in exports from Fiji over the past 7 years from 2010 to 2017, negotiations are underway to conclude a free trade agreement in order to deepen the relationship as trading partners, and a joint feasibility study has been underway since 2015.
Pacific Agreement on Closer Economic Relations (PACER)	Already in effect	-	A comprehensive trade framework being pursued by Australia and New Zealand, involving the 14 member countries of the Pacific Nations Forum. Fiji is an active participant in the negotiations and has acceded to, but not ratified, the framework.

Source: Ministry of Commerce, Trade, Tourism & Transport website, “International Trade and Market Access”<sup>57</sup>.

<sup>55</sup> Major imports in 2019 included frozen fish (USD 1,480million), processed fish (USD 1,080million), and rubber tires (USD 1,010million).

<https://oec.world/en/profile/bilateral-country/chn/partner/fji>

<sup>56</sup> The main export products in 2019 were frozen fish (USD 2,560 million), iron ore (USD 353 million), water (USD 247 million), etc.

<https://oec.world/en/profile/bilateral-country/chn/partner/fji>

<sup>57</sup> <https://www.mcttt.gov.fj/divisions/trade-unit/programmes/international-trade-agreements/>

### 1.4.3. Financial Sector (Overview of Government and Private Financial Institutions and Their Services)

#### (1) Overview

The financial sector in Fiji is supervised and regulated by the RBF, which has the functions, powers and responsibilities of issuing currency, regulating capital markets, promoting financial stability, consolidating the fiscal structure, and regulating the insurance and securities industries.

The RBF's monetary policy objectives are: (1) to maintain an average inflation rate of about 3% to ensure price stability; and (2) to maintain foreign exchange reserves sufficient to cover imports for 4-5 months. Therefore, the Overnight Policy Rate<sup>58</sup> has been lawered to 0.5% from 2011 onwards and 0.25% from COVID-19 pandemic, and RBF has been trying to promote economic growth and investment through monetary easing through a low interest rate policy.

The financial institutions operating under the RBF license include the Fiji Development Bank (FDB), a government-owned bank, the FNPF, a pension fund, six commercial banks, four credit institutions, and nine insurance companies. Among the private financial institutions, foreign companies headquartered in Papua New Guinea, Australia, India and other countries have established operations in Fiji. Fiji is also home to one of the two South Pacific Stock Exchanges<sup>59</sup> in the region.

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<sup>58</sup> The OPR is the interbank interest rate determined by the central bank, and it influences changes in short-term interest rates of commercial banks. In general, when the OPR declines, the short-term interest rates of commercial banks also decline in tandem with it.

<sup>59</sup> It is located in Papua New Guinea as well as Fiji.

Table 24 Private Financial Institutions in Fiji

Private financial institution	Number of companies	Fiji Company	Foreign-owned enterprise
Commercial bank	6	Home Finance Company Limited	ANZ Banking Group Limited (Australia), Bank of Barooda (India), Bank of South Pacific Limited (Papua New Guinea), Bred Bank Limited (France), Westpac Banking Corporation (Australia) Westpac Banking Corporation (Australia)
Credit institutions* 1	4	Kontiki Finance Limited, Merchant Finance Limited	BSP Finance Limited (Papua New Guinea), Credit Corporation Limited (Papua New Guinea)
Insurance company	9	Fiji Care Insurance Limited, Sun Insurance Company Limited	BSP Health Care Limited (Papua New Guinea), Capital Insurance Limited (Papua New Guinea), New India Assurance Company Limited (India), QBE Insurance Limited (Australia), Tower Insurance Limited (New Zealand), BSP Life Limited (Papua New Guinea), Life Insurance Corporation of India (India)
In addition to the above, 23 private sector financial institutions such as insurance brokers, foreign exchange dealers, stock dealers, investment funds and investment advisors are licensed by the Reserve Bank of Fiji.			

\* 1 Mainly provides services for small and medium-sized companies and individuals.

Source: RBF website<sup>60</sup>

Tier 1 capital ratios of Fiji's financial institutions (commercial banks, credit institutions, and other depository institutions) are above the Basel III requirement of 6%, indicating that the financial institutions are well managed. On the other hand, the non-performing loan ratio (NPL ratio) has been rising from 2016 to 2020 half year. According to information provided by RBF, the NPL ratio was 7.3% as of December 2021, but is expected to recover to around 5% as the economy recovers.

<sup>60</sup> <https://www.rbf.gov.fj/core-functions/financial-stability/licensing/>

Table 25 Financial Indicators of Financial Institutions (Commercial Banks and Credit Institutions) in Fiji

Financial Indicators	2016	2017	2018	2019	2020 2Q
Tier1 capital adequacy ratio*1	13.80	12.85	13.81	15.54	16.15
NPL ratio*2	2.24	2.42	3.09	3.84	5.21
Current ratio*3	60.67	81.16	61.61	70.61	77.28

1 The ratio of Tier 1 capital (capital, legal reserve, surplus and other high-quality capital items) to total assets (0% for cash and deposits, government bonds, etc., 50% for housing loans, etc.) weighted by risk weighting. Under Basel III, the ratio must be at least 6%.

2 Ratio of loans classified as non-performing to total assets.

3 Ratio of current assets to current liabilities.

Source: RBF, Financial Stability Review October 2020

Of the total assets held by all financial institutions in Fiji, the six commercial banks account for the largest share at 41.1%, making them an important lender of funds to the private sector. This is followed by the FNPF at 31.4%, making it the largest institutional investor in Fiji.



• Overview of FNPF

The Fiji National Pension Fund (FNPF) is a defined contribution pension fund in Fiji with a track record of more than 50 years and is the largest institutional investor in the country managing funds under the FNPF Act. The FNPF mainly manages (1) Retirement Fund, (2) Pension Fund, and (3) Special Death Benefit Fund, each with different investment policies and management teams. The portfolio is mainly invested in tourism and residential properties, with a 43% of the portfolio allocated to fixed income investments, mainly Fiji Infrastructure Bonds and Australia Government Bonds. Specifically, the remaining 57% are allocated to equity and real estate investments, including ownership of domestic investment properties such as Inter Continental, Westin, Marriott, and Holiday Inn; ownership, development, and renovation of domestic tourism facilities; and ownership of domestic operating companies (telecommunications, finance, and real estate). In addition, the company basically does not invest in sectors that it considers to be high risk (e.g. mining). According to the information provided by the FNPF, for several years prior to COVID-19, they were funding benefits to members by about 6.5% each year, but for two years after COVID-19, this has decreased to about 5%. In 2020, FNPF had about 447,000 members (up about 6,000 from the previous year), total assets of 7.9 billion FJD (up 400 million FJD from the previous year), and net income of 420 million FJD (down 210 million from the previous year)<sup>61</sup>. According to the information provided by FNPF, FNPF's assets as of the end of FY2021 are as shown in the table below. FNPF has corporate loans (around FJD 10 million) and fixed income investments such as Fiji government bonds (around FJD 36 million), and has sufficient levels of cash and cash equivalents to ensure liquidity.

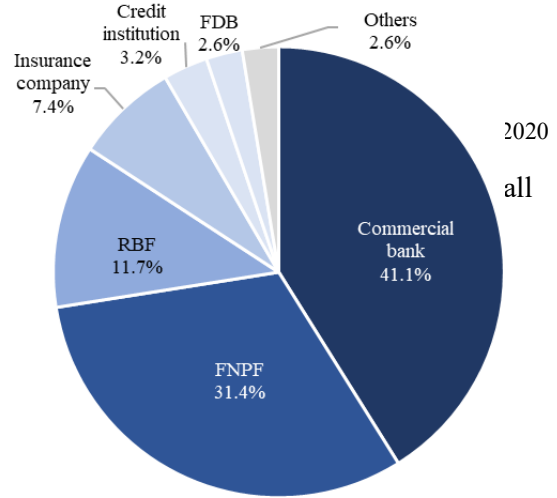


Table 26 Assets of FNPF (end of 2021)

Assets	Amount (millions of FJD)
Cash and cash equivalents	700
Stock investment	1,000
Loan (i.e. short grass)	1,000
Bond investment	3,600
Fixed assets and others	1,800
Total	8,100

Source: Information provided by FNPF

<sup>61</sup> FNPF Annual Report 2020

According to the information provided by the FNPF, when investing, it is necessary to go through a rigorous settlement process that involves consultation with various related departments. In addition, FNPF not only invests, but also sends personnel from FNPF to the management team of the investee to strengthen relationships and provide management advice.

Regarding collaboration with international organizations, according to the information provided by the FNPF, they have a track record of cofinancing with international organizations such as the IFC, World Bank and ADB, and are looking forward to collaborating with other MDBs and banks, including JICA, for cofinancing.

• Overview of FDB

FDB is a governmental development finance institution established in 1967 under the FDB Act with the mission of contributing to the development of agriculture and commerce through finance. The FDB's financial condition from 2015 to 2019 has been stable with a positive profit level, and its capital adequacy ratio in 2019 has been at 40%.

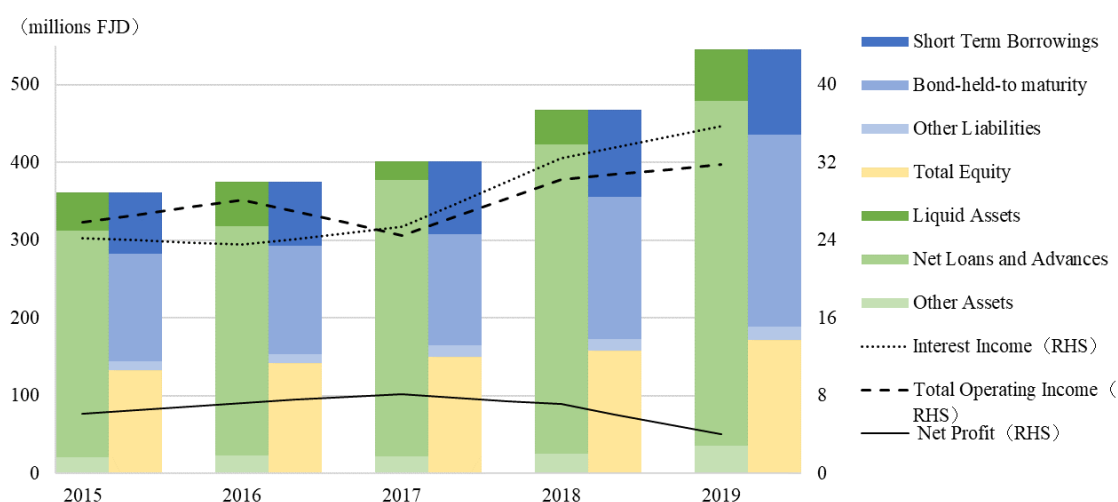
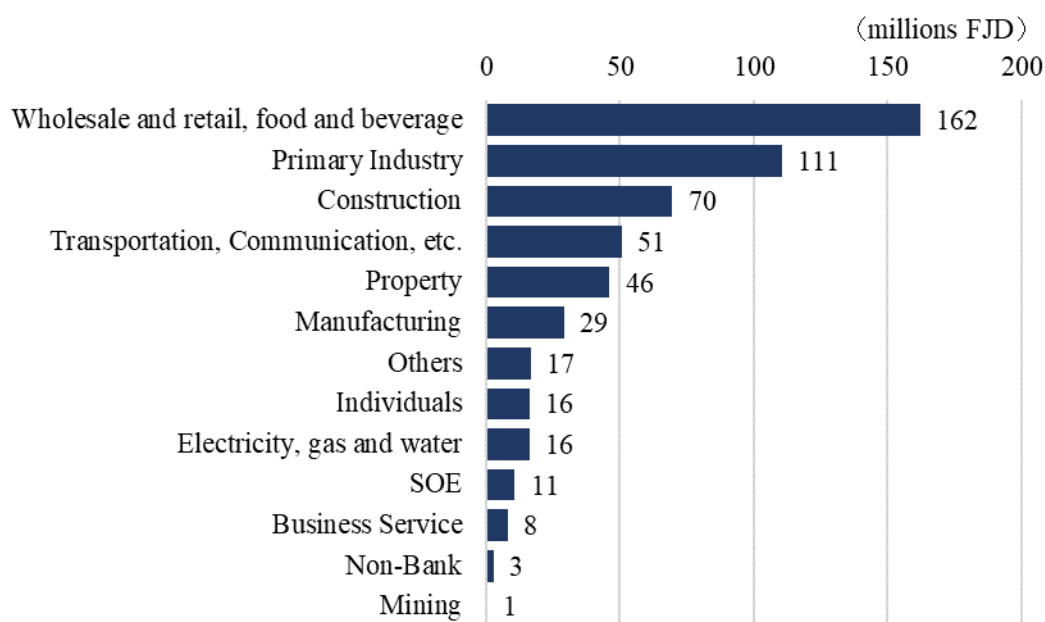


Figure 10 FDB's Financial Status

As for the NPL ratio, it is 16.61% in 2019, which is an improvement over the 17.16% in 2018, but still above the target of 10.00%. According to the information provided by FDB, the high NPL ratio is due to the fact that only some large customers with loans of more than FJD 40 million, not farmers or MSMEs, are rated as NPLs<sup>62</sup> due to COVID-19. This is because only some of the large customers with loans above JD are rated as NPL due to COVID-19, and the NPL ratio of the entire portfolio will improve as their business conditions improve after COVID-19 is resolved.

<sup>62</sup> Loan is classified as a non-performing loan if the principal or interest has not been paid for 18 months. Depending on the status of principal and interest payments, NPLs are classified into the following 3 categories: (1) Substandard (principal repayment is expected but interest payments are not expected), (2) Doubtful (partial principal repayment is expected but interest payments are not expected), and (3) Loss (neither principal nor interest payments are expected).

The FDB's portfolio by industry in 2019 was mostly wholesale/retail, accommodation, and food and beverage, with most of the portfolio for accommodation and food and beverage. The agriculture, forestry and fisheries industries, which are also Fiji's core industries, are the second largest, especially sugar production, which accounts for 92%<sup>63</sup> of the market share, and forestry, lumbering, and fisheries financing are heavily weighted.



Source: FDB Annual Report 2019

Figure 11 FDB's Portfolio by Industry

The FDB has two types of loans: one for agriculture, forestry, and fisheries, and the other for small and medium-sized enterprises (SMEs). For example, the FDB provides loans and guarantees for working capital to product-purchasing organizations such as Fiji Sugar Corporation and Fiji Rice, as well as loans to farmers for the purchase of tractors and other agricultural machinery<sup>64</sup>. Interest rates will be determined on a case-by-case basis, depending on whether or not the borrower is in one of the FDB's priority sectors<sup>65</sup>, the size of the borrower's business, the amount of the loan, and the availability of subsidies (ranging from 3.99% to 13.28% in 2021). In addition, as a measure to ease loan conditions for farmers, the Agriculture Family Loan Facility was established in 2019 to provide loans for farmland improvement, irrigation, renewable energy infrastructure, etc. to farmers who previously could not obtain loans because they did not have formal ownership of their land. Farmers

<sup>63</sup> Refers to the share of FDBs, commercial banks, and credit institutions in the total amount of loans.

<sup>64</sup> Information provided by FDB.

<sup>65</sup> The priority sectors are agriculture, forestry and fisheries; electricity, gas and water supply; manufacturing; mining; business services; state-owned enterprises; transportation, communication and warehousing (SMEs only); and wholesale, retail, accommodation and catering (SMEs only).

who receive this loan are provided with training in financial literacy and business skills development, with the goal of financial inclusion for smallholder farmers<sup>66</sup>.

As for potential areas for future investment, according to the information provided by the FDB, the FDB has been focusing on investment in the tourism industry for the past 10 years, but is now reviewing its investment strategy after COVID-19 and will focus on agriculture (sugarcane, rice, etc.) and micro, small and medium-sized enterprises (MSMEs). As for large-scale infrastructure projects, the ADB, JICA, the World Bank, and private commercial banks are providing support in these areas, and the FDB is not involved in these projects, there is little competition.

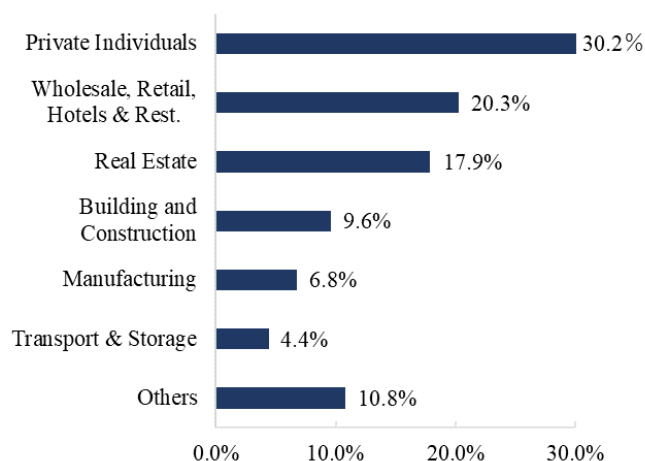
As for the issue of financing for MSMEs, according to the information provided by the FDB, the minimum loan amount is set at FJD 20,000 for SMEs and FJD 5,000 for MSMEs, and the FDB has not been able to provide sufficient financing for small business owners who require smaller amounts of funds. In addition, the application process is still paper-based and inefficient, so simplifying the process is an important issue.

• Overview of Other Domestic Financial Institutions

The only commercial bank located in Fiji that is not owned by foreign capital is Home Finance Company, which mainly provides mortgage loans (e.g., 4.5% fixed rate for 1 year), investment property loans (e.g., 5.5% fixed rate for one year), consumer loans (e.g., 12% interest rate), and time deposits (e.g., 500 FJD minimum deposit, 2.0% interest rate for 5-year maturity). The company provides services such as the sale of time deposits (minimum deposit amount 500 FJD, interest rate 2.0% for 5-year maturity, etc.). The company is owned by FNPF (75%) and Fijian investment fund Unit Trust (25%).

Commercial banks lend most to households and individuals (30.2%), wholesale and retail, accommodation and food services (20.3%), and real estate (17.9%). In addition, as of June 2020, the lending rate is 6.1% (as of January 2020: 6.3%) and the deposit rate is 2.6% (as of June 2019: 3.3%).

The two non-foreign owned credit institutions located in Fiji are Kontiki Finance and Merchant Finance, which mainly offer unsecured loans for wedding and travel funds, secured



Source: RBF, Financial Stability Review October 2020

Figure 12 Lending Sector from Commercial Banks in Fiji

<sup>66</sup> FDB website

loans for home and car purchases, and fixed term deposits (interest rates range from 0.0% to 40.0% for Kontiki Finance).

(2) Development Project

The Financial Sector Development Plan 2016-2025, prepared by the RBF, outlines 10 key policies and 25 initiatives in the areas of legal and regulatory framework, financial inclusion, micro, small and medium enterprises (MSMEs) finance, and improving the environment in the banking, non-banking, health, pension, and capital markets sectors.

According to the information provided by RBF, the progress of the plan is as shown in the table below, and discussions are underway with stakeholders such as stock exchanges and tax authorities to stimulate corporate activities. The National Payment System is also undergoing a major overhaul, which is expected to be completed by 2022. In order to improve access to finance for individuals and MSMEs, the government is continuing to simplify application procedures, including review of guarantees and collateral requirements, and online registration, which was launched in 2019.

Table 27 Overview and Progress of the Financial Sector Development Plan 2016-2025

Priority Fields	Details	State of progress
Create a sound legal and regulatory environment	<ul style="list-style-type: none"> <li>✓ Conducted a review of the legal and regulatory framework of the financial system and developed key recommendations to contribute to the development of the domestic financial sector.</li> <li>✓ Complementing the government's growth strategy, building incentives to promote growth in the financial sector, eliminating market distortions, and reviewing fiscal and tax systems</li> </ul>	<p><u>Completed</u></p> <ul style="list-style-type: none"> <li>✓ Companies (Wholesale Corporate Bonds) Regulations 2021</li> <li>✓ National Payments Act 2021</li> <li>✓ Personal Properties Securities Regulations 2019</li> <li>✓ Personal Properties Securities Act 2017, PPSA</li> </ul> <p><u>Not completed</u></p> <ul style="list-style-type: none"> <li>✓ Draft Legislation for Alternative Finance Crowdfunding</li> <li>✓ Draft Legislation for SMEs</li> </ul>
Strengthen human resource management and service provider development	<ul style="list-style-type: none"> <li>✓ Improve awareness, knowledge and skills of financial sector workers on financial sector development strategies</li> </ul>	N/A

Priority Fields	Details	State of progress
Implementing the latest technology for efficient payment services	<ul style="list-style-type: none"> <li>✓ Development of innovative payment system technologies for electronic documents, online registration, and databases</li> <li>✓ Raise awareness and promote use of convenient and inexpensive money transfer channels</li> <li>✓ Strengthen partnerships between remittance providers and financial institutions for the development and introduction of remittance-related financial products and services</li> </ul>	<p><u>Completed</u></p> <ul style="list-style-type: none"> <li>✓ Financial Sector Development Policy Statement No. 2 - FinTech Regulatory Sandbox Guidelines 2019</li> <li>✓ Pacific Regional Sandbox Guidelines 2020</li> <li>✓ National Payments System Project</li> </ul> <p><u>Not completed</u> N/A</p>
Strengthen the development and competitiveness of nonbanks and other financial institutions	<ul style="list-style-type: none"> <li>✓ Strengthen and develop financial institutions such as FDBs, credit unions, cooperatives, and microfinance institutions and examine ways</li> </ul>	N/A
Promoting sustainable financial inclusion and strengthening consumer protection	<ul style="list-style-type: none"> <li>✓ Introduction of appropriate monitoring and evaluation processes for the implementation of the National Financial Inclusion Strategy 2016-2020</li> <li>Introduction of appropriate monitoring and evaluation processes for the implementation of the National Financial Inclusion Strategy 2016-2020</li> <li>✓ Strengthening the Effectiveness of Fiji's Consumer Protection Framework</li> </ul>	<p><u>Completed</u></p> <ul style="list-style-type: none"> <li>✓ Financial Sector Development Policy Statement No. 1 - Minimum Requirements for Provision of Disaggregated Data</li> </ul> <p><u>Not completed</u></p> <ul style="list-style-type: none"> <li>✓ Draft Sustainable Finance Roadmap</li> <li>✓ Electronic Know Your Customer, e-KYC</li> </ul>

Priority Fields	Details	State of progress
<p>Building an environment for the development and financing of small, medium, and micro enterprises</p>	<ul style="list-style-type: none"> <li>✓ Reviewing the Small Business Development Act of 2002 and Reducing the Cost of Doing Business in Fiji</li> <li>✓ Formulation of key priority measures to be addressed by the Micro, Small and Medium Enterprise Development Plan from the following perspectives <ul style="list-style-type: none"> <li>Products and services for micro, small and medium enterprises</li> <li>Capacity building and mentorship</li> <li>Access to markets</li> <li>Adoption of technology to reduce business costs, improve efficiency, etc.</li> <li>Adequate governance, monitoring, and support framework</li> </ul> </li> <li>✓ Enactment of the Securities and Exchange Law and implementation of the Securities and Exchange Framework</li> <li>✓ Provision of physical locations for small and micro businesses to sell their products at minimal cost.</li> <li>✓ Provide a marketing platform for small and medium-sized companies in Japan and overseas.</li> <li>✓ Strengthen the organization of the Micro, Small and Medium Enterprise Development Center, etc. and establish appropriate governance in accordance with the revision of the Micro, Small and Medium Enterprise Development Act of 2002</li> </ul>	<p><u>Completed</u></p> <ul style="list-style-type: none"> <li>✓ Secured Transactions Reform, (STR): enactment of enabling legislation (PPSA), development of online registry</li> </ul> <p><u>Not completed</u></p> <ul style="list-style-type: none"> <li>✓ STR: design and development of new products and services tailored for secured lending to SMEs</li> <li>✓ Impact Evaluation on STR</li> </ul>

Priority Fields	Details	State of progress
Improving convenience, transparency, and efficiency of domestic banks	<ul style="list-style-type: none"> <li>✓ Promoting competition among banks and helping to ensure convenient prices, fees, and charges that meet the financial needs of individuals and corporations.</li> <li>✓ Development of an information sharing framework that contributes to well-informed risk assessment and pricing</li> <li>✓ Development of Roadmap for Sustainable Development Finance in the Fijian Financial Sector</li> <li>✓ Formulate a financial crisis management plan and study the possibility of deposit insurance to protect deposits.</li> </ul>	N/A
Introducing competition into the pension industry and establishing a savings culture	<ul style="list-style-type: none"> <li>✓ Examining approaches that contribute to the participation of other players in the pension industry</li> <li>✓ Introduction of innovative products and players to meet the retirement savings needs of Fijian workers and other contributors.</li> </ul>	N/A
Promotion of insurance products	<ul style="list-style-type: none"> <li>✓ Develop an awareness program on risk management for economic loss</li> <li>✓ Introduce innovative products, players and delivery channels to increase utilization of insurance services</li> <li>✓ Study of alternative methods for risk reduction and elimination for disaster risk management that cannot be underwritten by regular insurance companies</li> </ul>	<p><u>Completed</u></p> <ul style="list-style-type: none"> <li>✓ Pacific Insurance Climate Adaptation Programme (PICAP)</li> </ul> <p><u>Not completed</u></p> <p>N/A</p>
Establishing a position as a capital market in the South Pacific region	<ul style="list-style-type: none"> <li>✓ Implementation of the annual work plan developed in the Capital Market Development Master Plan 2016-2025</li> </ul>	<p><u>Completed</u></p> <ul style="list-style-type: none"> <li>✓ Debt Capital Markets Development Project</li> <li>✓ Alternative Finance - Crowdfunding</li> </ul>



Priority Fields	Details	State of progress
		<ul style="list-style-type: none"> <li>✓ Awareness Initiatives - Capital Markets Week 2018</li> <li>✓ Issuance of Green Bonds</li> <li><u>Not completed</u></li> <li>✓ Alternative Finance - Crowdfunding Legislation and Platform</li> </ul>

Source: Information provided by RBF and Financial Sector Development Plan 2016-2025 (RBF)

The National Financial Inclusion Strategic Plan 2016-2020, prepared by the RBF, lists 10 targets to be achieved by 2020 as shown in the table below, including access to financial services, account opening rates, mobile money usage rates, and government digital payment rates.

Table 28 Goals and Progress of the Financial Sector Development Plan 2016-2025

Field	GOALS
Achieve national goals	Increase the percentage of adults accessing financial services from 64% to 85% (13 million people) (of which 50% are women)
	Increase the percentage of young people opening accounts from 51% to 80% (25,000 people)
	Establishing a policy framework for SME development
	5% increase in GDP contribution of SMEs
Digital Financial Services	Increase the percentage of adults using mobile money from 2% to 15% (79,000 people)
	Raising government digital payments from 75% to 90%.
Financial education	Integrating Entrepreneurship Training into Higher Education
Green Finance	Development and promotion of sustainable business models to support climate change response
Data Measurement	Development of SME Base Set Indicators
	Collection, measurement, and analysis of detailed data on gender, age, and ethnicity

Source: RBF, National Financial Inclusion Strategic Plan 2016-2020

According to information provided by the RBF, the Second Financial Services Demand Side Survey 2020 (DSS), which was conducted to ascertain the progress of the Plan, assessed the financial needs and barriers to access of rural and coastal youth, persons with disabilities, self-employed persons and women Fijians. All key indicators have improved since the previous survey was conducted in 2014, indicating some progress in financial inclusion.

Table 29 Results of Financial Services Demand-Side Survey

DSS Survey Items	2014	2020
<b>Achieve national goals</b>		
Percentage of respondents who do not have access to formal financial institutions	34%	19%
Percentage of women who own bank accounts	52%	75%
Percentage of men who own bank accounts	68%	82%
of those who save money at formal financial institutions	38%	45%
Percentage of youth (age 15~30) with access to financial services	51%	77%
Percentage of people with disabilities who have access to financial services	-	81%
Percentage of respondents who received credit services from financial institutions in the past 1 year	7%	9%
Percentage of remittances received from abroad or from other parts of the country	23%	34%
Percentage of women who have received remittances	29%	37%
Percentage of remittances sent through legitimate financial institutions	33%	59%
Insurance coverage ratio	12%	15%
<b>Digital Financial Services</b>		
Percentage of mobile money accounts held	7%	17%
Percentage of women who own mobile money accounts	6%	11%
Percentage of account holders with access to Internet banking	8%	11%
<b>Financial education</b>		
of those who want information about financial services	-	60%
of those who want financial literacy training	-	38%
<b>Green Finance</b>		
Percentage of respondents who are aware of green finance and climate change-related products	-	27%

Source: Information provided by RBF

According to the information provided by the RBF, the National Financial Inclusion Strategy Plan 2022-2030 will be prepared after the completion of the Plan, and the focus areas are expected to be digital financial services, green and sustainable finance, consumer protection and market behavior, and MSME development.

(3) Issues and Measures

The following issues were identified from the information provided by the RBF.

Table 30 Details of Financial Sector Challenges in Fiji

Subject name	Details of the issue and countermeasures
Lagging behind in financial inclusion efforts	<ul style="list-style-type: none"> <li>✓ On financial inclusion, progress has been slow after COVID-19, although significant progress has been made in recent 10 years.</li> <li>✓ To implement the financial inclusion agenda, relevant working groups, such as the National Financial Inclusion Taskforce (NFIT), are working with members from both the government and the private sector.</li> <li>✓ In collaboration with various financial service providers, a campaign to improve financial literacy in rural and coastal areas has been implemented, including the airing of a TV program in the local language called “Noda I Lavo”.</li> </ul>
Improving access to MSMEs	<ul style="list-style-type: none"> <li>✓ MSMEs, such as agriculture, forestry, fisheries, and retail trade, account for 60~80% of Fiji's GDP. While it is important to revitalize these sectors, improving access to finance remains a major challenge, as those with lower incomes tend to be reluctant to borrow from commercial banks.</li> <li>✓ The RBF offers the MSME Credit Guarantee Scheme with a maximum rate of interest.</li> <li>✓ Since the FDB unfortunately does not focus on such groups, it would be desirable to create a financial entity that specializes in microfinance.</li> </ul>
Number of private companies in the payment sector	<ul style="list-style-type: none"> <li>✓ There are only a few private companies that provide services such as online fund settlement.</li> </ul>

Source: Information provided by RBF

According to the information provided by RBF and FNPF, regarding PPPs, EFL recognizes that Affordable Housing and construction of nursing homes are potential fields as they can be expected to increase housing prices and create jobs due to construction demand. As for the electric power sector, the capital, technology, and human resources of The Chugoku Electric Power Company have been incorporated into EFL, and in the context of the strong cooperative relationship with Japan, there are high expectations for PPP in the field of renewable energy such as hydropower.

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

- World Bank

In line with Fiji's National Strategy, the Country Partnership Framework 2020-2024 (CPF) has been developed with a particular focus on fostering the investment climate and private sector growth by strengthening the financial infrastructure. Specifically, USD 64 million loan was disbursed in 2019 to strengthen Fiji's medium-term financial sustainability and support, among other things, an improved business environment through better access to finance, especially for women<sup>67</sup>.

- ADB

According to information provided by the RBF, it is providing technical assistance to the Secured Transactions Reform. In addition, the ADB's Private Sector Development Initiative is providing technical assistance and capacity building support for alternative finance such as crowdfunding.

- Alliance Financial Inclusion (AFI)

According to the information provided by RBF, RBF is a member of AFI and participates in working groups in various financial inclusion related areas such as consumer empowerment and market behavior, digital finance, financial inclusion, green finance, and SMEs.

- IFC

According to the information provided by RBF, they have received capacity building on topics related to sustainable finance and Affordable Housing, as well as technical assistance on corporate bond laws and regulations.

- IMF

According to the information provided by the RBF, capacity building on financial inclusion has included participation in workshops and online trainings.

- Pacific Financial Inclusion Program (PFIP)

According to the information provided by the RBF, the RBF has a track record of supporting financial inclusion awareness raising activities, assisting in the drafting of the National Financial Inclusion Plan, supporting demand side surveys for financial services, and funding financial literacy training throughout Fiji, including in rural areas. It has also supported the improvement of access to finance through the provision of loans (about FJD 10,000/person) to rice farmers and Copra farmers<sup>68</sup>.

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<sup>67</sup> World Bank, 2019, New World Bank Support to Strengthen Fiji's Business Environment, Improve Access to Finance, and Boost Resilience to Climate Change

<sup>68</sup> Information provided by RBF.

- Pacific Insurance Climate Adaptation Programme (PICAP)

According to the information provided by the RBF, support was provided for product design, training manuals, capacity building on parametric products, and awareness raising activities for financial service providers on Parametric insurance.

- United Nations Capital Development Fund (UNCDF)

According to the information provided by the RBF, the RBF provided support for the preparation of reports and plans for the PFIP and PICAP studies, and funding for financial literacy training to be conducted throughout Fiji, including in rural areas.

- Sustainable Banking Network

According to the information provided by RBF, it has experience in supporting capacity building related to green finance.

- China

According to the information provided by the RBF, there is no grant or concessional funding from China in areas related to financial inclusion.

## ② Japan

According to the information provided by the RBF, the cooperation needs of Japan include: (1) advice on how to raise awareness of digital financial literacy; (2) support for improving access to finance for MSMEs through crowdfunding and other financial instruments; (3) support for the establishment of financial institutions specializing in MSMEs; and (4) advice on green finance and sustainable finance.

## 1.5. Sectoral Analysis

### 1.5.1. Public Infrastructure (Including Transportation, Urban Planning, Water and Sewerage, and Telecommunications)

#### 1.5.1.1. Transportation

##### (1) Overview

###### 1. Roads and Bridges

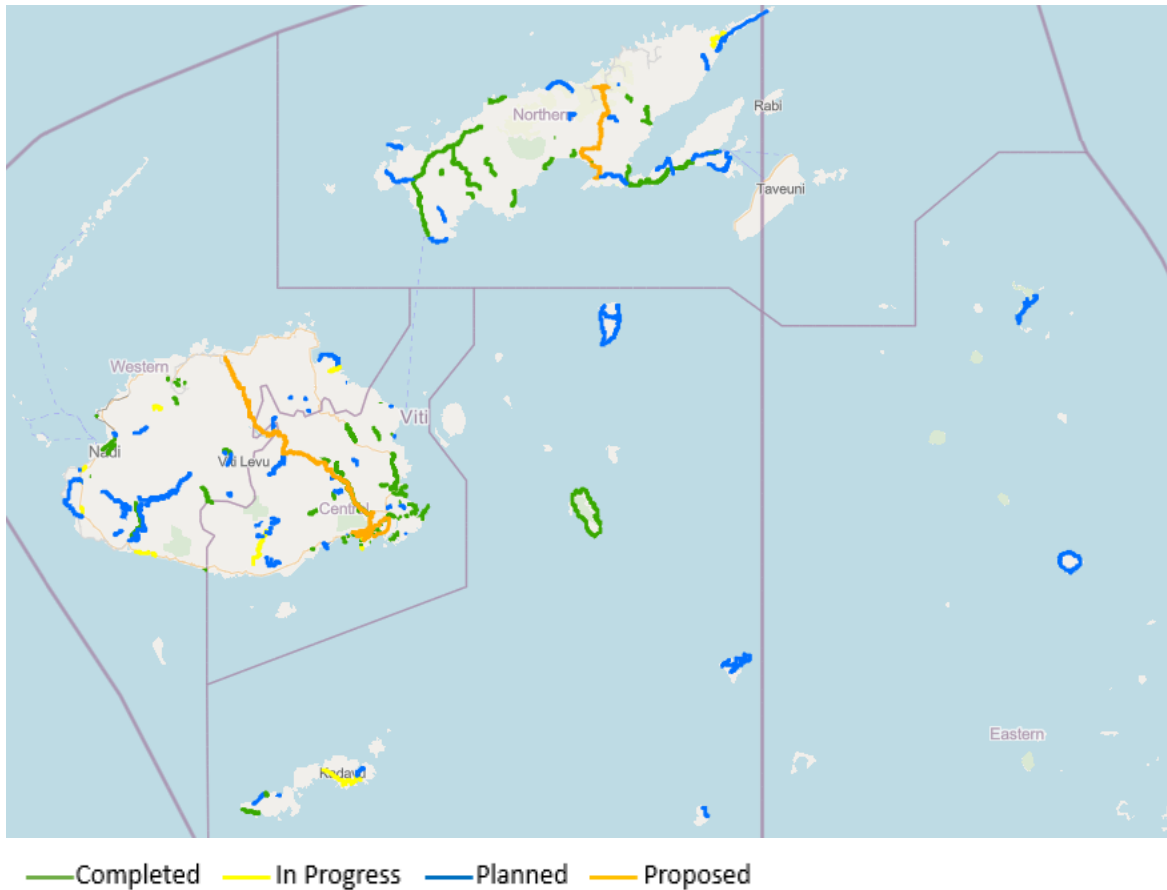
The Fiji Road Authority (FRA) is responsible for the planning, design, construction and maintenance of public roads and bridges, while the Land Transport Authority (LTA) is responsible for vehicle registration, vehicle licensing, road safety and traffic management.

As mentioned earlier, Fiji's national public road network is managed by the FRA, and as of the second quarter of 2021, the total length of the network is 6,457km, with 1,388 bridges and 48 jetties. According to the FRA, about 600km of roads have been rehabilitated in the past one year, and as of the end December 2021, the FRA is in the process of replacing 10 bridges and designing 14 bridges. The figure below shows the location of FRA's projects as of January 2022, including the planning and proposal stages.

Table 31 Distance of Road Extension and Number of Bridges and Piers

Region	Road (km)				Bridge	Pier
	Concrete	Pavement	Unpaved	Total		
Central	12	679	948	1,639	382	10
Eastern part	7	17	472	496	103	16
Northern part	4	385	1,564	1,953	415	15
Western part	9	715	1,645	2,368	488	7
Total	32	1,796	4,629	6,457	1,388	48

Source: Information provided by FRA



Source: Information provided by FRA

Figure 13 Project Location Map of FRA (as of January 2022)

In addition to public roads maintained by the FRA, Fiji has about 6,000km of private roads, including roads in residential areas and forest roads, which cannot be maintained by the FRA because they are private roads. (There are some roads that are already being used in a public manner and should be maintained, but because they are privately owned, the FRA is unable to use its budget to maintain them.)

## 2. Airport and Port

### Airport

Fiji has 2 international airports, Nadi International Airport in Nadi and Nausori International Airport in Suva, as well as several regional airports. Each airport is outlined in the table below, with Nadi International Airport being the main international airport.

Table 32 Overview of Airports in Fiji

Airport Name	Number of runways	Runway length
Nadi Airport (international and domestic flights)	2	(1) 3,146 x 45m, (2) 2,040 x 45m
Nausori Airport (international and domestic flights)	1	2,148 x 45m
Bureta Airport (domestic flights)	1	668 x 18m
Cicia Airport (domestic flights)	1	920 x 23m
Gau Airport (domestic flights)	1	754 x 19m
Kadavu Airport (domestic flights)	1	832 x 23m
Koro Airport (domestic flights)	1	793 x 22m
Labasa Airport (domestic flights)	1	1069 x 30m
Lakeba Airport (domestic flights)	1	826 x 18m
Matei Airport (domestic flights)	1	1000 x 23m
Moala Airport (domestic flights)	1	750 x 23m
Ono-i-lau Airport (domestic flights)	1	850 x 23m
Rotuma Airport (domestic flights)	1	1405 x 23m
Savusavu Airport (domestic flights)	1	803 x 18m
Vanuabalavu Airport (domestic flights)	1	726 x 22m

Source: Information provided by Fiji Airports

Table 33 Number of Passengers on International Flights

(Unit: Number)

Airport Name	2019				2020			
	Arrival	Departure	Connecting (flight)	Total	Arrival	Departure	Connecting (flight)	Total
Nadi Airport	1,005,190	1,007,800	153,594	2,166,584	178,758	190,928	190,928	404,050
Nausori Airport	17,954	17,954	1,917	37,394	4,027	3,548	266	7,841

Source: Information provided by Fiji Airports



Table 34 Number of Passengers on Domestic Flights

(Unit: Number)

Airport Name	2019		2020	
	Arrival	Departure	Arrival	Departure
Nadi Airport	158,661	160,074	63,247	64,491
Nausori Airport	167,124	161,988	101,505	99,319
Bureta Airport	2,127	1,950	1,073	971
Cicia Airport	418	448	404	431
Gau Airport	326	327	256	287
Kadavu Airport	3,378	3,785	548	763
Koro Airport	216	252	212	285
Labasa Airport	79,053	79,878	45,021	44,533
Lakeba Airport	708	948	1,294	1,341
Matei Airport	1,7195	17,878	6,082	6,584
Moala Airport	352	354	373	455
Ono-i-lau Airport	-	-	-	-
Rotuma Airport	1,994	2,184	2,572	2,905
Savusavu Airport	17,066	17,541	7,577	7,850
Vanuabalavu Airport	653	783	573	561

Source: Information provided by Fiji Airports

## Port

As for the ports, the ports of entry are Suva, Lautoka, Levuka, Wairiki, and Malau. The largest port is Suva, which has 3 berths of maximum depth 12 meters and has the capacity to berth 3,500 TEU containers or handymax general cargo ships. The second largest port is the Port of Lautoka, which has berths of up to 11 meters in depth and has the capacity to berth 2,800 TEU containers or handymax general cargo vessels. The above 2 ports alone handle about 95% of Fiji's import and export cargo<sup>69</sup>.

Table 35 Suva Port Wharf Facilities Overview

Wharf Name	Extension	Depth
Kings Wharf	496m	19m
Walu Bay Wharf	184m	7.5m
Princess Wharf	163m	5m

Source: Fiji Ports Terminal Limited's website<sup>70</sup><sup>69</sup> <https://www.fijiportsterminal.com/facilities><sup>70</sup> <https://www.fijiportsterminal.com/facilities>

Table 36 Overview of Wharf Facilities at Lautoka Port

Wharf Name	Extension	Depth
Queens West Wharf	150m	9.5m
Queens North Pier	145m	9.8m
Queens East Wharf	145m	8.3m

Source: Fiji Ports Terminal Limited's website<sup>71</sup>

According to Fiji Airports, the Ministry of Economy does not intend to promote the participation of the private sector in the operation of the airport, and in response to this policy, there are no PPP projects under consideration by Fiji Airports<sup>72</sup>.

## (2) Development Project

### 1. Roads and Bridges

#### 5 Year & 20 Year National Development Plan (NDP)

The NDP 2017-2036 touts the importance of “investment in road infrastructure as essential for future growth”. The plan aims to initiate large scale projects to pave most of the existing unpaved roads in the coming 20 years.

The NDP 2017-2021 sets out the policies in the table below.

Table 37 Policies Set Out in the NDP 2017-2021

<ul style="list-style-type: none"> <li>• Expansion of local road network</li> <li>• Further development of road network to international standards with emphasis on maintenance, rehabilitation and upgrading.</li> <li>• Expand rural transportation services</li> <li>• Ensuring safe, efficient (including reducing traffic congestion), and affordable transportation services</li> <li>• Ensure environmentally sustainable transportation.</li> </ul>
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Source: NDP 2017-2036, p.69-71

<sup>71</sup> <https://www.fijiportsterminal.com/facilities>

<sup>72</sup> Information provided by Fiji Airports

In addition, key performance indicators have been set as shown in the table below.

Table 38 Indicators Listed in NDP 2017-2021

Indicator	2016	2017	2018	2019	2020	2021
Existing roads to be maintained (km)	7,524	7,524	7,524	7,524	7,524	7,524
Existing roads to be resurfaced (km)	340	340	340	340	340	340
Number of existing bridges to be updated	1,251					
Number of existing piers to be updated	47					
Number of new streetlights to be built	500	500	500	500	500	500
Number of existing street lights to be updated	2,000	2,000	2,000	2,000	2,000	2,000
Number of fully automated vehicle inspection systems	1	1	1	1	1	1
Number of permanent measuring instruments	2	2	2	2	2	2
Annual number of fatalities in road traffic	0	0	0	0	0	0
Reduction in dependence on imported fossil fuels per km traveled (%) (Current value: 42%)	42	40	36	34	32	TBD
Reduction rate of automobile emissions (%) (current value: set to 50%)	50	47	45	43	40	TBD

Source: NDP 2017-2036, p.74

As of December 2021, FRA is preparing plans and indicators for 2022 and beyond, since the current NDP 2017-2021 covers the period up to 2021. According to FRA, only the indicator of “number of existing bridges to be renewed” was not achieved (target: 1,251, actual: 30-40), but all other indicators were achieved.<sup>73</sup>

#### Greater Suva Transportation Strategy 2015-2030

In 2014, FRA compiled the Greater Suva Transportation Strategy 2015-2030 as a short- to medium-term road network development plan for the Suva metropolitan area. The plan identifies 6 major challenges for the Suva metropolitan area as identified by stakeholders, as shown in the table below. Transportation infrastructure is inadequate in terms of both quality and quantity, and safety is perceived to be an issue.

<sup>73</sup> Information provided by FRA

Table 39 Key Issues Related to the Transportation Sector in the Suva Metropolitan Area

- Traffic congestion during peak hours
- Bus infrastructure and routes
- Quality and quantity of infrastructure to support safe and efficient travel
- Road safety (including pedestrians, signs, road markings, and lighting)
- Control and Regulation
- Driver education and awareness

Source: Greater Suva Transportation Strategy 2015-2030, p.10

The plan identifies 7 major programs (137 priority projects) to address the above issues. The analysis shows that the implementation of these programs/projects will require an investment of FJD 1 billion over the next 15 years. The 7 major programs are listed in the table below.

Table 40 Key Programs in the Greater Suva Transportation Strategy 2015-2030

- Installation of dedicated bus lanes
- Improve bus terminals
- Traffic signal linkage
- Improved pedestrian safety
- Strengthening the crackdown
- Improve intersections
- Develop a plan to design a more efficient bus network

Source: Greater Suva Transportation Strategy 2015-2030, p.3

#### Fiji Transport Infrastructure Investment Plan

The Fiji Transport Infrastructure Investment Plan (FTIIP), which outlines infrastructure investment policies, priorities, and investment projections in 2017-2036, emphasizes the importance of maintaining and managing infrastructure assets. The FTIIP emphasizes the importance of maintenance of infrastructure assets and states that the public policy objectives listed in the table below should be considered when evaluating and prioritizing transport infrastructure investments.

Table 41 Public Policy Goals to Consider When Evaluating and Prioritizing Transportation Infrastructure Investments

- Regional development: Target remote, underdeveloped, and poor areas such as the north and east. It not only provides infrastructure through infrastructure construction, but also employs workers.
- Universal access: Ensure basic access to all suburban population areas and make them accessible to the socially and physically vulnerable.
- Urban development areas (greenfield and regeneration).

- Transportation infrastructure as part of industrial development and revitalization, including the sugar industry, other agricultural production, tourism, and the creation of special economic zones.
- To improve disaster resilience, which is highly relevant to Fiji, recognizing that the transportation system, while serving as an important lifeline, is at risk from natural disasters, especially tropical storms.

Source: FTIIP, p.6

## 2. Airports and Harbors

### 5 Year & 20 Year National Development Plan

The NDP 2017-2036 sets a goal for airports to modernize and update both international and domestic airports to meet international standards. The NDP 2017-2021 sets out the policies in the table below.

Table 42 Airport and Port Related Policies in NDP 2017-2021

<p><u>Airport (domestic flights)</u></p> <ul style="list-style-type: none"><li>• Ensuring stable and reliable domestic air services</li><li>• Expansion of domestic air routes</li><li>• Ensure better air service infrastructure for all runways on remote islands.</li><li>• Ensure a higher level of safety standards for domestic airlines</li></ul> <p><u>Airport (International)</u></p> <ul style="list-style-type: none"><li>• Improve Nadi's status as the country's main gateway</li><li>• Continue to improve Nausori Airport and develop a new airport to provide more international services.</li><li>• Maintain a strong, independent, autonomous, and efficient civil aviation oversight system that meets ICAO standards and international best practices</li></ul> <p><u>Harbors</u></p> <ul style="list-style-type: none"><li>• Develop port infrastructure at the level expected for an international and regional port.</li><li>• Apply global environmental best practices in all ports to promote sustainable development.</li></ul> <p><u>Common to airports (international flights) and ports</u></p> <ul style="list-style-type: none"><li>• Maintain the strong financial position of Airports Fiji Limited and Ports Fiji Corporation Limited (and its subsidiaries)</li></ul>
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Source: NDP 2017-2036, p.81 • 84-85

In addition, key performance indicators have been set as shown in the table below.

Table 43 Indicators in NDP 2017-2021 (International)

Indicator	2016	2017	2018	2019	2020	2021
Secure direct flights to Asia and the US	Singapore	Other Asian countries and North America				
Increase passenger traffic at Nadi International Airport by 50% (base year:2015) (%)	10	20	30	40	50	TBD
Maintain effective implementation of Fiji's safety systems at or above global targets in the ICAO Member State dashboard (%)	100					
Number of fatal accidents	0					
80% improvement in sales from international flights arriving in Fiji (base year: 2015) (%)	10	20	40	60	80	TBD
80% improvement in port efficiency (base year: 2015) (%)	10	20	40	60	80	TBD

Source: NDP 2017-2036, p.87

Table 44 Indicators in the NDP 2017-2021 (Domestic routes)

indicator	2015	2016	2017	2018	2019	2020	2021
Growth rate of domestic passenger traffic (%)	20	22	24	26	28	30	30
Growth rate of domestic flight arrivals and departures (%)	15	16	17	18	19	20	20
Number of new airports	-	-	-	-	-	1	1
Number of upgrades to existing airports	13						
Compliance of aviation professionals with ICAO standards (%)	100	100	100	100	100	100	100
Aircraft accidents and fatalities (ensuring safety and security through compliance with ICAO standards)	0	0	0	0	0	0	0

Source: NDP 2017-2036, p.82

## Nadi Airport Master Plan

A master plan for Nadi Airport, including the extension of the runway, was prepared in 2018. However, according to Fiji Airports, the plan is based on the demand forecast before COVID-19 and needs to be reviewed, and the implementation of the plan has been stopped. In addition, the company has not yet decided who will fund the project and needs to review the plan as well as look for funders (as of January 2022)<sup>74</sup>.

### (3) Issues and Measures

#### 1. Roads and Bridges

The issues related to roads and bridges presented by the FRA are shown in the table below.

Table 45 Details of Issues Related to Roads and Bridges

Subject name	Issue Details
Poor access to transportation infrastructure for residents of rural areas	About 20% of the rural areas are inaccessible to transportation infrastructure such as roads, piers, and airports. This is especially true in inland areas such as Viti Levu and Vanua Levu islands, and in the Maritime Islands.
Shortfall in human resources	There is a shortage of human resources in both the government and the private sector, and there is a need to provide comprehensive vocational training in all aspects of road infrastructure planning, design, construction, and contract management.
Developing human capacity to cope with climate change	The impact of climate change on infrastructure is a major challenge, and there is a need to strengthen capacity on risk assessment and integration of adaptation and mitigation measures into planning and design.
Unscheduled expenditures due to damage caused by bad weather, cyclones, etc.	Unscheduled expenditures for restoration work after bad weather, cyclones and other damage.
Increased maintenance requirements due to climate change and natural disasters	Maintenance requirements are increasing due to the frequent occurrence of climate change and natural disasters.
Quality of road infrastructure	There are delays in road maintenance and rehabilitation due to lack of resources.
PPP projects difficult to implement	PPPs have been discussed, but it is difficult to implement them in Fiji, which does not have roads and bridges that can be tolled and has a small population.

Source: Information provided by FRA

<sup>74</sup> Information provided by Fiji Airports



## 2. Airports and Harbors

The following table shows the issues it was able to identify regarding airports and harbors.

Table 46 Details of Issues Related to Airports and Harbors

Subject name	Issue Details
Airport	
Deficit structure of airports other than Nadi Airport	Only Nadi Airport is profitable, and its profits cover the deficits of other airports in the country.
Lack of runway at Nadi airport	The Nadi Airport Master Plan includes a plan to extend the runway, but the plan is based on the demand forecast before COVID-19 and needs to be reviewed and the implementation of the plan has been stopped. The plan needs to be reviewed and the implementation of the plan has been halted. In addition, the funders have not been decided, and it is necessary to review the plan and look for funders.
PPP projects difficult to implement	The entry of a local tourist operator at Savusavu Airport has been considered, but it did not happen because the current size of the airport does not allow for profitability.
Port	
Volume of cargo handled	The volume of cargo handled, including imports, exports, and transshipments, needs to be improved.

Source: Information provided by Fiji Airports and NDP 2017-2036, p.83

(4) Direction of Cooperation

① Non-Japanese Partners

• ADB

In its Country Partnership Strategy Fiji 2019-2023, the ADB has set out 3 strategic objectives to achieve “sustainable and inclusive growth led by the private sector. Infrastructure development<sup>75</sup> is one of them. The table below shows the results of recent projects.

Table 47 Recent Projects by ADB

Approve	Project name
Jan 2021	Fiji Airways COVID-19 Liquidity Support Facility
Apr 2020	Preparing Projects to Enhance Transport Connectivity and Resilience in the Pacific
Oct 2019	Pacific Region Infrastructure Facility Coordination Office-Leveraging Infrastructure for Sustainable Development
Dec 2017	Implementation of Sustainable Transport for All
Dec 2015	Ports Development Master Plan in Fiji
Dec 2014	Transport Infrastructure Investment Sector Project (formerly Bridge Replacement Project)
Nov 2013	Transport Sector Planning and Management
Aug 2009	Emergency Flood Recovery (Sector) Project
Mar 2009	Third Road Upgrading (Sector) Project (supplementary loan)

Source: ADB website<sup>76</sup>

• ADB and World Bank

The Transport Infrastructure Investment Sector Project (formally Bridge Replacement Project) is under implementation with funding from ADB and World Bank. The ADB is contributing USD 1 billion for construction work and USD 70 million for capacity strengthening, and the World Bank USD 50 million to repair and upgrade existing roads, bridges and local piers, and to strengthen institutional capacity of central and line agencies<sup>77</sup>.

• China

In 2018, the Stinson Parade Bridge and Vatuwaqa Bridge were opened on Stinson Parade Road and Fletcher Road in Suva City with Chinese support<sup>78</sup>.

<sup>75</sup> ADB, Country Partnership Strategy, Fiji, 2019-2023, p.9

<sup>76</sup> <https://www.adb.org/projects/country/fij/sector/transport-1064/sector/transport-and-ict-1372>

<sup>77</sup> <https://www.adb.org/projects/48141-001/main>

<sup>78</sup> <https://www.fiji.gov.fj/Media-Centre/Speeches/English/HON-PM-BAINIMARAMA-AT-THE-OPENING-OF-STINSON-PARAD>

According to the FRA, the following Implementation Agreements for the construction of piers have been signed between the 2 countries in October 2019<sup>79</sup>.

- Kiuva Village, Tailevu Province
- Korolevu Bay, Nadroga/Navosa Province

- EU

A bridge (425m) was built on the route between Suva and Nausori Airport, jointly funded by the EU and the Fijian government, and opened in 2006<sup>80</sup>.

- Australia

Australia provided a loan to Fiji Airports in August 2021 through the Australian Infrastructure Financing Facility for the Pacific (AIFFP). The loan, made in conjunction with ANZ Fiji, will be used to refinance Fiji Airports' existing debt from Westpac Bank (FJD 66 million) and to develop airport infrastructure (FJD 40 million). AIFFP has provided a loan of FJD 10 million for infrastructure and ANZ Fiji has provided a loan of FJD 66 million for debt refinancing and FJD 30 million for infrastructure<sup>81</sup>.

② Japan

Japan has set “Strengthening Foundation for Sustainable and Resilient Economic Development” as one of the priority areas for the coming 3 years, which was announced at the PALM9 held on July 2, 2021. One of the action plans for this priority area is “Quality infrastructure development - strengthening connectivity through quality infrastructure development such as ports, airports, ships, roads, ICT, etc., capacity building for effective management, maintenance and utilization of quality infrastructure through dispatch of experts, etc., and cooperation in the field of financial infrastructure. The Japanese government will continue to strengthen its support for infrastructure development, including roads.

In the Country Assistance Policy (April 2019), the expansion of economic activities is set as development issue 1-1, and the program will be implemented by combining support schemes such as dispatch of individual experts, dispatch of volunteers, grassroots technical cooperation, and grant aid and grant aid. The policy of the program is to support the development of social and economic infrastructure as well as human resources that will contribute to sustainable development, including maintenance and management of facilities, with a view to the future development of South-South cooperation to neighboring countries and the contribution to neighboring small island countries through the implementation of regional training programs that take advantage of the convenience of the hub. Japan's major cooperation projects so far include the Reconstruction of Tamavua-i-wai

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<sup>79</sup> Information provided by FRA

<sup>80</sup> [https://www.istructe.org/journal/volumes/volume-85-\(published-in-2007\)/issue-10/the-construction-of-the-new-rewa-river-bridge,-nau/](https://www.istructe.org/journal/volumes/volume-85-(published-in-2007)/issue-10/the-construction-of-the-new-rewa-river-bridge,-nau/)

<sup>81</sup> Information provided by Fiji Airports

Bridge (preparatory study), which started in 2018, and the Pacific Region Port Operation and Maintenance Policy Advisor (wide-area cooperation).

#### Roads and Bridges

As for the cooperation needs from Japan, the FRA indicated that there is a high need for capacity building in the following areas.

- Comprehensive on-the-job training in road planning and contract management
- Improve capacity for managing procurement and performance-based contracts
- Review of institutions and private sector capacity
- Improving FRA's management capacity
- Strengthen capacity for risk assessment and integration of adaptation and mitigation measures into planning and design to cope with climate change

In addition, the FRA has compiled a project list of cooperation needs from donors (including support from foreign countries other than Japan), as shown in the table below. This list has been shared with other donors, and it is considered to be an effective strategy to collaborate with other donors and consider the contents of cooperation based on this list.

Table 48 Cooperation Needs of FRA

Areas of Cooperation	Budget (FJD)	Expected Effects
Capacity building and institutional strengthening	0.5 million	<ul style="list-style-type: none"> <li>• Build capacity within the organization to provide high quality engineering services.</li> <li>• Capacity building and institutional strengthening for managers and design engineers to conduct high quality feasibility studies, conceptual designs, and detailed designs (geotechnical, hydraulic, structural, civil, pavement, traffic safety, etc.)</li> </ul>
Construction Quality Assurance Management	0.5 million	<ul style="list-style-type: none"> <li>• Set up FRA's own quality lab for quality assurance management</li> </ul>
Signal system improvement	10 million	<ul style="list-style-type: none"> <li>• Upgrade of Traffic Signals Coordinated System (SCATS) and implementation of technology solutions</li> <li>• Expansion of signal system installation areas</li> </ul>
Building an Intelligent Transportation System	0.5 million	<ul style="list-style-type: none"> <li>• Establish a planning and investment framework for the establishment of an intelligent transportation system.</li> </ul>
Develop standard specifications,	0.5 million	<ul style="list-style-type: none"> <li>• Review of FRA's standard specifications, manuals, and guidelines</li> </ul>

Areas of Cooperation	Budget (FJD)	Expected Effects
manuals, and guidelines		
Road asset management system development	0.5 million	<ul style="list-style-type: none"> <li>Review and develop a management system for all of FRA's infrastructure assets</li> </ul>
Construction of Rewa-Vutia Bridge	50 million	<ul style="list-style-type: none"> <li>Improving access to transportation in rural areas where people are forced to travel by outboard motor</li> </ul>
Jetty maintenance at various locations (Vanuabalavu, Moala, Koro, Vunisea 2, Natuvu/Vanikura, Makogai, Wainiyabia, Vatulele and Nabukeru)	80 million	<ul style="list-style-type: none"> <li>Replacement of existing aging piers to ensure safety</li> </ul>
Replacement and renovation of domestic 40 bridges	400 million	<ul style="list-style-type: none"> <li>Ensuring safety by replacing or upgrading existing bridges that are aging.</li> </ul>

Source: Information provided by FRA

#### Airports and Harbors

As for the airport, it is thought that the most effective strategy is to keep a close eye on the review of the master plan of Nadi Airport and to discuss with Fiji Airports, which is looking for funders, the possibility of cooperation.

Table 49 Cooperation Needs of Fiji Airports

Field	Needs
Human Resource Development	Airfield: Pavement maintenance and inspection training Rescue and Firefighting: Training of Senior Officers and Development of Real Flight Simulator Aviation security: Training and development with new technologies Training and software for instrument flight system design Training and equipment to airport operation center
Infrastructure	VOR/DME (Nadi, Nausori, and Labasa airports) rescue fire truck AIXM, FIXM, and IWXXM and SWIM systems

Source: Information provided by Fiji Airports

As for the ports, improvement in the volume of cargo handled is listed as an issue in the NDP 2017-2036, and since the ADB is conducting a Site Selection Study for the relocation of the container terminal in Suva, it is considered to be an effective measure to monitor the progress of this plan and consider the possibility of collaboration with the ADB.

### 1.5.1.2. City Planning

#### (1) Development Project

- 5 Year & 20 Year National Development Plan

The NDP 2017-2021 sets out the following policies to create vibrant and environmentally sustainable cities.

Table 50 Policies Set Forth in NDP 2017-2021

<ul style="list-style-type: none"><li>• Strengthen planning and management at the municipal level</li><li>• Identify growth cities and strengthen long-term planning to develop them into vibrant urban centers</li><li>• Create an environment that encourages efficient use and effective management of resources by households and businesses in the central city.</li><li>• Develop infrastructure and urban plans that incorporate projections of the impact of climate change and natural disasters</li></ul>
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Source: NDP 2017-2036, p.99

#### (2) Direction of Cooperation

Ministry of Local Government is preparing a master plan for the development of major cities (Suva, Nadi, Lautoka) in cooperation with Singapore Cooperation Enterprise (SCE)<sup>82</sup>. However, the full picture is yet to be disclosed<sup>83</sup>.

In JICA's past cooperation, there was a desire to formulate an urgent redevelopment plan, such as relocation and renovation of the existing aging Suva Port and elimination of chronic traffic congestion, and a proposal (Eastern Gateway Concept) was prepared by individual experts, and the content of the proposal was brought to the attention of even the Vice Minister of the Ministry of Infrastructure at the time.

Also, under the leadership of the City of Yokohama (Y-Port Project<sup>84</sup>), consideration is being given to reflecting the city's urban planning experience in Suva's urban development (Smart City Project).

Now that the full picture of the master plan supported by SCE is not yet clear, it would be advisable to wait for the full picture to be revealed and consider the possibility of providing support in line with the plan.

<sup>82</sup> <https://www.fiji.gov.fj/Media-Centre/News/MASTER-PLAN-UNDERWAY-TO-TRANSFORM-FIJI%e2%80%99S-TOWNS-AND>

<sup>83</sup> It is expected to be completed as soon as the border is reopened, <https://www.fbcnews.com.fj/news/master-plan-to-be-completed-once-borders-open>

<sup>84</sup> International technical cooperation through public-private partnerships utilizing Yokohama's resources and technologies

### 1.5.1.3. Water and Sewerage

#### (1) Overview

The Ministry of Infrastructure and Meteorological Services Department of Water and Sewerage (DWS) is responsible for the water and sewerage sector in Fiji. The main roles of the DWS are to formulate policies and regulations for the provision of sustainable water and wastewater services, develop a regulatory framework, supervise and manage the Water Authority of Fiji, and manage government subsidies to the authority.

The Water Authority of Fiji (WAF) was established by the Fijian government in 2010 and owns 55 water treatment plants and 11 sewerage treatment plants throughout the country. Households with an annual household income of less than FJD 30,000 are provided with 92,500 liters of water free of charge by the Fiji Water and Sewerage Authority.

There are three types of water supply systems: (1) Urban Water Supply System (managed by WAF), (2) Semi-Urban Water Supply System (managed by the state), and (3) Rural Water Supply System (WAF builds simple facilities such as mini-dams, and the management is done by the Water Committees of each community)<sup>85</sup>.

Table 51 Number of Water and Wastewater Treatment Plants in Fiji

Island name	Number of drinking water treatment facilities	Number of sewerage treatment plants
Rotuma Island	3	0
Vanua Levu Island	13	1
Taveuni Island	6	0
Vanua Balavu Island	1	0
Lakeba Island	2	0
Moara Island	1	0
Kadavu Island	1	0
Ovalau Island	4	0
Viti Levu Island	24	10

Source: Water Authority of Fiji website (as of January 2021)

Fiji's water and sewerage tariffs are paid once to the national treasury, and water and sewerage projects are funded by government subsidies of about five times the revenue<sup>86</sup>. The WAF is

<sup>85</sup> Information provided by WAF

<sup>86</sup> The budget allocated by the government for the project is about FJD 77-85 million an annual year. In contrast, revenues have been limited to about FJD 50 million even in the highest years so far.



proposing to the central government to raise the water and sewerage tariffs<sup>87</sup> in order to achieve self-sustainable operations, and is also hoping that the higher tariffs will have the effect of reducing water demand<sup>88</sup>.

Fiji's non-revenue water rate has been reduced from 52% in 2013 to 31.6% in 2017<sup>89</sup>. The WAF attributes this achievement to a project with the Fukuoka City Waterworks Bureau<sup>90</sup>. Fukuoka City Waterworks implemented a grassroots technical cooperation project from 2014 to 2017 reduce non-revenue water in the Nadi and Lautoka water projects, transferring Fukuoka City's technology. While working on this project, various other issues related to water supply in Nadi and Lautoka were identified and the WAF urged for further technology transfer. In response to the WAF's strong request for further technology transfer, the "Water Supply Service Enhancement Project in Nadi and Lautoka Districts" was implemented from 2018 to 2021 through grassroots technical cooperation.

## (2) Development Project

In addition to the NDP, the DWF is preparing a Rural Water and Sanitation Policy, and the National Water Resources Management and Sanitation Policy is being finalized with support from ADB<sup>91</sup>. The National Integrated Water Resource Management Plan for Fiji is also expected to be finalized in July 2022 with the support of ADB and will be the target document for the next NDP.

The Water and Sewerage Bill<sup>92</sup> and the Water Carting and Rainwater Harvesting Guidelines also exist as related bills and plans.

WAF has prepared a 20-year Master Plan and a Non-Revenue Water Reduction Strategy (approved in February 2021), and for drinking water, since water pressure management is the main area of focus for the future, a Pressure Management Programme will be launched in 3 pilot areas (Suva, Nausori, Lnbasa) (January 2022)<sup>93</sup>.

The NDP sets the following targets for each 5 year for the percentage of the population with access to clean and safe water in the required quantities, and for the percentage of the population with access to central sewerage treatment facilities.

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<sup>87</sup> Water tariffs were raised in the early 2000s and have not been raised since. The WAF has always asked for a price increase, but with elections scheduled in 2022, the WAF believes it will be difficult to achieve. The collection rate of water bills is increasing with the spread of on-line payment.

<sup>88</sup> JICA, March 2020, Report on the information collection and verification study on the water supply and sewerage sector, Republic of Fiji

<sup>89</sup> According to the information provided by WAF, as of December 2021, the non-revenue water rate has increased again to 48%.

<sup>90</sup> Water Authority of Fiji 2017 Annual Report

<sup>91</sup> Information provided by DWS

<sup>92</sup> According to the information provided by DWF as of December 2021, it is being developed with the support of UNICEF.

<sup>93</sup> Information provided by WAF

Table 52 Target Percentage of Population with Access to Clean and Safe Water/Central Sewerage Treatment Facilities (%)

Water/Sewerage	Target area	2015(Actual)	2021	2026	2031	2036
Access to clean and safe drinking water	Whole country	78	90	95	100	100
	Region	58	85	90	100	100
	Urban centre	98	100	100	100	100
Access to the central sewerage treatment facility	Whole country	25	40	50	60	70
	Region	0	40	50	60	70
	Urban centre	25	40	50	60	70

Source: 5-Year & 20-Year National Development Plan (p.10, Ministry of Economy)

The WAF has developed a three-year Strategic Plan, 2020-2022, which was scheduled to be developed in 2019, but due to delays in the implementation of the project due to Fiji's planned budgetary allowances, the Strategic Plan 2017-2019 was extended to 2020<sup>94</sup>.

### (3) Issues and Measures

Issues and Measures related to the water and wastewater sectors are shown in the table below.

Table 53 Details of Issues Related to the Water and Sewerage Sector and Countermeasures

Subject name	Details of the issue and countermeasures
Obsolescence of the Sewerage Master Plan (Western)	In the cities of Nadi, Lautoka, Ba, and Sigatoka, which are implementing sewerage projects in the Western Region, the sewerage master plans are outdated (Sigatoka was prepared in 2005, while the others were prepared before 1992) and need to be updated as soon as possible. Based on the request from the WAF, JICA is currently implementing a development study type technical cooperation project for the formulation of the Western Region Sewage Master Plan (to be completed in 2024).
Inadequate manuals due to incompetence of staff, equipment failure (Western)	Due to the lack of equipment maintenance manuals in the sewerage treatment plants in the 4 western cities, equipment breakdowns are occurring and operation and water quality data are not being used. The WAF recognizes the need to strengthen the capacity of its staff. The capacity building of staff is planned to be implemented through the above technical cooperation.

<sup>94</sup> JICA, March 2020, Report on Information Collection and Verification Study on Water Supply and Sewerage Sector, Republic of Fiji

Subject name	Details of the issue and countermeasures
High non-revenue water ratio (western part)	The target of 20% non-revenue water by the end of the 2018 as set out in the Nadi/Lautoka Regional Water Supply Scheme Master Plan 2013-2033 (NLWMP33) prepared by 2013 Fiji Water and Sewerage Authority and finalized in 2015 has not been achieved (the target ranged from 34.4% to 40.8% in each quarter of the 2018). Due to the limited capacity of existing facilities, seasonal supply capacity is insufficient to meet the required water demand.
Rural water using data collection and system development	DWS believes that it is necessary to develop a system to collect data and efficiently maintain information in rural areas. In rural areas, there are many villages that have to rely on rainwater, and the Rainwater Harvesting Guideline has been issued to subsidize a 70% of the necessary costs. It is necessary to promote this policy.
Water Purification System Using the Biological Purification Method (EPS)	A water purification system using the bio-purification method (EPS) was launched as a pilot in 2012/13 and has since been introduced in 109 several villages. The use of chlorine can be reduced by providing naturally purified drinking water, but since there are 1,171 villages in Fiji, it needs to be spread efficiently.
Lack of independent management and human resources for WAF	Water tariffs are low (about 18 cents/1,000 liters) and WAF has not been able to achieve independent management. All fees collected are paid to the government, and all operating costs are covered by the government budget. Another problem is that the price has not been raised for a long time. In terms of human resources, the number of systems to be managed is growing, but there is no increase in WAF staff. Many of the O&M staff do not have bachelor's degrees or proper training, and many technicians will be retiring within the next 2~3 years.
Lack of water purification facilities	There are many rural areas that depend on rainwater or Rural Water Supply System (no water purification facilities, water supply system managed by Water Comittie in each community).
Aging of drinking water infrastructure	Water pressure is not under control due to old water pipes. This is also the reason for the high non-revenue water rate.
Deterioration of turbidity in reservoirs	The turbidity reached 80 NTU in October 2021 reached a record high of 500 NTU in December 2021 (the record high is 180 NTU and the water treatment plant is shut down when the turbidity exceeds 50 NTU).
stolen water	Water theft is also a major issue.
Renewal and expansion of sewerage treatment facilities	It is necessary to upgrade and expand treatment facilities that meet the standards required by the Department of Environment. There is a high demand for sewerage treatment capacity, and improving the current treatment system (decentralized treatment) and other measures to increase treatment capacity is an urgent issue.

Source: Fiji Water Supply and Sewerage Sector Information Collection and Verification Survey Report (March, 2020) (JICA) and information provided by DWS and WAF

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

###### • ADB

In ADB's Strategy 2030, the ADB has identified 7 priorities for the Asia and Pacific region. Several of the priorities, including "addressing lingering poverty and reducing inequality" and "building more livable cities," refer to water safety and pricing.

ADB has been consistently implementing projects in the capital city of Suva since 1998. The ongoing project "Urban Water Supply and Wastewater Management Investment Program" is also a project in Suva, which aims to improve access to safe drinking water, enhance wastewater treatment and management capacity, and improve WAF management and service supply capacity. In addition, the aforementioned National Integrated Water Resources Management Plan is scheduled to be formulated by July 2022 with the support of ADB, and will be the Target Document for the next NDP.

Table 54 List of ADB Projects in the Water Supply and Sewerage Sector

Period	Project name
1998-closed	Suva-Nausori Water Supply and Sewerage Development
2003-2013	Suva Nausori Water Supply and Sewerage Project
2009-2015	Suva-Nausori Water Supply and Sewerage Project (Supplemental Loan)
2013-2016	Urban Development Planning and Institutional Capacity Building
2015-2018	Project Design Advance Urban Water Supply and Wastewater Management Project
2016-active	Urban Water Supply and Wastewater Management Investment Program
2016-2026	Urban Water Supply and Wastewater Management Investment Program, Tranche 1
2018-2020	Revitalization of Informal Settlements and their Environments using a Water-Sensitive Approach

Source: ADB website

- Australia

Online training programs are being conducted by Australian companies Hunter Water, Sydney Water, and WaterWix.

- UNICEF

It supports the aforementioned new Water and Sewerage Bill, surveys of rural water sources, and implementation of WASH projects.

According to the information provided by WAF, in addition to the above, the GCF is also a major partner, and together with the ADB, is funding the Urban Water Supply and Wastewater Management Investment Program. There is no record of support from China.

## ② Japan

In its development cooperation policy for each country (April 2019), the government has set up “expansion of economic activities” as development issue 1-1 and “environmental conservation” as issue 2-2, pointing out the lack of development of water resources (water supply, sewerage, etc.) and sewerage treatment capacity.

In the “Nadi/Lautoka Regional Water Supply Improvement Project”, the capacity of the water treatment plant was increased by improving and expanding the intermediate stages of the water supply flow (mainly the water treatment plant, distribution reservoirs, and transmission pipes), and the 1daily water supply capacity was increased from 93 million liters to 130 million liters. Grassroots Technical Cooperation was provided by the Fukuoka City Waterworks Bureau as mentioned above, and contributed to the reduction of the non-revenue water ratio.

Table 55 Japan's Major Projects in Fiji's Water Supply and Sewerage Sector

Start date	End Date	Project name
Official Development Assistance Loans		
Feb 1998	Apr 2004	Nadi and Lautoka Area Water Supply Improvement Project
Grassroots Technical Cooperation		
Mar 2014	Jul 2017	Project to support reduction of non-revenue water in Nadi and Lautoka water projects
Jan 2018	Jan 2021	Water Supply Service Enhancement Project in Nadi and Lautoka Districts

Source: JICA website

The “Report on Information Collection and Confirmation Survey on Water Supply and Sewerage Sector in the Republic of Fiji” was carried out from February 2019 to March 2020 with the aim of collecting information for the specific consideration of JICA's cooperation to the water supply and sewerage sector in western Fiji and to conduct a survey on the preparations for the consideration of alternatives to the project components. The recommendations include three loan projects in the water

supply sector in western Fiji: raising the flood discharge of the Vatul Dam by 5 meters, converting a single line section (3 sections) of water pipeline to a double line section, and reducing the non-revenue water ratio. In the field of sewerage, a master plan was prepared, staff capacity building was carried out, and the rehabilitation and expansion of sewerage treatment plants based on the master plan were summarized.

As for the cooperation needs from Japan, according to the information provided by DWF and WAF, there are expectations for cooperation such as training in the field of O&M of water supply and sewerage in general for about 10 years, especially training in water purification plant management. As for PPP, both the DWS and the WAF are not positive about it because of the difficulty in securing profitability.

#### 1.5.1.4. IT and Telecommunications Infrastructure

##### (1) Overview

Fiji's IT and telecommunications infrastructure sector is managed by the Ministry of Communications, and the Telecommunication Authority of Fiji (TAF) was established in 2008 to implement ICT-related policies and manage the spectrum.

The telecommunication and internet infrastructure in the country has improved significantly. 95% of the country is connected by wired and wireless networks, and 98% of the population uses cell phones (89.6% of cell phone users use Android devices). 3G networks cover 94% of the population, while LTE/Wi-Fi covers at least 75% of the population. In addition, support for 5G is underway. Access to the Internet through cell phones is also on the rise. In 2019, 64.3% of web traffic came from cell phones, while 33.1% came from laptops and desktops.

Fiji's first submarine fiber optic cable connecting Australia, New Zealand and the United States was laid in 2000, and the Tui-Samoa cable connected Viti Levu and Vanua Levu islands in 2020<sup>95</sup>.

The following are the submarine cables connecting to Fiji. The Southern Cross Cable Network will reach the end of its service life<sup>96</sup> in 2025, and a new cable, the Southern Cross Next, is scheduled to be laid<sup>97</sup>.

Table 56 Submarine Communication Cables Connecting to Fiji (as of March 2021)

Name	Connected countries	Total length (km)	Owner	Installer	Year of installation
Gondwana-2/Picot-2	New Caledonia	unknown	OPT New Caledonia	Alcatel Submarine Networks	2022 scheduled
Southern Cross NEXT	Australia, Kiribati, New Zealand, Tokelau, USA	13,700	Southern Cross Cable Network	Alcatel Submarine Networks	2022 scheduled
Tui-Samoa	Samoa, Wallis and Futuna	1,693	Samoa Submarine Cable Company	Alcatel Submarine Networks	2018
Interchange Cable Network 1 (ICN1)	Vanuatu	1.259	Interchange	Alcatel Submarine Networks	2014

<sup>95</sup> The cable stations are located at Vatuwaqa on Viti Levu Island and Savusavu on Vanua Levu Island.

<sup>96</sup> The service life of submarine cables is estimated to be about 25 years.

<sup>97</sup> Information provided by the Ministry of Communications.

Tonga Cable	Tonga	827	Digicel Tonga, Tonga Communications Corporation, Government of Tonga	Alcatel Submarine Networks	2013
Southern Cross Cable Network (SCCN)	Australia, New Zealand, USA	30,500	Southern Cross Cable Network	Alcatel Submarine Networks, Fujitsu	2000

Source: TeleGeography, Submarine Cable Map<sup>98</sup>

### Major Players in the IT and Telecommunications Sector

In Fiji, Amalgamated Telecom Holdings (ATH)<sup>99</sup>, a government-established holding company, owns Vodafone Fiji Limited<sup>100</sup>, Telecom Fiji Limited (TFL) and Fiji International Telecommunications Ltd (FINTEL) and is a major player. Jamaica's Digicel also has a presence in Fiji in the mobile telecommunications sector.

Digicel Fiji and Vodafone are the main operators in the mobile telecommunications business. Vodafone has been providing personal and business telecommunication services in Fiji since 1994, and is also involved in low-cost prepaid cell phone services for low-income earners and international money transfers through its online payment platform MPaisa. FNPF's majority ownership of Vodafone has led some people to believe that investing in a cell phone with Vodafone is an investment in their pension and future<sup>101</sup>. Digicel is a Jamaican mobile phone operator that offers SMS, calling, mobile payment services, etc., and offers prepaid and postpaid. In Fiji, in contrast to Vodafone, Digicel is perceived as a “foreign company” and is estimated to have a market share of around 20% in 2018<sup>102</sup>.

TFL has been in the postal business since 1900, and its current main business is the provision of broadband lines and fixed and cell phone communication services; FINTEL's main business is the provision and operation of international communication facilities and the provision of domestic Internet services, and it is also responsible for the management and operation of SCCN cable.

The digitization of government services is also underway, with the annual Digital Government Transformation Programme as part of the digital Fiji project, which aims to deliver key government

<sup>98</sup> <https://www.submarinecablemap.com/>

<sup>99</sup> It is a holding company established under the Companies Act of 1983/1956 to consolidate government investments in the IT and telecommunications sectors, and is currently 72.5% owned by FNPF.

<sup>100</sup> FNPF and ATH have been 100% shareholders since 2014, and the Vodafone group has effectively withdrawn from the Fiji market.

<sup>101</sup> CDAC Network, 2021, Fiji Media, Language and Telecommunications Landscape Guide, p.20

<sup>102</sup> CDAC Network, 2021, Fiji Media, Language and Telecommunications Landscape Guide, p.20



services through online and mobile applications. As of October 2021, birth certificates and company registrations can be processed online<sup>103</sup>.

For investment in the IT and telecommunication infrastructure sectors, the government has implemented investment incentives such as an annual income tax exemption for new businesses for 13 years<sup>104</sup>.

(2) Development Project

The development plan for Fiji's IT and telecommunications sector is contained in the NDP 2017-2021. According to information provided by the Ministry of Communications, there are related policies and plans such as the National Broadband Policy, Emergency Telecommunications Plan, and Cyber Security Strategy, which are under review.

The NDP 2017-2021 sets “universal access to information and competitive telecom services on secure platforms” as a development objective for the entire IT and telecom infrastructure sector, and specifies 5 policies and 28 strategies.

Table 57 Policies and Strategies for Fiji's IT and Telecommunications Infrastructure Sector

Policy	Strategy
Improve communication infrastructure	<ul style="list-style-type: none"> <li>✓ Introduction of digital government by 2020 (online access to priority government services, especially disaster and recovery-related information)</li> <li>✓ Multi-user use of existing fixed-line infrastructure under reasonable conditions and strengthening of competition in broadband Internet services</li> <li>✓ Consideration of PPP for the construction of telecommunication infrastructure such as communication towers and base infrastructure to connect to SCCN, including the use of funds from the Universal Service Obligation Fund and international incoming call charges.</li> <li>✓ Installation of fiber optic cables and other equipment during road construction and maintenance by providers such as road authorities, water authorities, power authorities, TFL, etc.</li> <li>✓ Completion of TFL fiber optic cable ring around Viti Levu Island</li> <li>✓ Establishment of a second link from Viti Levu to Vanua Levu via Lomaiviti and installation of high-speed lines to Vanua Levu, Taveuni, Levuka, Lakeba and other islands.</li> <li>✓ Establishment of fiber optic connection between Viti Levu Island and Vanua Levu Island via Tui-Samoa Cable Network</li> </ul>

<sup>103</sup> <https://mobile.digital.gov.fj/MainNA>

<sup>104</sup> <https://pic.or.jp/ja/wp-content/uploads/2019/02/Investment-Fiji-Sector-Profile-ICT.pdf>

	<ul style="list-style-type: none"> <li>✓ Implementation of ICT Development Policy and National Broadband Policy 2011</li> </ul>
Providing equal access to ICT	<ul style="list-style-type: none"> <li>✓ Expand the government's Community Telecentre Project to the extent feasible.</li> <li>✓ Improving access to computers and assistive devices for the visually impaired and hearing impaired through tax incentives and subsidies</li> <li>✓ Provision of subtitle services for the hearing impaired by television broadcasters</li> <li>✓ Review the National ICT Policy and incorporate relevant parts of the National Gender Policy 2014 and the National Disability Policy</li> <li>✓ Provision of subsidies to improve access for people with disabilities to schools and community telecentres (e.g. wheelchair ramps)</li> </ul>
Strengthen regulatory framework	<ul style="list-style-type: none"> <li>✓ Consolidation of all existing charges for telecom operators (e.g., special international call processing charges, ICT levy, license fees, universal service obligation fund) into a single standard charge</li> <li>✓ Study on the establishment of a new regulatory framework for telecommunications by multi-sectoral regulators</li> <li>✓ Develop a cybersecurity policy and framework</li> </ul>
Strengthening employees' ICT capabilities	<ul style="list-style-type: none"> <li>✓ Encouraging the retention of graduates with proficient IT skills in the workforce</li> <li>✓ Prioritizing the use of ICT-based planning and monitoring tools in the public sector</li> <li>✓ Promote the use of social media to facilitate consultation with the public during policy making</li> <li>✓ Encourage the widespread use of ICT in the public sector to improve business processes, productivity, and service delivery (e.g., minimize paper-based communication, adopt more efficient means such as e-mail and teleconferencing, etc.)</li> <li>✓ Increased access to appropriate technologies through bilateral, regional, and international technology transfer</li> <li>✓ Improving efficiency and productivity at the farmer level by supporting the diffusion of ICT to provide weather information and forecasts to farmers.</li> </ul>
Promoting the use of green technology	<ul style="list-style-type: none"> <li>✓ Encouraging large-scale FDI in industries that develop environmentally sustainable technologies, especially in the areas of transportation, renewable energy, manufacturing, and agriculture.</li> <li>✓ Encouraging FDI in the BPO sector</li> <li>✓ Establishing a national framework to promote innovation, research and development toward environmentally sustainable technologies</li> <li>✓ Examining the possibility of introducing a national ID card</li> </ul>

	<ul style="list-style-type: none"> <li>✓ Imports according to green technology specifications (high energy efficiency, low carbon emissions, meeting minimum quality standards and safety, preventing parallel imports)</li> <li>✓ Installation, operation and maintenance of Early Warning Systems in appropriate countries/regions and forecasting infrastructure for tropical cyclones, floods and other hydro-meteorological events, disaster monitoring and program support for building resilience for the future.</li> </ul>
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Source: Ministry of Economy, 5 Year & 20 Year National Development Plan, p.130

Table 58 Development Targets for the IT and Telecommunications Infrastructure Sector in Fiji

Indicator	2015	2021
Wired and wireless network penetration (% of population)	95	100
Household broadband penetration rate (% of households)	30.7	70
Number of Internet users (% of population)	41.8	60
Digital TV penetration rate (% of population)	0	100

Source: Ministry of Economy, 5 Year & 20 Year National Development Plan, p.132

The government's annual budget in 2020 also includes incentives to attract private sector investment in network cabling and ICT infrastructure to accelerate digital connectivity. incentives aimed at developing the BPO sector include annual tax exemption for investments of less than FJD 5 million and up to annual tax exemption for investments of more than FJD 10 million<sup>105</sup>.

<sup>105</sup> US Department of State, Fiji-Country Commercial Guide, <https://www.trade.gov/country-commercial-guides/fiji-information-and-communication-technology>

### (3) Issues and Measures

The following table shows the issues that it was able to confirm through information provided by the Ministry of Communications.

Table 59 Details of Issues Related to the IT and Telecommunications Infrastructure Sector and Measures to Address

Subject name	Details of the issue and countermeasures
Provide communication access to remote areas	<ul style="list-style-type: none"> <li>✓ The telecommunication access coverage in the country is about 95%, but the key issue is to provide telecommunication access to remote areas which is the remaining 5%.</li> <li>✓ It is difficult for the private sector to develop business in remote areas because it is difficult<sup>106</sup> to expect a return on investment.</li> <li>✓ The Universal Service Fund<sup>107</sup> was established to cover the cost of installing, maintaining, and operating telecommunication infrastructure in 317 remote areas, with contributions from service providers and international organizations. Ministry of Communications is currently discussing how the fund should be utilized.</li> </ul>

Source: Information provided by the Ministry of Communications

The US Department of State also noted that the Pacific region, including Fiji, is facing the risk of cyber-attacks as Internet connectivity increases with the laying of submarine cables<sup>108</sup>.

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

##### • Joint MDBs and governments

The Samoa-Tui cable connecting Fiji and Samoa was funded by the ADB with USD 25 million, the World Bank with USD 16 million, the Samoan government with USD 6.73 million, and the Australian government with USD 1.5 million<sup>109</sup>.

For the Tonga Cable connecting Fiji and Tonga, the ADB contributed USD 9.7 million, the World Bank USD 16 million, the Asian Development Fund and the private Tonga Cable Limited USD 6.6 million<sup>110</sup>.

<sup>106</sup> When constructing satellite towers, an investment of about FJD 500,000 per tower is required. Information provided by the Ministry of Communications.

<sup>107</sup> Information provided by the Ministry of Communications

<sup>108</sup> <https://www.trade.gov/country-commercial-guides/fiji-information-and-communication-technology>

<sup>109</sup> <https://www.worldbank.org/en/news/press-release/2018/02/09/adb-world-bank-australia-supported-high-speed-broadband-goes-live-in-samoa#:~:text=The%20project%20is%20supported%20by,governance%20of%20Australia%20and%20Samoa.&text=The%20project%20will%20enhance%20low,e%2Dhealth%20investment%20in%20Samoa.>

<sup>110</sup> <https://www.worldbank.org/en/results/2019/09/16/closing-the-digital-divide-in-tonga>

- World Bank

Funding of USD 5.95 million was provided to support the construction of a new 95km broadband cable to connect the existing Southern Cross submarine cable network to Vanua Levu Island<sup>111</sup>. The Fiji Connectivity Project also included the installation of free Wi-Fi spots in the northern region<sup>112</sup>.

- Australia

It is undertaking 18 ICT-related projects worth USD 6.8 million by 2020, including programs aimed at strengthening governance. In cooperation with the International Cyber Policy Centre of the Australian Strategic Policy Institute (ASPI) and the e-Governance Academy of Estonia, an e-Government development mission-based program has been established for six Pacific countries including Fiji<sup>113</sup>.

- New Zealand

Funded four ICT projects worth USD 3.3 million by 2020, including the construction of a land information system, an audit system for the Ministry of Finance, procurement of IT equipment, and database construction.

- China

It has two ICT projects totaling USD 22.5 million by 2020, including the construction of e-government services implemented from 2006 to 2011 with financing from China<sup>114</sup>.

- Singapore

Provided technical and operational support to the digital Fiji project through the Singapore Cooperation Enterprise<sup>115</sup>.

- Korea

Provided support for 18 projects amounting to USD 395,000, including ICT-related training programs and support for establishing master's courses on global digital production and e-government<sup>116</sup>.

## ② Japan

Although there is no direct reference to the IT/telecommunications sector in the country-specific development cooperation policies (April 2019), the development of social and economic infrastructure that contributes to the “expansion of economic activities” is mentioned in Development Issue 1-1.

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<sup>111</sup> <https://www.worldbank.org/en/news/press-release/2016/11/30/new-cable-project-to-deliver-faster-more-resilient-internet-to-northern-fiji#:~:text=The%20project%20will%20support%20the,commerce%20and%20reduce%20transaction%20costs.>

<sup>112</sup> Information provided by the Ministry of Communications

<sup>113</sup> Australian Strategic Policy Institute Limited (2020), ICT for Development in the Pacific Islands, p.18

<sup>114</sup> Australian Strategic Policy Institute Limited, 2020, ICT for Development in the Pacific Islands, p.18

<sup>115</sup> Australian Strategic Policy Institute Limited, 2020, ICT for Development in the Pacific Islands, p.18

<sup>116</sup> Australian Strategic Policy Institute Limited, 2020, ICT for Development in the Pacific Islands, p.18

In 2010, the Japan-Pacific ICT Centre was established in the USP headquarters campus<sup>117</sup>. In order to provide the opportunity of higher education to the residents of Oceania and to improve the quality of this education, technical cooperation projects including support of bachelor degree programs, enhancement of satellite communication network, improvement of distance learning system, and effective utilization of the Japan-Pacific ICT Centre were implemented from February 2010 to January 2013<sup>118</sup>.

As for the cooperation needs of Japan, according to the information provided by the Ministry of Communications, the provision of communication infrastructure to remote areas is expected. Specifically, as part of the Telecentre Project, Fiji government is setting up community spaces in 25 remote areas to provide services such as Internet access, PC access, printing, and ICT education. There have been centers in various remote areas, but the demand is still there and support is needed, whereas no international donors are involved in the project and PPPs. In addition, free Wi-Fi spots have been set up with the support of the World Bank, but there is still demand for these spots in many areas, so they are looking for support in terms of infrastructure installation and maintenance.

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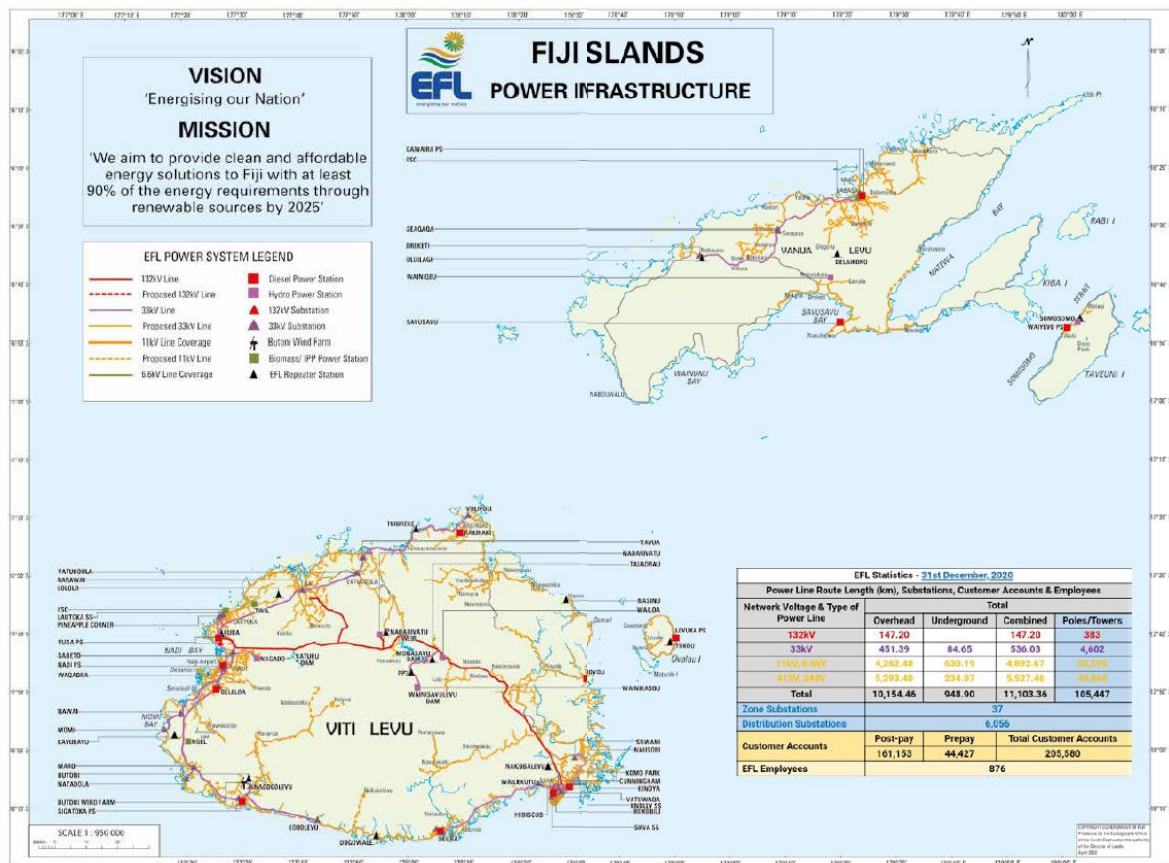
<sup>117</sup> [https://www.jica.go.jp/project/fiji/002/materials/pdf/japan\\_pacific\\_01\\_01.pdf](https://www.jica.go.jp/project/fiji/002/materials/pdf/japan_pacific_01_01.pdf)

<sup>118</sup> [https://www.jica.go.jp/english/our\\_work/thematic\\_issues/ict/study.html](https://www.jica.go.jp/english/our_work/thematic_issues/ict/study.html)

## 1.5.2. Energy

### (1) Overview

Energy Fiji Limited (EFL) is responsible for the generation, transmission and distribution (retail) of electricity on Viti Levu, Vanua Levu, Ovalau and Taveuni, covering access to electricity for 90% of the population. For the other islands, the Department of Energy (DOE) is responsible for electricity supply, and together, EFL and DOE cover 94% of the population's access to electricity. On the other islands, such as the Yasawa Islands, the resort hotels themselves generate their own electricity. The government has set a target of providing access to electricity for the entire population by 2026. The Fijian government also aims to have 90% of power generation from renewable energy sources by 2025, with 50%-60% of the total currently coming from hydropower. The largest hydropower plants are the Monasavu and Nadarivatu plants in Viti Levu<sup>119</sup>.



Source: EFL, Annual Report 2020, p.46-47

Figure 14 Location of EFL's Power Infrastructure

<sup>119</sup> Information provided by EFL

EFL's financial position has been in the red in the past, but in recent years it has transformed into a profitable organization. The Fiji Energy Authority (FEA) has been privatized since 2018, with the Fiji National Provident Fund holding 20% of the shares at one stage during the privatization process. The remaining 44% was acquired by a consortium (Sevens Pacific, registered in Singapore) funded by China Electric Power Company and JBIC<sup>120</sup>.

(2) Development Project

5 Year & 20 Year National Development Plan

The NDP 2017-2036 aims for a resource efficient, cost effective and environmentally sustainable energy sector, and the NDP 2017-2021 sets out the policies in the table below.

Table 60 Policies Set Out in the NDP 2017-2021

<ul style="list-style-type: none"><li>• Provide affordable, reliable, modern, and sustainable energy services to all citizens.</li><li>• Increase in the percentage of electricity generated from renewable energy sources</li><li>• Expand private sector participation in the electric power industry through regulatory reform.</li><li>• Improving energy efficiency</li><li>• Increased community use of Rocket Clean Cook stoves</li><li>• Reduce the cost of oil imports and ensure a safe and stable supply through further development of biofuels (biodiesel and ethanol).</li><li>• Ensuring the long-term sustainability of renewable energy resources based on the principles of the Green Growth Framework</li></ul>
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Source: NDP 2017-2036, p.26-27

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<sup>120</sup> Information provided by DOE



In addition, key performance indicators have been set as shown in the table below.

Table 61 Indicators Listed in NDP 2017-2021

Indicator	2015	2016	2017	2018	2019	2020	2021
Percentage of population with access to electricity (%)	92	92	94	96	98	100	100
Percentage of the population that relies on wood fuel for cooking (%)	18	17	16	15	14	12	10
Energy efficiency (imported fuel consumption per GDP (MJ/FJD))	2.89	2.89	2.88	2.88	2.87	2.86	2.85
Energy efficiency (electricity consumption per GDP (kWh/FJD))	0.219	0.219	0.218	0.217	0.216	0.215	0.214
Renewable energy as a percentage of total power generation (%)	67	67	70	75	78	81	TBD
Share of renewable energy in total energy consumption (%)	13	14	15	16	17	18	TBD
Number of solar home systems installed	2,500	2,500	2,500	2,500	2,000	2,000	2,000
Number of new hydropower plants constructed		2	2	2	2	2	2
Number of new biomass plants constructed	2	4	5	5	5	5	5
Number of qualified personnel such as electrical engineers, civil engineers, hydrologists, etc.	15 (FEA and DOE)						

Source: NDP 2017-2036, p.28

As mentioned earlier, the current coverage of electricity access is 94%, and the indicator of achieving 100% access by 2021 has not been achieved, and the current target is to achieve 100% electricity access by 2026. As for the share of renewable energies in total power generation, the target for 2021 and beyond is to have 90% of power generation from renewable energies by 2025, and the operation of biomass plants by Fiji Sugar Corporation and private companies in Japan and abroad has started. Fiji Sugar Corporation and other domestic and foreign private companies have already started operating biomass plants.

Table 62 Examples of Biomass Plant Operation

Manager	Overview
Fiji Sugar Corporation	Biomass plants using sugarcane are located in Lautoka, Ba and Labasa, each generating about 2MW of electricity. One of the problems is that the sugarcane, which is used as fuel, is available during the harvesting season, so there are seasonal fluctuations in the supply of electricity.
A joint venture between GIMCO, a Korean company, and Tropik Wood, a Fijian lumber company	They are operating a biomass plant using wood chips in Nabou. One of the challenges is that although the plant was initially designed to generate 10MW of electricity, Tropik Wood, which had supplied the wood chips, has withdrawn from the business, so the plant is currently generating only about 2MW of electricity.

Source: Information provided by DOE

### Fiji National Energy Policy

According to the DOE, the current National Energy Policy is up to 2020, so a revised version is being drafted. Although it is still in the draft stage, it includes a community-based power management policy<sup>121</sup>.

### Power Development Plan (PDP)

EFL is reviewing its 10-year plan, the PDP, every two years. According to the plan, investment of FJD 2.4 billion is needed over the next 10 years (FJD 1.6 billion for power generation projects and FJD 800 million for the transmission and distribution sector)<sup>122</sup>.

<sup>121</sup> Information provided by DOE

<sup>122</sup> Information provided by EFL

### (3) Issues and Measures

The issues related to the energy sector presented by the DOE are shown in the table below.

Table 63 Details of Issues Related to the Energy Sector

Category	Issue Details
Challenges for the sector	Establishing national standards for energy raw materials in the market Remoteness and accessibility of land Low-load, low-demand areas Renewable resources and capacities Sustainability of off-grid systems Economics and Bankability of Technology Impact of Covid-19 on the national budget Frequent Natural Disasters
Operation and maintenance issues	Weather and geographic factors Transportation of materials Aging infrastructure

Source: Information provided by DOE

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

##### • ADB

In its Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific, which guides the ADB's efforts, the ADB identified 7three priorities for the Asia and Pacific region. One of them is “Addressing Climate Change, Building Climate and Disaster Resilience, and Enhancing Environmental Sustainability,” which prioritizes investment in low greenhouse energy, selective use of concessional financing, broad private sector cooperation, and support for innovative PPPs. From the perspective of water security, it also promotes energy that uses less water, such as solar and wind power<sup>123</sup>. In addition, the Country Partnership Strategy, Fiji, 2019-2023, sets out 3 strategic objectives to achieve “the realization of sustainable and inclusive growth led by the private sector”, one of which is “infrastructure development” under “promoting private investment and growth”<sup>124</sup>. The table below shows the results of recent projects.

<sup>123</sup> ADB, Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific

<sup>124</sup> ADB, Country Partnership Strategy, Fiji, 2019-2023, p. 9

Table 64 Recent Projects by ADB

Approval date	Project name
Oct 2021	Development of the Pacific Energy Regulators Alliance
Apr 2019	Pacific Renewable Energy Program
Nov 2017	Capacity Building and Sector Reform for Renewable Energy Investments in the Pacific
Sep 2015	Support for Energy Sector Regulatory Capacity and Electrification Investment Planning
Oct 2006	Improving Infrastructure Services (formerly Power Sector Development Road Map)
Jan 2006	Preparing the Renewable Power Sector Development Project

Source: ADB website<sup>125</sup>

- China

According to the DOE, the Sosomo and Bukuya hydropower plants are being constructed with Chinese assistance (free of charge). The DOE is also coordinating the implementation of South-South cooperation for the installation of street lighting and solar home systems<sup>126</sup>.

- Pacific Environment Community Fund<sup>127</sup>

In 2012, the Pacific Environmental Community Fund provided USD 2.3 million to install 1,000 individual solar home systems in rural houses (the project was completed in 2014)<sup>128</sup>.

- Other

In order to achieve the goal of “90% of electricity generation from renewable energy sources by 2025”, many renewable energy related projects (by private companies and donors) are being implemented. The table below shows an overview of the projects underway.

Table 65 Renewable Energy-Related Projects in Progress

Project name	Companies, donors, etc.	Current status (as of the publication of Annual Report 2020)
Qeleloa 5MW Solar Farm	Sunergise Fiji Limited (SFL)	EFL is planning to sign a Power Purchase Agreement (PPA) with SFL in early 2021. Construction and commissioning are expected to take place by the first 2 quarter in 2022.
Development of 3 x 5MW solar farms in Viti Levu	IFC	EFL has signed a Financial Advisory Services Agreement (FASA) with the International Finance Corporation (IFC). IFC will provide the

<sup>125</sup> <https://www.adb.org/projects/country/fij/sector/energy-1059>

<sup>126</sup> Information provided by DOE

<sup>127</sup> USD 66 million fund created at the suggestion of Japan to help Pacific nations deal with climate change issues.

<sup>128</sup> <https://pacificdata.org/data/publications/pacific-environment-community-pec-fund-profiles2/resource/94a95e31-cd7b-4d2d-903b-6dc48c3796ef>

Project name	Companies, donors, etc.	Current status (as of the publication of Annual Report 2020)
		expertise necessary for the design and implementation of a public-private partnership to develop three 5MW solar power plants through the dispatch of experts.
Solar Project in Taveuni	KOICA	1MW solar power plant with 1MWh lithium-ion battery storage system is scheduled for completion in the first 3 quarter in 2022. Once completed, by the end of 2022, Taveuni will be generating 100% of its electricity from renewable energy sources.
Agro-Photovoltaic Solar Project in Ovalau	Green Climate Fund (GCF)	The project was approved by the GCF and started in August 2020. Installed elevated solar panels and battery energy storage system to safely connect to EFL grid. The project cost was USD 3.91 million.
Qaliwana and Upper Wailoa Diversion Hydro Development Scheme	European Investment Bank (EIB)	The EIB-funded feasibility study is in its final stages and the final report will be submitted by the second 2 quarter in 2021.
Namosi Hydro Hydro Development Schemes	Australian Infrastructure Financing Facility for the Pacific (AIFPP)	Coordination is underway with the Australia High Commission in Fiji to conduct a feasibility study on the Namosi hydroelectric project located in the central part of Viti Levu Island.
Lower Ba Hydro Development Schemes	EIB	Feasibility study is underway for the Lower Ba hydropower project located in the western part of Viti Levu Island.
Development of 132kV Transmission Network from Virara Settlement to Rarawai, Ba	unknown	132kV power grid development project, delayed due to COVID-19, but development will start in 2021 and is expected to be completed by the end of 2022 once travel restrictions are lifted.
Development of 33kV Transmission Network from Vuda to Naikabula, just outside Lautoka City boundary.	unknown	Project for construction of 33kV overhead power grid. It will be completed by the end of 2021.

Source: EFL, Annual Report 2020, p.12-14

② Japan

In the Country Assistance Policy (April 2019), development issue 1-1 “Expansion of economic activities” identifies the inadequacy of new construction, expansion, and maintenance of social and economic infrastructure, including energy sector, as an issue. In 2-2 “Climate Change Countermeasures,” the issue is to promote efficient and stable operation of the power system with the introduction of renewable energies such as solar power, and to promote the use of renewable energies for power supply in remote islands. As a response policy, Japan will cooperate toward a low-carbon society with the promotion of the hybrid island concept at the core, and will study the power supply mix to optimize the introduction of renewable energy while ensuring the stability of the power system and efficient operation of power sources. The main example of Japan's cooperation to date is the Pacific Region Hybrid Power System Project (wide-area cooperation, 2017-2023).

As for the cooperation needs from Japan, the DOE indicated that the needs are high as shown in the table below.

Table 66 DOE Cooperation Needs

Field	Needs
Hydroelectric power generation	Feasibility study Project implementation
Wind power generation	Support the preparation of reports on wind resources for investors. Implementation of pilot projects
Waste Power Generation	Feasibility Study of Kinoya Waste Treatment Plant
Training	Conduct training in the field of design and implementation for hydropower Conduct training in the areas of resource assessment, uncertainty analysis, design, and implementation for wind power Training in the areas of research, design, and implementation related to waste power generation

Source: Information provided by DOE

As mentioned above, the Government of Fiji has set a target to generate 90% of its electricity from renewable energy sources by 2025, and increased investment by IPPs in the renewable energy sector is essential to achieve this target. IFC has been supporting private sector participation by dispatching experts to design and implement a public-private partnership to develop 3 solar power plants in Viti Levu<sup>129</sup>. Japan should also consider cooperation that contributes to the expansion of private sector participation in the renewable energy sector.

<sup>129</sup> Information provided by EFL

### 1.5.3. Industry (Including Agriculture, Forestry, Fisheries, Tourism, and Mining)

#### 1.5.3.1. Agriculture

##### (1) Overview

Fiji's agricultural sector is mainly governed by the Ministry of Agriculture (MoA) and the Ministry of Sugar, with the Agriculture Marketing Authority (AMA) as the governmental body responsible for importing and exporting agricultural products and promoting the marketing of producers.

In terms of agriculture, forestry and fisheries in Fiji, many households engaged in agriculture (including animal husbandry) as well as forestry and fisheries earn their livelihoods through multiple activities. Traditionally, subsistence farming and sugarcane production and processing have been the main activities, but in recent years, there has been a shift to semi-commercial agriculture, and the proportion of food crops such as Cassava, Dalo, and Yaqona, as well as crops unique to tropical regions such as pineapple and coconut, is increasing. Cassava, in particular, is grown mainly for export, and is used for processed products such as chips. Other livestock industries such as beef, dairy products, and beekeeping are also becoming more popular.

Rice is a major staple food, but domestic production falls short of the annual requirement of about 60,000 tons<sup>130</sup>, and much of it is dependent on imports.

According to the 2020 Census of Agriculture, the number of agricultural workers<sup>131</sup> in the country is 83,395, of which more than half are unpaid family workers. The total area of agricultural land is 194,769ha, of which more than half is owned by traditional practices. Agricultural households with less than 1ha of farmland account for 65.0% of the total farmland area, while those with more than a 50ha of farmland account for only 50.5%, and most of them are small-scale farmers<sup>132</sup>.

Fiji's land ownership system is divided into 3 categories: (1) iTaukei land, which is indigenous land, (2) Freehold land, and (3) Crown land<sup>133</sup>.

##### Major Agricultural Products

As for domestic agricultural products, the total production is in 399,057metric tons and the total output is in FJD 2,558,748 thousand. As for annual crops, Cassava and Dalo account for more than 70% of the total production, while Yaqona alone accounts for more than 80% of the total production. As for perennial crops, coconut and pineapple account for less than 70% of the total production, and more than 50% of the total production. Sugarcane is not included in the agricultural census, but is

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<sup>130</sup> MoA, Agriculture Sector Policy Agenda 2020, p.58

<sup>131</sup> Refers to members of households whose primary means of livelihood is agriculture (cereal cultivation and animal husbandry), including secondary occupations.

<sup>132</sup> MoA, 2020 Fiji Agriculture Census volume 1: General table & Descriptive Analysis Report, p.9-18

<sup>133</sup> Information provided by the MoA

provided by the Ministry of Sugar and Fiji Sugar Corporation. The latest agricultural statistics are available in the Fiji Agriculture Statistics Online Library<sup>134</sup> prepared by the MoA.

In terms of regions, the production of agricultural products is highest in the central region with 36.5%, followed by the western region with 27.8%. On the other hand, the northern part of the country has the highest production output (65.35%). This can be attributed to the fact that the northern part of the country has long been a producer of rice, Yaqona, and coconuts, and has many skilled farmers due to the abundant opportunities for agricultural training provided by the government and NGOs such as ADRA, as well as to the fact that the production of Yaqona<sup>135</sup>, which has a high output per unit, is the highest at metric 15,908 tons (65% of total production). This is thought to be due to the fact that it produces<sup>136</sup>.

Table 67 Production and Output of Major Agricultural Products (excluding sugarcane) in Fiji (2020)

Main crops		Production volume (metric tons)		Production output (thousand FJD)	
Annual crop	Cassava	117,561	38.4%	117,542	4.9%
	Dalo	102,324	33.4%	143,630	6.0%
	Yaqona	24,610	8.0%	1,990,546	83.1%
	Okra	11,481	3.8%	44,174	1.8%
	Ginger	10,157	3.3%	11,635	0.5%
	Other	39,902	13.0%	87,609	3.7%
	Subtotal	306,035	100.0%	2,395,136	100.0%
Perennial crop	Coconut	35,479	38.1%	42,426	25.9%
	Pineapple	28,629	30.8%	46,332	28.3%
	Banana	3,946	4.2%	8,512	5.2%
	Pawpaw	3,877	4.2%	5,689	3.5%
	Vudi	2,233	2.4%	5,278	3.2%
	Other	18,859	20.3%	55,376	33.8%
	Subtotal	93,022	100.0%	163,612	100.0%
Total		399,057	-	2,558,748	-

The crops listed are the top-producing 5 varieties in 2020 except for sugarcane.

Source: MoA, 2020 Fiji Agriculture Census volume 1: General table & Descriptive Analysis Report, p.138 • 143 • 197

<sup>134</sup>[https://analytics.wfp.org/t/Public/views/FijiAgricultureStatisticsOnlineDataLibrary/HomePage?%3Adisplay\\_count=n&%3Aiid=6&%3Aorigin=viz\\_share\\_link&%3AshowAppBanner=false&%3AshowVizHome=n&%3AisGuestRedirectFromVizportal=y&%3Aembed=y&%3AdeepLinkingDisabled=y#2](https://analytics.wfp.org/t/Public/views/FijiAgricultureStatisticsOnlineDataLibrary/HomePage?%3Adisplay_count=n&%3Aiid=6&%3Aorigin=viz_share_link&%3AshowAppBanner=false&%3AshowVizHome=n&%3AisGuestRedirectFromVizportal=y&%3Aembed=y&%3AdeepLinkingDisabled=y#2)

<sup>135</sup> Since domestic demand has remained high and overseas exports have been steady, prices have tended to remain high. Information provided by MoA

<sup>136</sup> MoA, 2020 Fiji Agriculture Census volume 1: General table & Descriptive Analysis Report, p.13



Households engaged in livestock production are 22,991 households and mainly fatten and sell goats, beef cattle, dairy cattle, pigs, sheep, poultry (e.g., chicken), and bees. Of these, households dealing with goats account for 40%, the largest proportion.

Table 68 Major Livestock in Fiji, Number of Households and Number of Cattle (2020)

Livestock type	Number of households*1		Number of animals
Goat	9,212	40.1%	143,853
Poultry (chickens, etc.)	8,862	38.5%	49,650
Pig	8,515	37.0%	58,420
Beef cattle	6,498	28.3%	70,041
Milk cow	6,144	26.7%	1,449,857
Sheep ( <i>Ovis aries</i> )	4,341	18.9%	37,435
Beekeeping	1,295	5.6%	13,162*2
Number of households engaged in livestock farming	22,921	-	-

\*1 Some households handle more than one type of livestock, so the total number of households for each livestock type does not equal the total number of households engaged in livestock farming.

\*2 Based on the number of hive boxes

Source: MoA, 2020 Fiji Agriculture Census volume 1: General table & Descriptive Analysis Report, p. 13-14

### Processed Agricultural Products

Major processed products include sugar, industrial alcohol, and distilled liquor made from sugarcane, as well as processed products using ginger, fruits, rice, and coconuts, with coconuts in particular producing copra (desiccated coconut), oil, cream, and soap. Processed chips made from taro, banana, and breadfruit are also produced<sup>137</sup>.

Private companies engaged in agro-processing include Food Pacific Limited, Punjas Group, Floor Mills of Fiji Limited, Leyland Limited, Tebara Meats, Wahley Butchery, Motibhai Group, etc<sup>138</sup>. There are also State-owned companies engaged in agro-processing are as follows.

<sup>137</sup> MoA, Agriculture Sector Policy Agenda 2020, p.59

<sup>138</sup> MoA, Agriculture Sector Policy Agenda 2020, p.59

Table 69 Agricultural Sector State Enterprises in Fiji

Classification	Organization name	Overview
Vegetable and grain processing	Food Processors (Fiji) Ltd	Manufacture of bottled products such as tomatoes, coconut cream, chestnuts, chili, honey, etc.
	Rewa Rice Limited	Rice polishing
Livestock processing	Yaqara Pastoral Co.	Fattening of dairy cattle, processing and sales of dairy products
	Rewa Coop Dairy Company	Milk and dairy products processing
	Fiji Meat Industry Board	Retail of slaughterhouse services and processed meat products

Source: MoA, Agriculture Sector Policy Agenda 2020, p.59

## (2) Development Project

The following development plans (other than NDP) are available for the agricultural sector. As for the Strategic Development Plan 2019-2023, the mid-term review was under preparation at the time of the hearing (as of December 2021).

Table 70 Development Plans for the Agricultural Sector in Fiji (other than NDP)

Development project	Status
2020 Agriculture Sector Policy Agenda	Already published
Strategic Development Plan 2019-2023	Already published
Costed Operation Plan 2021-2022	Already published
National Food System Pathway (Based on 2030 UN Agenda)	In discussion with UN
Development Plan	In discussion with EU

Source: Information provided by MoA

In the NDP 2017-2021, the agricultural sector has been differentiated into sugar industry and the rest of the world and development plans have been formulated.

### Agriculture (Sugar Industry)

“Sustainable Sugar Industry” is set as a development goal for the entire sugar industry, and 9 strategies with 1 policy are defined<sup>139</sup>.

<sup>139</sup> Ministry of Economy, 5 Year & 20 Year National Development Plan, p.107

Table 71 Policies and Strategies for the Sugar Industry in Fiji

Policy	Strategy
Growth of Sugar Industry	<ul style="list-style-type: none"> <li>✓ Improving industrial governance through the introduction of relevant laws and regulations to support organizational restructuring that contributes to industrial growth.</li> <li>✓ Protecting the sugar market</li> <li>✓ Establishment of a program to promote the entry of motivated young farmers into sugarcane cultivation</li> <li>✓ Establishment of FSC-owned farms</li> <li>✓ Support for mechanization</li> <li>✓ Support increase in sugarcane production to 31 million tons (by 2023)</li> <li>✓ Mechanization of harvesting operations and establishment of truck-to-rail transfer stations</li> <li>✓ Implementation of a payment system based on sugarcane quality (by 2023)</li> <li>✓ Development of climate-resilient sugarcane varieties</li> </ul>

Source: Ministry of Economy, 5 Year & 20 Year National Development Plan, p107

Table 72 Goals Development Targets for the Sugar Industry in Fiji

Indicator	2016	2017	2018	2019	2020	2021
Sugarcane production (thousand metric tons)	1,390	1,630	1,800	2,200	2,600	3,000
Sugar production (thousand metric tons)	140	180	210	258	305	352

Source: Ministry of Economy, 5 Year & 20 Year National Development Plan, p.107

#### Agriculture (Other than Sugar Industry)

The overall development objective for the agricultural sector (other than the sugar industry) is “competitive, sustainable and value-added agriculture” and 31 strategies with 3 policies are defined.

Table 73 Policies and Strategies for Fiji's Agricultural Sector (Other than Sugar Industry)

Policy	Strategy
Continued broad-based support for agriculture, a key driver of economic growth and poverty reduction	<ul style="list-style-type: none"> <li>✓ Strengthen research and development through review and restructuring of research and service divisions</li> <li>✓ Reviewing the role of AMA in supporting the marketing of agricultural products with a focus on small-scale farmers and verifying the effectiveness of the program</li> <li>✓ Development of an up-to-date agricultural statistical database to support decision making</li> <li>✓ Implementation of the Agricultural Census by 2019</li> </ul>

	<ul style="list-style-type: none"> <li>✓ Adoption and implementation of strategies for the livestock sector</li> <li>✓ Development and adoption of National Land Use land</li> <li>✓ Enactment of Land and Water Resources Management Bill</li> <li>✓ Strengthen linkages and synergies between the agriculture and tourism sectors to promote locally produced food</li> <li>✓ Develop and promote efficiency, quality assurance and standardization among the Fiji Crops and Livestock Council and key industry stakeholders</li> <li>✓ Development of tailor-made incentives and financial packages for small-scale farmers to encourage value addition and investment in large-scale commercial agriculture.</li> <li>✓ Promotion of agricultural marketing in both domestic and overseas markets</li> <li>✓ Establish and implement a program to transition from subsistence agriculture to semi-commercial or fully commercial agriculture.</li> <li>✓ Establishment of agricultural cooperatives and promotion of clustering to enhance synergies among farmers</li> <li>✓ Promote mechanization and increase productivity in the agricultural sector</li> <li>✓ Review of agricultural curriculum and identification of pathways to practical commercial agriculture at Fiji National University</li> <li>✓ Institutionalization of a training system and encouragement of the new generation of farmers to take practical training, based on the successful experience of the Tutu Training Center.</li> <li>✓ Formulate and approve the National Seed Policy</li> <li>✓ Establish a local seed industry that contributes to strategic access to seeds and other plant materials</li> </ul>
Support for specific strategic products	<ul style="list-style-type: none"> <li>✓ Formulate product and industry plans that involve stakeholders</li> <li>✓ Development of agricultural products for niche markets</li> <li>✓ Concentrate resources on specific products where Fiji has a competitive advantage and where domestic and international markets exist.</li> <li>✓ Bilateral Quarantine Arrangement (BQA) Crops (Nadi)</li> <li>✓ Dairy products (Korovou)</li> <li>✓ Pineapple and Mango (Rakiraki, Seaqaqa)</li> <li>✓ Root vegetables (Bua)</li> <li>✓ Fruits and Vegetables (Sigatoka)</li> <li>✓ Coconut (Taveuni)</li> <li>✓ Organic farming on the outer islands (Levuka)</li> <li>✓ Infrastructure development, including roads, public facilities, and packaging and refrigeration facilities</li> <li>✓ Institutionalization of community-based training system for farmers through Farmer Field School</li> <li>✓ Encouragement of PPP construction in the operation of collection centers</li> </ul>

Developing farmers through improved farm efficiency to promote sustainable agricultural land use practices and resource use	<ul style="list-style-type: none"> <li>✓ Conduct training on appropriate approaches to climate change and disaster risk management in collaboration with local partners</li> <li>✓ Conduct Farmer Field School training, including appropriate land use practices and risk management</li> <li>✓ Strengthen provision of agricultural support services such as research, extension training, soil health and water conservation, livestock health, and credit support to improve farmers' productivity and efficiency</li> <li>✓ Revitalization and strengthening of traditional agricultural techniques and knowledge (food and nutrition security)</li> <li>✓ Deepening of understanding and implementation of training on backyard farming techniques such as container farming</li> <li>✓ Development and introduction of organic farming methods to farmers and incentives for investment in organic farming, greenhouse and hydroponic technologies</li> <li>✓ Continue to improve measures to promote the use of agricultural waste as livestock feed, organic fertilizer, and biogas.</li> </ul>
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Source: Ministry of Economy, 5 Year & 20 Year National Development Plan, p.109

Table 74 Fiji's Goalsal Development Targets for the Agricultural Sector (Other than the Sugar Industry)

Indicator (metric ton)	2016	2017	2018	2019	2020	2021
BQA crops						
Breadfruit	1,033.9	1,085.6	1,139.8	1,196.8	1,256.7	1,319.5
Chilli	52.1	68.5	75.4	82.9	87.1	91.4
Egg plant	1,180.9	1,239.9	1,301.9	1,367.0	1,435.3	1,507.1
Okra	356.0	373.8	392.5	412.1	432.7	454.3
Pawpaw.	2,100.5	4,201.0	4,411.1	4,631.6	4,863.2	5,106.3
Yaqona	4,509.8	4,058.8	3,855.9	3,663.1	4,762.0	4,175.9
Ginger	6,230.9	6,542.4	6,869.5	7,213.0	7,573.7	7,952.3
Pineapple (Ananas comosus)	6,629.0	6,960.4	7,308.4	7,673.9	8,057.6	8,460.4
Dalo	42,649.6	55,444.5	60,988.9	67,087.8	70,442.2	73,964.3
Cassava	59,689.7	74,612.2	78,342.8	82,259.9	86,372.9	90,691.5

Source: Ministry of Economy, 5Year & 20 Year National Development Plan, p.112

### Stockraising

Regarding the development plan for the livestock industry, the Ministry of Agriculture formulated the Livestock Sector Strategy in 2016, and in response to the Fiji National Agriculture Policy 2020, the strategy for the livestock industry has been organized over the next 10 years starting from 2016<sup>140</sup>.

<sup>140</sup> MoA, Livestock Sector Strategy Final Report, p.1

The basic vision is to build sustainable, diverse, resilient and modern competitive value chains led by governments and the livestock industry, providing opportunities for youth and women, and contributing to economic growth and food security. The report stipulates 4 outcomes, 7 indicators, 21 goals, and 68 activities as follows

Table 75 Strategic Plan for the Livestock Sector in Fiji

<u>Outcome Indicator</u> 2020 target (2012 results)	Goals	Activity
<u>Governance Improvement</u>  GDP growth rate of livestock industry 3% per year (3% per year)	Implementation of regulatory reform	Strengthen regulatory reform and compliance to improve quality, safety, and animal welfare standards
		Regulatory reform to improve quality assurance in the feed industry
		Regulatory reform to promote modern veterinary medicines and veterinary materials and their safe and effective use
		Protection against dumping, unfair competition, and biosecurity risks
		Improvement of analytical and experimental skills
		Review of livestock-related laws
	Promote industry leadership and participation	Strengthen representative organizations of the meat and livestock industry
		Institutionalization of industry consultation in policy, regulation, planning, implementation, and research prioritization
	Improving service capabilities	Human resource development, increase in the number of women in technical, professional, and managerial positions
		Facility Upgrades
		Strengthen the performance appraisal system and performance-based promotion mechanism in the Ministry of Agriculture
		Public-private partnerships in service delivery
	Providing investment incentives	Tax and duty incentives
		Establishment of a research and development fund
		aid acquisition
		Building Public-Private Partnerships
	Effective implementation	Cabinet approval of livestock strategy and implementation structure and 5annual program budget

Outcome Indicator 2020 target (2012 results)	Goals	Activity
		Improve capacity for analysis, monitoring, and evaluation of meat and livestock policies
<u>Building a competitive value chain</u>  Balance of trade in livestock products (FJD) -16,970,255 (-18,239,207)  Total consumption of livestock products (Millions of FJD) 298 (A)213	Innovation	Research and development on specific priorities
		Competitive subsidy system with contributions from industry and funds from the government
		Participatory research, evaluation, and dissemination
		Strengthen R&D capabilities and expertise
		Strengthening collaboration among research providers
		Strengthen knowledge management and knowledge sharing
	Quality and safety improvement	Strengthen skills and competencies for quality and safety management, monitoring, and analysis
		Implement regulatory reforms to rationalize, modernize, and improve compliance.
		Expand and improve facilities to include cold chain and processing
		Establish a grading and warranty system agreed upon by the industry and the market
	Improve business reliability	Strengthen value chain linkages
	market development	Conduct training on agriculture as a business
		Product development and promotion
		Infrastructure development for market access and logistics
		Improving trade and market access
	strengthening of financial resources	Improve market intelligence
		Conduct business skills training
		Development of agri-finance products
		Strengthening the capacity of FDB
	Feed improvement	Facilitation of foreign investment
Promote feed legislation, monitoring programs, and voluntary certification		
Research and development for the development of a commercial value chain for local feed resources		
		Agribusiness research and development to develop commercial production of animal feed

Outcome Indicator 2020 target (2012 results)	Goals	Activity
<u>Providing opportunities for the next generation</u>  Labor productivity of livestock industry (GDP of livestock industry/workers in livestock industry) (FJD) 25,974 (23,613)  Percentage of female participants in livestock industry (including related industries) 30% (7%)	Promoting youth participation Strengthen employment of young people	Promotion, communication, and knowledge sharing targeting youth
		Strengthening Rural Youth Organizations
		Provide incentives to livestock farmers and agribusinesses to promote employment of young people
		On-site training in livestock production
	Skills and Capacity Building Female participation	Strengthening of rural training institutions
		Provide scholarships and training support
		Developing the role of women in livestock production
	Increase in the number of women in technical, field advisory, research, and management positions in the Ministry of Agriculture	Improving land access for young livestock farmers
		Business Training for Young Livestock Farmers
		Introduction of mentoring system for young livestock farmers
<u>Improved sustainability and toughness</u>  Percentage of livestock industry's contribution to food security (percentage of domestic supply of animal protein) 60% (53%)  Growth rate of livestock production >0 (-0.4)	Improving resilience and risk management	Research and development to promote stress-tolerant varieties and feed resources
		Facilitate farm-wide planning
		Disaster monitoring and preparedness
		Capacity building in veterinary medicine
	Sustainable use of natural resources	Development of a practical guide for pastureland management
		Strengthen capacity to comply with environmental safeguards
		Promote the use of biogas and other wastewater management systems
		Adapting environmental standards to the local dairy industry
	Insurance	Development of insurance schemes for the livestock sector
		Funding mechanisms for livestock insurance premiums and claims
	Sharing of good practices	Dissemination of good practices
		Promote organic growth of livestock
		Promote certification options preferred by the market



Outcome Indicator 2020 target (2012 results)	Goals	Activity
	Ensuring Food Security	Strengthening the supply chain for livestock products in remote areas
		Promoting the introduction of small livestock to secure food for the family
		Preventing the importation of livestock products that cause non-communicable diseases
	Ensuring Food Security	Strengthening the supply chain for livestock products in remote areas
		Promoting the introduction of small livestock to secure food for the family
		Preventing the importation of livestock products that cause non-communicable diseases

Source: MoA, Livestock Sector Strategy Final Report, p.22-23 • 28

### (3) Issues and Measures

The table below shows the issues that it was able to identify through the information provided by the MoA.

Table 76 Details of Challenges Facing Fiji's Agricultural Sector and Measures to Address Them

Subject name	Details of the issue and countermeasures
Expansion of commercial agriculture	<ul style="list-style-type: none"> <li>✓ Among the challenges recognized by the Ministry of Agriculture, the expansion of commercial agriculture is the most important.</li> </ul>
Mechanization of agriculture	<ul style="list-style-type: none"> <li>✓ The mechanization of agriculture is also an issue.</li> <li>✓ Since individual farmers cannot afford the cost of acquiring and maintaining machinery, it is desirable to promote the use of machinery by farmer groups.</li> </ul>
Farm road maintenance	<ul style="list-style-type: none"> <li>✓ There are many farmers who cultivate Dalo in the inland highlands, but the lack of well-developed farm roads makes transportation of machinery and harvested products inefficient.</li> </ul>
Use of ICT	<ul style="list-style-type: none"> <li>✓ The creation of an online Data Library has facilitated the provision of information to internal and external audiences.</li> <li>✓ Regarding soil analysis, the latest soil maps are outdated in 1976 and need to be updated.</li> <li>✓ It is also expected to be used for various economic and social surveys such as Socio Economic Impact Assessment (SEIA).</li> </ul>
Improving market access	<ul style="list-style-type: none"> <li>✓ There is room for improvement in access to overseas markets such as Australia.</li> <li>✓ As an example, it took 10 years to enter the ginger market in Australia.</li> <li>✓ MoA is also considering the expansion of Fiji's wide variety of flowers (<i>Heliconia</i>, etc.) into the Japanese market.</li> </ul>
Capacity building of agricultural extension workers	<ul style="list-style-type: none"> <li>✓ Capacity building on sustainable agricultural technologies is needed for Extension Officers in Fiji.</li> <li>✓ The number of farmers to a agricultural extension workers is 800 persons.</li> </ul>

Source: Information provided by MoA

According to the information provided by the Ministry of Agriculture, commercial agricultural development initiatives are being implemented for hydroponic systems, simple irrigation kits, orchard development, fencing kits, intensive dairy farming, small farm equipment, farmland development, and women's support.

Regarding large-scale investment in the agricultural sector, according to the information provided by the Ministry of Agriculture, large-scale cultivation of industrial and medical hemp is not legally allowed.

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

###### • FAO

Regarding agricultural technical assistance, Fiji has received the most from FAO<sup>141</sup>. The Census of Agriculture has been conducted four times in the past, in 1968, 1978, 1991 and 2009, but there have been issues with accuracy and comprehensiveness. Therefore, in 2020, with the support of FAO, a complete agricultural statistical survey was conducted for the first time, and an agricultural census report was prepared as the 2020 Fiji Agriculture Census<sup>142</sup>.

###### • ADB

In 2005, ADB provided a loan of USD 25 million for the Alternative Livelihoods Development Project to develop an alternative to sugarcane cultivation for farmers engaged in the declining sugar industry<sup>143</sup>.

###### • IFAD

Since 2015, USD 3.5 million has been invested in providing nutritious meals, especially utilizing indigenous and traditional foods, with special emphasis on investments that benefit remote and highland communities, youth, and women<sup>144</sup>. Major activities include strengthening the capacity of small-scale farmers to produce and market high value-added crops through organic certification and other means, promoting partnerships between small-scale farmers and private organizations, strengthening the capacity of the Ministry of Agriculture to promote the development of the agribusiness sector, and strengthening the participation of local communities in the national policy process.

###### • Taiwan

Since 1978, Taiwan has been supporting Fiji's agricultural development by establishing experimental farms and aquaculture centers for the production of seedlings and fry, providing agricultural guidance to farmers, and introducing guava and dragon fruit.

The Center for Agricultural Technology Transfer (CETT) was established in February 2021 to support agricultural modernization and sustainable development<sup>145</sup>. The Center has 2 smart greenhouses equipped with sensors to control lighting, temperature, humidity, etc., and a culture lab to grow seedlings for cultivation and production of high value-added crops.

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<sup>141</sup> Information provided by the MoA

<sup>142</sup> MoA, Agriculture Sector Policy Agenda 2020, p.21

<sup>143</sup> <https://www.adb.org/projects/32541-013/main>

<sup>144</sup> <https://www.ifad.org/en/web/operations/w/country/fiji>

<sup>145</sup> [https://www.roc-taiwan.org/fj\\_en/post/1228.html](https://www.roc-taiwan.org/fj_en/post/1228.html)

• Korea

An Agrophotovoltaic Project combining agriculture and solar power generation is being implemented on Ovalau Island (2021-2022)<sup>146</sup> using funds from KOICA and the Green Climate Fund.

In addition to the above, according to information provided by the Ministry of Agriculture, India has provided support for vegetable seeds, China has provided agricultural tractors and support for rice and mushroom cultivation development, Australia has provided support for improving access to the Kava market, Israel has provided agricultural training, and the EU has provided technical assistance related to agricultural policy.

② Japan

There is no direct reference to agriculture in the Country Assistance Policy (April 2019).

According to the information provided by the MoA, about FJD 370,000 worth of heavy equipment (bending machines, tractors, etc.) were provided for the maintenance of agricultural roads in the northern area in March 2021<sup>147</sup>.

One of the cooperation needs from Japan is the use of ICT. Specifically, in the field of soil property survey and analysis, the latest soil maps are produced in 1976 and need to be updated<sup>148</sup>. It is also expected to support in improving access to overseas markets, such as exporting flowers (Heliconia, etc.) to Japan. In terms of capacity building, Japan is also expected to provide support as it lacks the capacity to develop regenerative agriculture technologies and cross-sectoral agricultural land use planning with other sectors.

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<sup>146</sup> Information provided by the MoA

<sup>147</sup> <https://www.fiji.gov.fj/Media-Centre/News/AGRICULTURE-FOCUSES-ON-STRENGTHENING-INFRASTRUCTURE>

<sup>148</sup> Information provided by the MoA

### 1.5.3.2. Forestry

#### (1) Overview

The forestry sector in Fiji is mainly administered by the Ministry of Forestry, which is responsible for the supply of wood resources, biomass energy production, habitat conservation, and water supply. In addition, the Ministry of Environment and the Native Land Trust Board (NTLB) are other relevant government agencies<sup>149</sup>.

The forest area and major tree species in Fiji are as follows.

Table 77 Fiji's Forest Area and its Breakdown

Type	Area (ha)	Percentage (%)
Natural forest	923,444	83.2
Artificial forest (Mahogany)	59,171	5.3
Planted forests (Pine)	73,433	6.6
Mangrove	54,189	4.9
Total forest area	1,110,237	100.0

Source: Information provided by the Ministry of Forestry

The main activity output of Fiji's forestry sector is shown below, with sawmilling and log production accounting for more than 50% of the output. According to the information provided by the Ministry of Forestry, the contribution to Fiji's GDP is estimated to be about 0.2% in 2019 for log harvesting alone, but about 1.5% if lumbering and manufacturing and processing into wood products are included.

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<sup>149</sup> <https://www.rinya.maff.go.jp/j/riyou/goho/kunibetu/fji/info.html>

Table 78 Output of Major Activities in the Forestry Sector in Fiji (million FJD)

Forestry Activities	2014	2015	2016	2017	2018	2019	Annual average
Logging	55.1	43.4	24.2	22.5	26.1	24.7	32.7
Sawing	38.3	56.0	70.8	69.8	68.6	68.7	62.0
Manufacture of cork, etc.	14.4	15.7	17.2	17.6	18.3	18.4	16.9
Manufacture of pulp, paper, etc.	1.3	1.3	1.7	2.9	2.3	2.4	2.0
Manufacture of corrugated cardboard, etc.	13.4	14.9	14.4	13.5	12.9	11.9	13.5
Other paper products	17.6	20.7	26.3	23.4	23.9	21.2	22.2
Furniture Manufacturing	20.3	15.2	9.4	6.4	6.6	6.8	10.8
Total	160.4	167.2	164.0	156.1	158.7	154.1	160.1

Source: Information provided by the Ministry of Forestry

According to the 2020 Census of Agriculture, the number of households engaged in forestry was 69,476 and 97.9% of the total number of households engaged in agriculture, forestry, and fisheries<sup>150</sup>. On the other hand, the number of households that makes a living from forestry is 14,094 (7.7%) and, of those, only 18.0% make it their main occupation.

The number of forestry workers is 183,129, and many of them are involved in daily activities such as cutting branches, collecting firewood, and harvesting medicinal plants. In addition, they are engaged in planting, nursery, and felling of plants such as Voivoi<sup>151</sup>, Masi<sup>152</sup>, and Sandalwood, which are used for traditional crafts, and production and sales of handicrafts.

<sup>150</sup> MoA, 2020 Fiji Agriculture Census volume 1, p.257

<sup>151</sup> Pandanus Leaf is a member of the Pandanaceae family, and is used as a raw material for textiles in Fiji.

<sup>152</sup> It is a member of the mulberry family, called Paper Mulberry in English, and is used to make bark cloth, called Tapa cloth, in the Pacific Islands.

Table 79 Main Activities of Forestry Workers in Fiji

Main Activities	Activity participation rate
Branch cutting and firewood collection	99.6%
Harvesting medicinal plants	94.7%
Afforestation (Voivoi)	12.0%
Harvesting Voivoi	7.2%
Handicraft production	4.3%
Harvesting wild plants	4.2%
Afforestation (Sandalwood, etc.)	1.8%
Sale of handicrafts	0.7%
Afforestation (Masi)	0.6%
Harvest Masi	0.4%
Raising seedlings	0.1%

Some households engage in more than one activity, so the total for each type of activity is not 100%.

Source: MoA, 2020 Fiji Agriculture Census volume 1: General table & Descriptive Analysis Report, p.14

As for accurate statistical data on the forestry sector, the Ministry of Forestry and the Bureau of Statistics are currently taking the lead in establishing a data collection system, and a memorandum of cooperation was signed in 2020<sup>153</sup>.

#### Main Forest Products

The major forest products in Fiji are Mahogany, Pine, Sandalwood, Teak, etc. The volume of logs harvested and the volume of sustainable harvesting<sup>154</sup> of the major tree species are as follows

Table 80 Logging Volume and Sustainable Harvesting Volume (m<sup>3</sup>) of Major Tree Species in Fiji

Tree species	2014	2015	2016	2017	2018	2019	2020	Annual Sustainable harvest volume
Pine	410,904	408,640	259,301	266,456	419,773	432,828	500,297	400,000
Mahogany	56,439	56,066	39,854	5,522	13,625	22,141	22,254	120,000
Native species	46,775	54,350	50,825	38,957	32,602	23,547	20,841	30,000

Source: Information provided by the Ministry of Forestry

<sup>153</sup> Fiji Sun, December 5 2020, Forestry and FBoS Work Towards Accurately Capturing Information on the Forestry Sector

<sup>154</sup> Information provided by the Ministry of Forestry.

## Trends in Major Companies

The major companies in the forestry sector are Fiji Pine Limited (FPL) and Fiji Hardwood Corporation Limited (FHCL).

FPL is mainly engaged in the production of pine logs, processing of lumber, export sales, and its predecessor, Fiji Pine Commission, was established in 1976 for the purpose of sustainable forest management. The company leases forests from local forest owners and secures the supply of pine trees as raw materials by paying lease fees<sup>155</sup>, log sales<sup>156</sup>, and bonuses based on the company's performance. The pine logs are mainly sold to Tropik Wood Industries Limited and Tropik Wood Industries Limited, the sawmill division of the group companies, and are processed into lumber for construction materials and wood chips. In terms of overseas cooperation, GIMCO Korea Limited and Tropik Wood Products Limited established a joint venture and started operation of the Nabou biomass plant. In addition, the company has obtained Forest Management and Chain of Custody certification from the Forest Stewardship Council (FSC).

FHCL is mainly engaged in the logging, processing and marketing of mahogany logs. In 1998, FHCL was transformed from a public corporation to a joint-stock company, and is now operating under the Fiji Mahogany Act 2003<sup>157</sup>. As for FSC certification, the company is working with the Ministry of Forestry to obtain it as of December 2021.

Table 81 Key Companies in Fiji's Forestry Sector

Company name	Contents
Fiji Pine Limited -Tropik Wood Industries Limited -Tropik Wood Products Limited	Negotiation with forest owners, forest management, and group business management Lumber processing and sales of construction materials, etc. Manufacture and sale of wood chips
Fiji Hardwood Corporation Limited	Logging, processing and sales of mahogany

Source: Fiji Pine Limited website and Fiji Hardwood Corporation Limited website

## Major Export Destinations

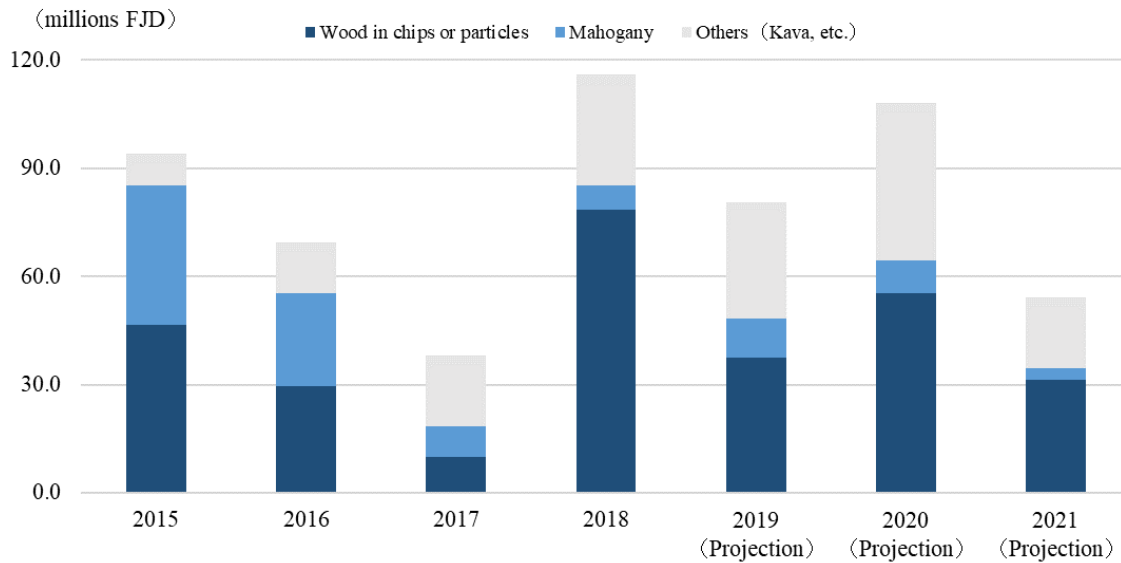
Fiji's main timber related exports are wood chips and other timber and processed products such as mahogany and Kava. The volume of exports of wood related products declined from 2015 to 2017 due to the damage caused by Cyclone Winston, but increased to FJD 116 million in 2018.

<sup>155</sup> FJD 13/ha

<sup>156</sup> A payment of 2% of net amount of the log sales price minus transportation costs, etc. will be made.

<sup>157</sup> <https://www.rinya.maff.go.jp/j/riyou/goho/kunibetu/fji/info.html>

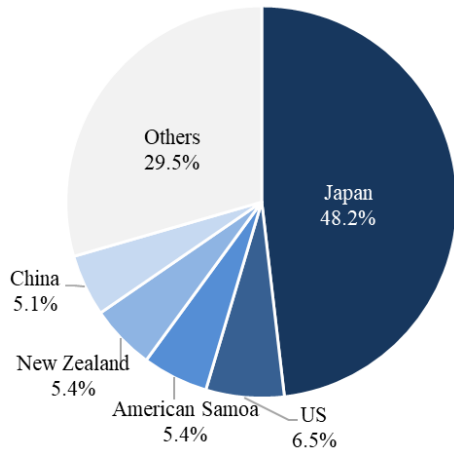




Source: Fiji Bureau of Statistics

Figure 15 Export Value of Fiji's Major Wood-Related Products

Fiji's top export destinations (2019) for wood-related products are Japan, the United States, American Samoa, New Zealand, and China, with the top 5 destinations accounting for more than 70% of exports<sup>158</sup>. As for exports to Japan, mahogany is not exported, and wood chips used as raw material for paper pulp are the main product<sup>159</sup>.



Source: World Integrated Trade Solution

Figure 16 Fiji's Export Destinations for Wood-Related Products (2019)

Licensing of Forest Operations

In Fiji, forest operations, including logging, are handled differently for mahogany and other tree species.

Mahogany is mostly harvested in accordance with the Fiji Plantation Grown Mahogany Harvesting Code of Practice issued by the Mahogany Industry Council<sup>160</sup>. At the time of harvesting, the FHCL examines the harvesters based on the Mahogany Industry (Licensing and Branding) Decree 2011, and the Mahogany Industry Council issues a harvesting permit.

<sup>158</sup> [https://wits.worldbank.org/CountryProfile/en/Country/FJI/Year/LTST/TradeFlow/Export/Partner/by-country/Product/44-49\\_Wood#](https://wits.worldbank.org/CountryProfile/en/Country/FJI/Year/LTST/TradeFlow/Export/Partner/by-country/Product/44-49_Wood#)

<sup>159</sup> <https://www.rinya.maff.go.jp/j/riyou/goho/kunibetu/fji/info.html>

<sup>160</sup> 95% is under the jurisdiction of the Mahogany Industry Board, but 5% is under the jurisdiction of the Ministry of Forestry. information provided by the Ministry of Forestry.

For other than mahogany, it is based on the Fiji Forest Harvesting Code of Practice issued by the Ministry of Forestry, but prior approval from the Ministry of Environment and NTLB<sup>161162</sup> is required<sup>163</sup>.

(2) Development Project

The Ministry of Forestry has prepared a Strategic Development Plan and will conduct a review of the past 5 years progress in 2022.

The NDP 2017-2021 places “sustainable management and development of forest resources” as a development objective for the entire forestry sector and specifies 9 strategies for the 3 policies.

Table 82 Policies and Strategies in Fiji's Forestry Sector

Policy	Strategy
Strengthen sustainable forest resource management	<ul style="list-style-type: none"> <li>✓ Strengthen forest protection and sustainable deforestation practices, and enhance mitigation of climate change impacts</li> <li>✓ Forest protection and logging concession management, establishment of long-term leasing system for afforestation</li> </ul>
Promote private sector participation in the afforestation sector	<ul style="list-style-type: none"> <li>✓ Establishment of afforestation policies that encourage management and development of afforestation.</li> <li>✓ Formalization of the National Land Use Plan</li> <li>✓ Create an environment conducive to promoting private investment in afforestation development</li> <li>✓ Continuation of reforestation program by FHCL</li> </ul>
Promoting the growth of wood production	<ul style="list-style-type: none"> <li>✓ Strengthen wood product research and promotion through building appropriate infrastructure (facilities, machinery, equipment)</li> <li>✓ Support SMEs in developing niche products through appropriate SME schemes</li> <li>✓ Expansion of plant and machinery used by FPL</li> </ul>

Source: Ministry of Economy, 5Year & 20 Year National Development Plan, p.117

Table 83 Goalsal Development Targets for the Forestry Sector in Fiji

indicator	2015	2021
16% increasing in forest area conserved in the long term	3	5
Percentage of forest area (%)	56	56

Source: Ministry of Economy, 5 Year & 20 Year National Development Plan, p.118

<sup>161</sup> In Fiji, where more than 80% of the land is traditional common land, prior contracting is required for planting and logging in the common land by the Mataqali units of the indigenous Fijians who own the land, and the contracting is done through NTLB.

<sup>162</sup> Japan Forest Technology Association (JFPA), Report Meeting on the Results of the Survey on Production Country Information Collection Project (European Region, etc.) of "Clean Wood" Utilization Promotion Project" commissioned by Forestry Agency, <https://www.rinya.maff.go.jp/j/riyou/goho/kunibetu/fji/fji-houkokusyo.pdf>

<sup>163</sup> <https://www.rinya.maff.go.jp/j/riyou/goho/kunibetu/fji/info.html>

### (3) Issues and Measures

The following table shows the issues that were identified through the information provided by the Ministry of Forestry.

Table 84 Details of the Challenges Facing the Forestry Sector in Fiji.

Subject name	Details of the issue and countermeasures
Planting of high value-added tree species	<ul style="list-style-type: none"> <li>✓ Of the many species, only 27 speices are commercially valuable as furniture materials or exports.</li> <li>✓ It is necessary to implement afforestation, etc. concentrating on high value-added tree species while maintaining a balance with the complex land ownership jurisdiction.</li> </ul>
Transition from export of logs and chips to production and export of lumber products	<ul style="list-style-type: none"> <li>✓ At present, most exports are of logs and chips, but in the future, it will be important to process them into lumber and add value before exporting them.</li> </ul>
Herb production in forest areas	<ul style="list-style-type: none"> <li>✓ There is a need to increase the production of value-added herbs and other products in forest areas.</li> </ul>
Improving the forestry/wood industry training center	<ul style="list-style-type: none"> <li>✓ Ministry of Forestry has Forestry Training Centre and Timber Industry Training Centre, but needs to improve curriculum accreditation and establishment of master's courses by strengthening partnerships with higher education institutions.</li> </ul>

Source: Information provided by the Ministry of Forestry

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

##### • World Bank

CO<sub>2</sub> reduction program is implemented by 2025. In addition, a Country Partnership Framework has been formulated for the period from 2021 to 2024, which includes contributions to the development of the blue economy<sup>164</sup>.

##### • ADB

According to information provided by the Ministry of Forestry, the ADB has supported some of the Ministry of Forestry's forest-related policies through ongoing dialogue.

##### • FAO

According to the information provided by the Ministry of Forestry, the project has received support from the Ministry of Forestry for forest conservation and protection activities and livelihood

<sup>164</sup> Information provided by the Ministry of Forestry

enhancement through community forest development programs by SMEs. It also has experience in supporting reforestation programs in dry forests in the country.

- Germany

Deutsche Gesellschaft für Internationale Zusammenarbeit has been working with local communities and Fiji's forestry sector to assist in the preparation of forest measurement and timber harvesting plans since 1985<sup>165</sup>. It has also been developing plantation guidelines<sup>166</sup>.

- China

According to the information provided by the Ministry of Forestry, through the APFNet program, support is being provided to Ministry of Forestry staff to participate in international workshops for capacity building and to maintain the genetics of the indigenous sandalwood species. China is also supporting the Fiji International Bamboo and Rattan Organisation (INBAR) to become a member and is in dialogue with INBAR on bamboo development in Fiji.

In addition to the above, Fiji is also involved in forest conservation and water source protection programs through Global Environmental Facility (GEF), partnerships with International Tropical Timber Organization (ITTO), and sustainable forest management training.

## ② Japan

There is no direct reference to forestry in the Country Assistance Policy (April 2019).

In the past, long-term experts have been dispatched from 2011 to 2013 as “Pacific Region Forest Advisors” to build capacity in sustainable forest management.

As for the cooperation needs from Japan, according to the information provided by the Ministry of Forestry, cooperation that contributes to the improvement of research capacity necessary for the implementation of plantation and production of high value-added tree species is expected. Other activities include support for the Emission Reduction Programme, forest conservation and protection, development of value-added lumber products, support for research and development on forest resources, review of forestry policies and regulations, raising awareness of forest-related programs among domestic and international stakeholders, improvement of log harvesting and lumber processing technologies, and Support needs for degraded forest regeneration programs, coastal and river restoration programs, and capacity building programs for forestry-related human resources have been identified.

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<sup>165</sup> Federal Ministry for the Environment, Nature Conservation and Nuclear Safety website, Sustainable forestry in Fiji and SNRD Asia and Pacific website, REDD + Community Exchange in Fiji: At the end of 10 years of REDD+ support by GIZ in the Pacific Island Countries

<sup>166</sup> Information provided by the Ministry of Forestry

### 1.5.3.3. Fisheries

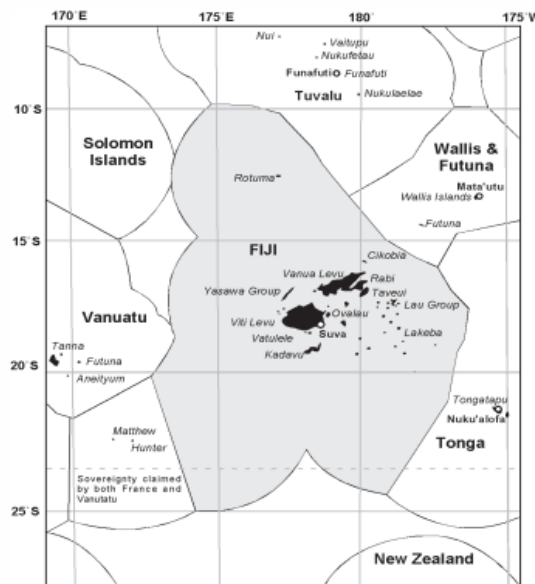
#### (1) Overview

Fiji's fisheries sector is managed by the Ministry of Fisheries, which covers offshore fisheries, coastal fisheries, aquaculture, and related industries such as fish processing. The Ministry of Fisheries also provides funding and technical assistance to the Fishermen's Association<sup>167</sup>.

The fisheries industry in Fiji is important both commercially and socially, and is positioned alongside the tourism and sugar industries.

Fiji's Exclusive Economic Zone (EEZ) is shown in Figure 17. The EEZ of Fiji is approximately 1.29 million square kilometers.

Of the households engaged in fishing, the number of making a living from fishing is 4,513 (6.5%)<sup>168</sup>, and many of them are involved in multiple activities such as agriculture and forestry.



Source: Ministry of Fisheries, Annual Report 2018-2019

Figure 17 Fiji's EEZ

Community fishing rights are legally recognized in Fiji, and the responsibility for resource management and control of commercial fishing lies with the registered owner of each fishing right. The ownership of fishing rights is under the jurisdiction of The Native Land and Fisheries Commission, which is responsible for surveying fishing rights areas, determining boundaries with traditional owners, registering owners, and handling appeals, etc. 410 fishing rights areas have been registered<sup>169</sup>. As for Community Marine Protected Areas, according to information provided by the Ministry of Fisheries, 150 have been established as of December 2021.

As for the data related to fisheries, according to the information provided by the Ministry of Fisheries, in 2020, the contribution to GDP will be 1%, export value will be FJD 7,010 million, import value will be FJD 95.8 million, production (offshore, coastal, aquaculture) will be 10,799.81 metric tons, and tuna catch (bigeye, yellowfin, albacore) will be 10,317.12 metric tons. Data on export volume, export value, and nominal GDP prior to 2018 are as follows.

<sup>167</sup> Information provided by the Ministry of Fisheries

<sup>168</sup> MoA, 2020 Fiji Agriculture Census volume 1: General table & Descriptive Analysis Report, p.17

<sup>169</sup> MoA, Agriculture sector policy agenda 2020, p.56

Table 85 Fiji's Fisheries-Related Figures (GDP, Export Volume and Value)

	2014	2015	2016	2017	2018
Nominal GDP of fisheries industry (Millions of FJD)	88.4	85.5	70.8	80.7	73.1
Percentage contribution of fisheries to nominal GDP (%)	0.96	0.87	0.69	0.73	0.63
Export volume (t)	-	-	12,631	9,399	9,379
Export value (FJD)	-	-	105,948,289	85,302,058	86,158,468

Source: Ministry of Fisheries, Annual Report 2018-2019, p.7

In terms of the fishing-related workforce, it is estimated that in 2015, 12,000 people were employed full-time in coastal fishing, 1,677 in offshore fishing vessel crews, and 2,000 in tuna processing, for a total of 15,677 people<sup>170</sup>.

#### Summary by Type of Fishery

According to the annual<sup>171</sup> report of the Ministry of Fisheries, Fiji mainly has offshore fisheries, coastal fisheries (including commercial and subsistence), and aquaculture (freshwater and brackish water).

#### Offshore Fishing Industry

The longline fishery is mainly used to catch a wide variety of fish species that are consumed both domestically and internationally, including tuna (albacore, yellowfin, bigeye) mainly for export markets. According to the Ministry of Fisheries<sup>172</sup>, in 2018, about 70% of the longline catch took place in Fiji's domestic waters and 30% in ex situ waters, with 90 domestic longline fishermen catching 12,283 tons of tuna and 2,089 tons of other pelagic fish.

Fiji's fishing industry, which accounts for 1.8% of the country's exports, is dominated by the tuna fishery (yellowfin tuna, bigeye tuna, etc.), which also exports to Japan and other countries. The fleet composition in 2018 was as follows: 13 vessels with a total length of less than 21 meters, 36 vessels with a total length of 21-30 meters, and 46 vessels with a total length of more than 30 meters, for a total of 95 longline vessels. As for profitability, it is affected by albacore tuna prices and fuel prices, with albacore tuna prices peaking at USD 3,700/ton in 2012, then falling to USD 2,250 in 2013, and rising again to USD 3,750 in early 2019. In addition, fuel prices have continued to rise between 2016

<sup>170</sup> Ministry of Fisheries, Annual Report 2018-2019, p. 7

<sup>171</sup> Ministry of Fisheries, Annual Report 2018-2019, p. 4

<sup>172</sup> Ministry of Fisheries, Annual Report 2018-2019, p. 4

and 2019. According to the information provided by the Ministry of Fisheries, the cap on the granting of fishing licenses to domestic fishing vessels (Flag vessels) has been set at 60 (2020).

#### Coastal Fishing (Commercial Purposes)

It includes fishing on atolls and reefs, in deep water, and in nearby open ocean waters. According to the Ministry of Fisheries<sup>173</sup>, most of the vessels involved in these fisheries are less than 9 meter in length, and some fisheries do not use vessels. Coastal fisheries use various types of fishing gear (lines, nets, spears, traps, etc.) to harvest a wide variety of fish, shellfish, seaweed and other species. Fiji's coastal fishery catch is estimated to be about 11,000 tons per year, but due to the large number of landing sites and fishermen, an accurate estimate is difficult to make. Most of the catch is destined for the domestic market, and according to the Ministry of Fisheries<sup>174</sup>, 70% of the catch from the northern part of Vanua Levu Island goes to the Suva market. On the other hand, high market value fish such as snapper and lobster are exported. In recent years, fish species such as Coral Grouper (Donu in Fijian name) and Blue-Spotted Hind (Kawakawa in Fijian name), which are popular as food fish in the country, have been banned from fishing (catching, selling, buying, possessing, and exporting) from June to September, the peak of the spawning season, to prevent overfishing. A fine is imposed on violators.

#### Freshwater Fishery

The fishery is relatively small compared to other forms of fishery, and mainly catches native species such as shellfish, eels and crustaceans, as well as non-native species such as tilapia and carp, and occurs in almost all major rivers in Fiji. The freshwater fisheries catch is estimated to be about 3,700 tons per year<sup>175</sup>. There is little active management of freshwater fish species in Fiji, but general river management practices such as erosion control are in place and are thought to help secure freshwater fish species.

#### Aquaculture

It is considered a growth area in Fiji's fisheries sector and has an impact on the livelihoods of Fiji's coastal and inland communities. In addition to tilapia, shrimp, seaweed, coral, and pearls, which have been the focus of recent years, aquaculture species developed in Fiji include carp, sabahi, western pearl oysters, oysters, sea cucumbers, sponges, and crabs. According to the Ministry of Fisheries, the annual aquaculture production is estimated at FJD 2.9 million<sup>176</sup>.

#### Fishery Processing

According to the World Bank's report on fish processing in 2016, there are large cannery in Levuka and other 6 small and medium-sized freezer storage facilities and canneries, mainly in Suva.

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<sup>173</sup> Ministry of Fisheries, Annual Report 2018-2019, p. 4

<sup>174</sup> Ministry of Fisheries, Annual Report 2018-2019, p. 6

<sup>175</sup> Ministry of Fisheries, Annual Report 2018-2019, p. 4

<sup>176</sup> Ministry of Fisheries, Annual Report 2018-2019, p. 4

Table 86 Tuna Processing Facility in Fiji

Owned company	Location	Business Description	Annual operating results (t)	Number of direct employees
PAFCO	Levuka	Canning of cooked meat	11,000	812
Golden Ocean	Suva	Fresh and frozen processing	3,000	647
Viti Foods	Suva	Canned food manufacturing	10,000	230
Sealand Fish	Suva	Fresh and frozen processing	No data	30
Blue Ocean	Suva	Fresh and frozen processing	No data	10
Tri Pacific	Suva	Fresh and frozen processing	No data	108
Tosa Busan	Suva	Fresh and frozen processing	No data	38

Source: World Bank, 2016, Tuna Fisheries Pacific Possible Background Paper No.3, p.34

## (2) Development Project

The NDP 2017-2021 places “sustainable fisheries resource management” as a development objective for the entire fisheries sector and specifies 30 strategies with 3 policies.

Table 87 Policies and Strategies for Fiji's Fisheries Sector

Policy	Strategy
Sustainable management of offshore fishery resources	<ul style="list-style-type: none"> <li>✓ Finalization of the National Fisheries Policy and offshore processing, value addition, and niche market coverage</li> <li>✓ Review of the Fisheries Act 1942 and support for sustainable growth and management of fisheries</li> <li>✓ Promote the processing of Pacific Fishing Company Limited (PAFCO) and other private companies by conducting research on value-added and niche markets and encouraging industry participation.</li> <li>✓ Implementing a “look to the future exercise” that focuses on long-term tangible outcomes and the costs and benefits of fishing.</li> <li>✓ Building a platform for discussing policy and program initiatives in the offshore fisheries sector with the active participation of the private sector, regional partners, and other key stakeholders</li> <li>✓ Involvement in regional fisheries partnerships to develop and implement a coherent approach that contributes to optimal and sustainable fisheries development.</li> </ul>



Policy	Strategy
Supporting coastal fisheries through sustainable fisheries management and development	<ul style="list-style-type: none"> <li>✓ Establishment of a Coastal Fisheries Management Department responsible for monitoring, control and surveillance of coastal fisheries.</li> <li>✓ Expanding existing databases to obtain data on the status of coastal and offshore marine resources (e.g., regeneration and fishing conditions)</li> <li>✓ Conducting resource assessment surveys to manage coastal fisheries</li> <li>✓ Establishment of a framework for appropriate assessment of coastal fisheries</li> <li>✓ Review and rationalization of procedures for obtaining fishing permits, etc., and review of fees and charges</li> <li>✓ Conducting stock assessment and commodity profiling to understand the status of fish resources</li> <li>✓ Review of the Inshore Fisheries Management Decree and finalization of related coastal policies and regulations</li> <li>✓ Completion of fisheries policy on supporting activities such as game fishing for recreational purposes.</li> <li>✓ Promote sustainable fisheries management and fish resource security through management measures such as establishment of MPAs, seasonal fishery closures, size limits and quotas, and gear restrictions</li> <li>✓ Strengthen community-based integrated and sustainable resource management and development efforts through enhanced collaboration with development partners and ongoing fisheries programs</li> <li>✓ Support for the restoration and conservation of mangroves and corals</li> <li>✓ Implementation of training and training of fish wardens for effective monitoring and enforcement</li> <li>✓ Support for strategic placement and maximum utilization of infrastructure such as RFCs, ice plants, and refrigerated warehouses</li> </ul>
Supporting the growth of aquaculture	<ul style="list-style-type: none"> <li>✓ Promote private investment in aquaculture through PPP, tax incentives, research and extension demonstrations, and provision of fry stock.</li> <li>✓ Support cost-benefit analysis for commercial development of aquaculture industry, including existing and potential commodities such as tilapia, shrimp and seaweed</li> <li>✓ Supporting small-scale farmers and community-based aquaculture production for food and nutrition security</li> <li>✓ Technical advice and training for farmers, supply of high-quality fry and feed, and improved access to financial assistance</li> <li>✓ Expansion of existing aquaculture facilities and promotion of juvenile fish production</li> <li>✓ Review of existing fee structure for supply of fry and feed</li> <li>✓ Conducting seafood value chain analysis</li> </ul>

Policy	Strategy
	<ul style="list-style-type: none"> <li>✓ Further study of commercialization and productization of marine products targeting potential niche markets, such as sea cucumbers, sea grapes, and marine fish farming</li> <li>✓ Implement the Aquaculture Development Decree, regulations, and the Aquaculture Strategic Plan.</li> <li>✓ Finalization of Commodity Development Plan and Aquaculture Strategy</li> <li>✓ Improve access to technical advice and financial support for aquaculture farms</li> </ul>

Source: Ministry of Economy, 5 Year & 20 Year National Development Plan, p.114

Table 88 Development Target Figures for Fiji's Fisheries Sector

Indicator	2016	2017	2018	2019	2020	2021
Number of new marine protected areas established	3	3	3	3	3	3
Percentage of area of marine protected areas in Fiji waters (%)	1.8	-	-	-	-	30

Source: Ministry of Economy, 5 Year & 20 Year National Development Plan, p.116

In addition, the Ministry of Fisheries has prepared the Strategic Development Plan 2019-2029. The contents of the plan and the progress as of December 2021 are as follows.

Table 89 Contents and progress of the Strategic Development Plan 2019-2029

Strategy	Priority matter	Progress rate
Offshore fishing industry	<ol style="list-style-type: none"> <li>1. Creating a sustainable market environment</li> <li>2. Using technology to improve service delivery</li> <li>3. Cost reduction in the longline tuna fishery</li> <li>4. Development of traceability</li> </ol>	74%
Coastal fishing	<ol style="list-style-type: none"> <li>1. Formulate appropriate laws and regulations</li> <li>2. Develop a robust licensing system</li> <li>3. Development of joint projects with the private sector</li> <li>4. Development of species management plans</li> <li>5. Development of a coastal ecosystem plan</li> <li>6. Secure 30% of marine protected areas in Fijian waters.</li> <li>7. Joint program development with NGOs</li> </ol>	68%
Aquaculture	<ol style="list-style-type: none"> <li>1. Formulate appropriate laws and regulations</li> <li>2. Joint program development with NGOs</li> <li>3. Building a robust biosecurity framework</li> <li>4. Formulation of the National Aquaculture Plan</li> </ol>	72%

Strategy	Priority matter	Progress rate
	5. Creating a sustainable market environment for new aquaculture species 6. Development of joint projects with private companies	
Quality	1. Establish a quality maintenance process 2. Ensuring quality by implementing quality maintenance processes 3. Provide effective services to customers 4. Capacity building to provide effective services to customers 5. Strengthen collaboration with all stakeholders	79%

Source: Information provided by the Ministry of Fisheries

According to the information provided by the Ministry of Fisheries, the development priorities from 2021 to 2024 include: (1) investment support for research and development of high value products; (2) development of fit-for-purpose legislation; (3) development of technology for effective monitoring and control of EEZs and coastal waters; (4) automation of systems to promote trade and investment opportunities, including online licensing systems; (5) development of a coastal fisheries database; (6) development of digital solutions to track the performance of public sector investment programs; and (7) development of economic analysis tools to determine the contribution of the fisheries industry to GDP.

### (3) Issues and Measures

According to the information provided by the Ministry of Fisheries, the following issues are recognized.

Table 90 Details of Challenges Facing Fiji's Fisheries Sector and Measures to Address Them

Subject name	Details of the issue and countermeasures
Decrease in export volume	✓ Due to the impact of COVID-19, transportation costs have increased and export volumes have decreased.
Maintaining a balance between resource management and economic growth	✓ Balancing the three priority areas of economic growth, food security, and resource management is both important and a major challenge. ✓ For example, the export of sea cucumbers, which are popular in the Asian market, is now subject to fishing regulations due to concerns about a decline in the population. Due in part to the implementation of these regulations, the export value has been on a downward trend in recent years.
Awareness-raising activities for the community on resource management methods, etc.	✓ However, from the perspective of food security, community awareness-raising activities regarding resource management methods and marine product market conditions are an issue that the Ministry of Fisheries is focusing on.

Subject name	Details of the issue and countermeasures
Lack of knowledge on fishery data analysis	<ul style="list-style-type: none"> <li>✓ There is little knowledge of data analysis as a basis for fisheries policy, etc.</li> </ul>
Communication with each fishing community	<ul style="list-style-type: none"> <li>✓ Communication with each fishing community is also an issue, and it is difficult to gain the community's acceptance of fishery policies, especially those related to protected areas.</li> <li>✓ As a countermeasure, meetings through the iTaukei ministry may be held in each province.</li> </ul>
Cooperation with the tourism industry	<ul style="list-style-type: none"> <li>✓ Collaboration with the tourism industry is also emphasized, and an MoU has been signed with the Fiji Hotel and Tourism Association to strengthen the relationship.</li> </ul>
Decline in demand for fresh seafood	<ul style="list-style-type: none"> <li>✓ Domestic demand for fresh seafood is declining, and demand for canned products is increasing.</li> </ul>
Impacts of development activities on freshwater fish	<ul style="list-style-type: none"> <li>✓ Since every development activity has some impact on the natural environment, but also on freshwater fish, a fisheries impact assessment is conducted before any development activity takes place. Based on the results and recommendations, development activities are carried out.</li> <li>✓ In order to maintain and ensure the sustainability of freshwater fishery resources, the fishery is supplemented with juvenile carp, shrimp, tilapia, and other fish produced in hatcheries.</li> </ul>

Source: Information provided by the Ministry of Fisheries

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

###### • FAO

The project is being implemented by FAO through a grant from the Ministry of Foreign Affairs of Japan and has been implemented in Fiji since 2017 to develop value-added and alternative livelihoods (ecotourism, sport fishing, etc.) for the development of fisheries and diversification of income sources using coastal aggregating devices (artificial floating fish reefs for fish collection). The “Strengthening Livelihoods and Food Security through Fishery with Coastal Harvesting Devices in the Pacific Ocean (Collaboration with FAO) (for Kiribati, Samoa, Tuvalu, Vanuatu, Palau, Fiji and Marshall Islands)” is being implemented<sup>177</sup>.

###### • ADB

In addition to Papua New Guinea, Solomon Islands, and Timor-Leste, which are geographically adjacent to the Coral Triangle, the following countries were selected for the phase 2 of the ADB program “Strengthening Coastal and Marine Resources Management in the Coral Triangle of the Pacific” to enhance the management of coastal and marine resources in the Coral Triangle region. In addition to Papua New Guinea, Solomon Islands, and Timor-Leste, the program was also applied to Fiji and Vanuatu, which are geographically adjacent to the Coral Triangle, share coastal and marine ecosystems and species (mangrove forests, seagrass beds, and coral reefs), and have experienced similar environmental threats<sup>178</sup>. Also, in 2017, at the request of the Ministry of State Enterprises, a master plan for port development was prepared to improve the efficiency and productivity of ports such as Suva, Lautoka, Malau, Wairiki, Levuka and Rotuma<sup>179</sup>.

###### • EU and Sweden

The Pacific-European Union Marine Partnership Programme (PEUMP), which aims to protect biodiversity and sustainably use marine resources, was launched in October 2017 with a total co-financing of EUR 45 million by the EU and Sweden (EUR 35 million by the EU and EUR 10 million by Sweden), and is scheduled to end in 2023, with a possible extension of one or two years. It aims to support the sustainable development and management of fisheries, which are the basis for food security and economic growth, while considering climate resilience and marine biodiversity in 15 countries in the Pacific region. The implementing organizations of this program include the regional organizations: SPC, FFA, SPREP, and USP, as well as the NGOs IUCN, LMMA, PITIA, and WWF. In Fiji, the program has so far provided support through surveys, workshops and trainings, and the preparation of handbooks.

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<sup>177</sup> [https://www.mofa.go.jp/mofaj/gaiko/oda/data/gaiyou/odaproject/pacific/fiji/contents\\_01.html](https://www.mofa.go.jp/mofaj/gaiko/oda/data/gaiyou/odaproject/pacific/fiji/contents_01.html)

<sup>178</sup> <https://www.adb.org/projects/43427-012/main>

<sup>179</sup> <https://www.adb.org/projects/49281-001/main>

② Japan

In the Country Assistance Policy (April 2019), under the Sustainable Oceans Program of Development Agenda 1-1 “Expansion of Economic Activities”, it is stated that Fiji will provide cooperation to support its efforts to contribute to the maintenance and conservation of sustainable oceans, focusing on the points that Fiji has committed to the international community at the United Nations Conference on the Oceans.

Japan's cooperation with Fiji's fisheries industry has been ongoing, and in the private sector, OFCF has been actively involved in technical cooperation and other activities (as shown in the table below).

Table 91 Examples of Japan's Cooperation with Fiji's Fisheries Industry

Case name	Type/amount	Overview
Donation of ice plant and truck Technical cooperation (2021) <sup>180</sup>	Donations and technical cooperation by OFCF	Provision of 2 ice machines and truck (7 tons) under the FDAPIN (Fisheries Development Assistance for the Pacific Island Nations) project, and technical cooperation for facility maintenance and management
Development plan for tilapia ponds in Nasautoka village (signed in 2021) <sup>181</sup>	Grant-in-aid USD 446,600	Construction of 3 tilapia farms and drainage system for nasautoka village in Wainibuka Wainibuka, Tailevu District
Bua fishery business center generator maintenance plan (signed in 2020) <sup>182</sup>	ODA Grant USD 62,551	Provision of 2 generators to increase the annual ice making capacity of the center
Equipment for tilapia seedling production at Naduruloulou Fisheries Experiment Station (2020) <sup>183</sup>	ODA Grant FJD 370,422	One of the leading aquaculture facilities in the South Pacific, which distributes 1 million tilapia eggs annually to 500 tilapia farmers in the country, was granted new tilapia seedling production equipment and 1 tractor.
SDGs 14 Life Below Water project (2020-2024) <sup>184</sup>	Technical Cooperation (Dispatch of experts, training, provision of equipment)	Develop a framework for human resource development for fisheries-related ministry officials in the Pacific region, and strengthen the human resource development capacity of Ministry of Fisheries officials.

<sup>180</sup> <https://fjijisun.com.fj/2021/03/04/japan-investment-boosts-fisheries/>

<sup>181</sup> [https://www.fj.emb-japan.go.jp/itpr\\_ja/11\\_000001\\_00239.html](https://www.fj.emb-japan.go.jp/itpr_ja/11_000001_00239.html)

<sup>182</sup> [https://www.fj.emb-japan.go.jp/itpr\\_ja/00\\_000634.html](https://www.fj.emb-japan.go.jp/itpr_ja/00_000634.html)

<sup>183</sup> <https://thefishsite.com/articles/japan-to-fund-fijian-tilapia-improvements>

<sup>184</sup> [https://www.jica.go.jp/activities/project\\_list/knowledge/ku57pq00002ntn6j-att/2020\\_106\\_fij.pdf](https://www.jica.go.jp/activities/project_list/knowledge/ku57pq00002ntn6j-att/2020_106_fij.pdf)

	JPY 200 million	
Coastal and Marine Resource Management Advisor (Regional) (2015-2018) <sup>185</sup>	Dispatch of experts	Marine resource management (coastal and offshore) education and research needs, human resources, and facilities at USP and related institutions; identification of needs and formation of new projects in neighboring countries; formation of networks of education and research content and human resources of interest in the Pacific region by relevant education and research institutions in Japan; technical guidance to the “Tuna Fisheries Course”; integrated Implementation, monitoring, evaluation and analysis support for on-site activities related to coastal resource management
Vitawa Aquaculture Development Project (2009-2011) <sup>186</sup>	Technical Cooperation USD 220,000	Technical cooperation for the aquaculture industry using Sabahia, which is abundant in the mangrove coast of northern Viti Levu Island
Advisor for the promotion of fishing villages (2008-2010) <sup>187</sup>	Dispatch of experts	Coordination of related organizations, especially the USP, a regional organization, support for various aspects of study and implementation, and strengthening of the system to promote a fishery livelihood improvement model that can be adapted in the Pacific region.
Lami Fishing Port Redevelopment Plan (signed in 2005) <sup>188</sup>	ODA Grant JPY 577 million	Development of a pier at the Rami fishing port to reduce congestion at the Muaywar pier in Suva Bay and to promote the conversion of some small-scale fisheries to offshore fishing.

Sources: JICA website, Ministry of Foreign Affairs of Japan website, Fiji Embassy in Japan website, etc.

As for the cooperation needs from Japan, they expect to provide knowledge on methods such as fishery statistics and cost-benefit analysis, as they do not have expertise in analyzing fishery-related data<sup>189</sup>. There is also a need for training on the development of sea cucumber fisheries in marine

<sup>185</sup> [https://www.jica.go.jp/activities/project\\_list/knowledge/ku57pq00002jrici-att/2017\\_106\\_fij.pdf](https://www.jica.go.jp/activities/project_list/knowledge/ku57pq00002jrici-att/2017_106_fij.pdf)

<sup>186</sup> <https://www.jica.go.jp/fiji/english/activities/partnership02.html>

<sup>187</sup> [https://www.jica.go.jp/activities/project\\_list/knowledge/ku57pq00002jvh30-att/2010\\_106\\_fij.pdf](https://www.jica.go.jp/activities/project_list/knowledge/ku57pq00002jvh30-att/2010_106_fij.pdf)

<sup>188</sup> [https://www.mofa.go.jp/mofaj/press/release/17/rls\\_0124a.html](https://www.mofa.go.jp/mofaj/press/release/17/rls_0124a.html)

<sup>189</sup> Information provided by the Ministry of Fisheries.

protected areas, training on the Agri-Aqua System, which combines aquaculture and hydroponics, and training on the technical maintenance yap grade of solar-powered freezers and ice warehouses.



#### 1.5.3.4. Mining

##### (1) Overview

The Ministry of Lands and Mineral Resources and Environment (MoLMRE) is the principal government agency responsible for implementing the country's mineral development policy under the Mining Act 1978 (amended in 1985). The Mineral Resources Department (MRD), which is under the Ministry, formulates mining policies, assists investors in the mining sector, and provides geological information to promote exploration and development of the country's mineral and petroleum resources. The ministry has also established a community unit to mediate between exploration companies and landowners and to raise community awareness during mining and exploration operations on indigenous lands.

The main mineral products are ores such as gold, silver and bauxite, and zinc and copper are also mined<sup>190</sup>. Development minerals<sup>191</sup> such as crushed rock<sup>192</sup>, sand, and clay for construction materials and limestone for agricultural materials are also actively mined<sup>193</sup>. Although deposits of stone materials such as marble have been confirmed to exist, no mining has taken place due to the low quality of the ore and the fact that the area was designated as a government-protected area under an amendment to the Mining Law in 1983<sup>194</sup>.

Fiji's mining-related laws and regulations are as follows (including seabed minerals). As of December 2021, the mining laws were being reviewed with the support of the IGF.

Table 92 Relevant Laws and Regulations for the Mining Sector in Fiji

Name
Explosives Act 1937
Quarries Act 1939
Petroleum Exploration and Exploitation Act 1948
Mining Act 1965
Environmental Management Act 2005
Fiji International Seabed Mineral Management Act 2013
Fair Share of Mineral Royalties Act 2018

Source: Information provided by MoLMRE

<sup>190</sup> <https://mric.jogmec.go.jp/reports/trend/20200131/123003/>

<sup>191</sup> It refers to minerals and materials (limestone, clay, diatomaceous earth, granite, gypsum, sand, etc.) that are mined, processed, or manufactured domestically and used in industries such as construction, manufacturing, and agriculture, and does not include metal ores, fossil fuels, or precious stones.

<sup>192</sup> In the UNDP research report baseline Assessment of Development Minerals in Fiji, crushed rock is defined as rock fragments greater than 2mm, sand as rock fragments from 0.06mm to 2mm, and clay as soil less than 0.06mm.

<sup>193</sup> UNDP, 2018, Baseline Assessment of Development Minerals in Fiji, p.7

<sup>194</sup> UNDP, 2018, Baseline Assessment of Development Minerals in Fiji, p.24

The following table shows the production and export value of major minerals in 2021, with gold having the highest export value.

Table 93 Production of Major Minerals in Fiji

Type	2016	2017	2018	2019	2020	2021
Gold (oz)	23,630	45,029	41,493	35,553	35,054	30,075
Silver (oz)	47,919	22,740	21,029	23,171	16,203	18,418
Bauxite (t)	59,500	115,456	57,960	-	-	-
Iron sand (t)	-	-	-	73,000	61,865	88,647
Minerals developed (m <sup>3</sup> )	602,611	463,641	406,733	359,599	-	-

Source: Information provided by MoLMRE

Table 94 Export Value of Fiji's Major Minerals (thousand FJD)

Type	2016	2017	2018	2019	2020	2021
Gold	121,940	114,379	107,760	106,247	131,779	109,900
Silver	842	780	675	811	704	964
Bauxite	2,831	5,098	2,666	-	-	-
Iron sand	-	-	-	4,765	4,174	5,403

Source: Information provided by MoLMRE

The contribution of the mining industry to Fiji's GDP is estimated at 0.9% (2021). On the other hand, information provided by MoLMRE points out that the mining and quarrying of development minerals is often neglected because it is not reflected as mining and quarrying in GDP calculations, even though it is an important sector as it provides basic components for infrastructure projects.

#### Precious Metal

As for major gold mines, the Vatukoula gold mine, Fiji's largest producer, continues to operate, as do the Kasi, Tuvatu, Cirianui and Dakunimba gold mines.

Gold export is an important industry, peaking at 3,777kg in 2016 and accounting for 6.26% of total exports; as of 2019, it exported 1,840kg, 4.87% of total exports<sup>195</sup>.

The major player in gold production in Fiji is Vatukoula Gold Mines (owned by the Chinese company ZhongrunResources Investment Corporation), which is developing the Vatukoula gold mine, which has been in near continuous production since 1935. Newcrest Mining limited, an Australian mine developer, owns 69.94% stocks of the Namosi Joint Venture, which is developing

<sup>195</sup> <https://www.visualcapitalist.com/erupting-gold-exploration-potential-the-pacific-ring-of-fire/>

the Namosi mine, believed to be the world's largest undeveloped copper-gold deposit<sup>196</sup> (other shareholders are Mitsubishi Materials Corporation and Nittetsu Mining Co. The other shareholders are Mitsubishi Materials Corporation and Nittetsu Mining Co.)<sup>197</sup>.

According to the Fraser Institute, Australia ranks third among the 12 regions of Australia and Oceania in terms of investment attractiveness, behind Western Australia and Queensland<sup>198</sup>.

#### Developed Minerals

Most of the exploited minerals for construction materials in Fiji are mined by small and medium-sized domestic companies, with 76% of mining done from rivers and 20% from rocky areas in the forests.

Development minerals such as crushed rock, sand and clay for construction materials are mainly exported to Kiribati and Tuvalu. Cement is exported to Vanuatu, Samoa, Tonga, Kiribati and other Pacific countries, but mining of cement raw materials has been terminated since 2005, and sand and gravel are mixed with cement raw materials imported from Japan and China to produce cement in Japan.

According to the Department of Statistics, the total output is FJD 53 million in 2017, while the UNDP survey estimates it at between 190 million and 369.1 million<sup>199</sup>, with variations in the data.

Under the Mining Act (Article 2), “minerals” includes precious metals (gold, silver, platinum, palladium, iridium, etc.) and precious stones (amber, amethyst, cat's eye, diamond, emerald, garnet, opal, ruby, turquoise, etc.) as well as bauxite, asbestos and graphite, but does not include clay, gravel, sand or rock<sup>200</sup>. It does not contain clay, gravel, sand, or rocks.

#### Submarine Mineral

Exploration of the deep sea floor has been conducted since the 1980s, and the possibility that Deep Sea Minerals (DSM), which contain rare earths, are distributed over a wide area in the Pacific region has been pointed out, attracting attention as a new industry.

According to the World Bank<sup>201</sup>, the following 3 types of deep-sea minerals have been identified in the Pacific region: Seafloor Massive Sulphides (SMS), Polymetallic Manganese Nodules (PMN), and Cobalt-rich ferromanganese crusts (CFC). These minerals have been identified in the deep sea.

SMS is the precipitation of concentrated minerals such as copper, iron, zinc, silver, and gold in hydrothermal vents (active and inactive volcanic vents) located at depths 1,500 ~ 5,000m. In addition to Fiji, other Pacific island countries where SMS is known to occur are Papua New Guinea,

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<sup>196</sup> <https://www.domegoldmines.com.au/about-fiji/mining-in-fiji/>

<sup>197</sup> <https://www.marketresearch.com/Timetric-v3917/NJV-Namosi-Copper-Gold-Mine-11160809/>

<sup>198</sup> Frase Institute (2018), Survey of Mining Companies 2018, <https://www.fraserinstitute.org/sites/default/files/annual-survey-of-mining-companies-2018.pdf>

<sup>199</sup> UNDP, 2018, Baseline Assessment of Development Minerals in Fiji, p.7

<sup>200</sup> UNDP, 2018, Baseline Assessment of Development Minerals in Fiji, p. 69

<sup>201</sup> World Bank, 2017, Precautionary Management of Deep Sea Minerals Pacific Possible Background Paper No. 2, p. 15-16

Solomon Islands, Tonga, and Vanuatu. The Pacific island countries where SMS has been confirmed to occur are Papua New Guinea, Solomon Islands, Tonga, and Vanuatu, in addition to Fiji.

PMN is abundant at depths of 3,500~6,000m and contains manganese as well as cobalt, copper, iron, lead, nickel, zinc, and rare earth elements. It is known to exist in the EEZs of the Cook Islands, Kiribati, Niue, and Tuvalu.

CFCs are generally found in the depth range of 800~2,500m and contain cobalt, nickel, manganese, and copper, as well as other minerals including precious metals (platinum) and copper. It is known to occur in the EEZs of Kiribati, FSM, RMI, Niue, Palau, Samoa, and Tuvalu.

Fiji is a member of the International Seabed Authority (ISA)<sup>202</sup>. Licenses to mine seabed minerals are issued using the Mining Act of 1978, which was amended in 2010 to include seabed minerals in its scope. Although the International Seabed Minerals Management Decree was passed in 2013, there is no independent legislation on seabed mineral exploration and mining in Fiji.

#### Trends in the Private Sector

According to information provided by the Ministry of Land, Infrastructure, Transport and Tourism, JOGMEC is conducting resource exploration in Fiji with Thunderstruck Resources Limited, a Canadian company, as a joint mining partner. In addition, Australian mining companies Mitsubishi Materials Corporation and Nittetsu Mining Co., Ltd. have invested in the Namosi Joint Venture, which is developing the Namosi mine, and an F/S is underway. The number of companies that have obtained Exploration Licenses has decreased from 80 to 30. This is due to the impact of COVID-19 and the tightening of criteria for obtaining licenses.

The following are the private companies with prospecting licenses in Fiji in September 2021. Of the companies with special prospecting licenses, only one has actually been issued a mining concession and is in operation.

Table 95 Private Companies with Special Prospecting Licenses and Operations in Fiji

Company name	Owner's nationality	Operation status
Amex Resources PTE Limited	Australia/China	Operating
Asia Pacific Resources Limited	Australia	Operating
Aurum Exploration (Fiji) PTE Limited	China	Operating
Destiny Gold PTE Limited	Australia	
Ding Jin Mining PTE Limited	China	
Dome Mines PTE Limited	Australia	

<sup>202</sup> It is an international organization that organizes and manages activities on the deep sea floor in accordance with the provisions of the United Nations Convention on the Law of the Sea and the implementing agreements of Part 11 of that Convention, with the primary purpose of managing the mineral resources of the deep sea floor (the sea floor outside the continental shelf of all coastal states and below the jurisdiction of any state).

Goldbasin Mining (Fiji) PTE Limited	China	
Kalo Exploration PTE Limited	Canada	
Lion One Pte Limited	Canada	Operating
Magma Mines PTE Limited	Australia	
Matai Holdings Ltd	Australia/USA	
Mineral Exploration (Fiji) PTE Limited	Fiji	
Namosi Joint Venture	Japan/Australia	
Oak Mines Limited	Australia/China	
Tengy Mines PTE Limited	China	
Thunderstruck Pte Limited	Canada	
Vatukoula Gold Mines PTE Limited	China	Operating
Viti Mining PTE Limited	Australia/Fiji	

Source: Information provided by MoLMRE

As for seabed minerals, exploration within the Fiji EEZ has been underway since 1977, in cooperation with partners such as Australia, New Zealand, the United States, France, and Japan. The organization with an exploration license in effect in 2021 is only KIOST Minerals (Korean Institute of Ocean Science and Technology Minerals)<sup>203</sup>. The mining of minerals is in its early stages, and commercialization is expected in 2030 at the earliest<sup>204</sup>.

## (2) Development Project

The only publicly available development plan for the mining sector in Fiji is the NDP (development plans prepared by various ministries and agencies each year are available as internal documents)<sup>205</sup>. The NDP sets “Sustainable Mining” as a development objective for the entire mining sector and specifies 3 policies and 28 strategies.

The plan was to issue 6 new blocks by 2021-2022, but due to lack of prior consultation with the relevant ministries, the plan was set as an unrealistic development strategy, according to the report<sup>206</sup>.

<sup>203</sup> Fiji Sun, 2021, Five Sites Identified for Fiji's Deep Sea Mineral Exploration: KIOST Minerals

<sup>204</sup> World Bank, 2017, Precautionary Management of Deep Sea Minerals Pacific Possible Background Paper No.2, p.23

<sup>205</sup> Information provided by MoLMRE

<sup>206</sup> Information provided by MoLMRE

Table 96 Policies and Strategies for the Mining Industry in Fiji

Policy	Strategy
Sustainable Mining Management	<ul style="list-style-type: none"> <li>✓ Protecting the environment and human life through proactive application of mine safety standards</li> <li>✓ Monitoring of exploration licenses and safety regulations</li> <li>✓ Environmental impact assessment</li> <li>✓ Strengthen resource management through active enforcement of the provisions of the Environment Management Act (EMA) and other laws.</li> <li>✓ Signed a Memorandum of Understanding (MOU) with the Ministry of Environment on the roles and responsibilities of the environmental sector in the implementation of the EMA</li> <li>✓ Incorporation of environmental best practices into the Ministry of Environment's Standard Operating Procedures for Mining and Groundwater Development</li> <li>✓ Enact and enforce appropriate laws regarding all types of mineral resources.</li> <li>✓ Maximize profits from all exploration activities, especially oil exploration.</li> <li>✓ Improving the quantity and quality of earth science information and its availability</li> <li>✓ Efficient acquisition and storage of information from stakeholders, entrepreneurs, and companies with exploration licenses</li> <li>✓ Improve the data bank</li> <li>✓ Enforcement of laws regarding the collection and provision of data such as reports, surveys, drilling logs, seismic profiles, photographs, charts, punch cards, computer prints, core samples, geochemical samples, etc.</li> <li>✓ Enhancement and improvement of services provided by the Geochemical Laboratory to continue and maintain the verification of ore grade analysis</li> <li>✓ Establishing a fair royalty system based on the 30 Amendment</li> <li>✓ Review of the Mineral Act to ensure adequate benefits to landowners.</li> <li>✓ Promote friendly relations between landowners and investors</li> <li>✓ Provide updated and verified information on newly explored areas and their mineral resource potential</li> <li>✓ Conduct evaluation of already explored Special Prospecting Licence (SPL) areas and other areas with potential for mineral resources</li> <li>✓ Conduct resource assessment of mined areas (specifically, estimate of resources already mined and reserved areas)</li> <li>✓ Increased employment opportunities in the mining sector</li> <li>✓ Confirm that a training program is essential for investment.</li> </ul>

Policy	Strategy
	<ul style="list-style-type: none"> <li>✓ Review compensation of professionals to bring them in line with other industries.</li> </ul>
Promoting and accelerating growth through FDI	<ul style="list-style-type: none"> <li>✓ Integration of promotional and marketing activities with the Investment Fiji program</li> <li>✓ Consideration of fiscal measures to attract and retain investment in mineral resources</li> <li>✓ Simplifying the use of geoscience data to support investors</li> <li>✓ Updating the database of the mineral survey program and packaging the survey results for investors</li> </ul>
Ensure sustainable development of groundwater resources	<ul style="list-style-type: none"> <li>✓ Strengthen laws on water quality management, standards, and use</li> <li>✓ Development of necessary capacity in the earth science sector to enable better management and control of groundwater resources.</li> </ul>

Source: Ministry of Economy, 5 Year & 20 Year National Development Plan, p.120

Table 97 Goalsal Development Targets for Fiji's Mining Industry

Indicator	2015	2021
Share of private investment in GDP (%)	20.9	Over 15

Source: Ministry of Economy, 5 Year & 20 Year National Development Plan, p.121

(3) Issues and Measures

The issues identified through the information provided by MoLMRE are shown in the table below.

Table 98 Details of Issues Related to the Mining Sector and Measures to Address Them

Subject name	Details of the issue and countermeasures
Mining Act Update	✓ As the Mining Act is very old and was formulated in 1965, a review of the Mining Act has been initiated with the support of The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF). A review of the Mining Act has been initiated with the support of The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development.
Capacity building in the mining sector	✓ The challenge is to improve the capacity of the mining sector in various fields such as engineering and geology.
Attracting foreign investors	✓ Sovereign risk in Fiji is high, including political issues, and people are often cautious about investing in the mining sector.
Acquisition of domestic human resources	<ul style="list-style-type: none"> <li>✓ Compared to Australia and New Zealand, there is a lack of advanced education programs for domestic personnel to enter the mining sector.</li> <li>✓ Students also have no choice but to work in the mining sector, and there is a shortage of skilled and experienced laborers.</li> </ul>
Environmental pollution of rivers and other bodies of water caused by extraction of minerals for development	<ul style="list-style-type: none"> <li>✓ Most of the development minerals such as rocks and sands are currently mined from the rivers, affecting the local communities that use the rivers.</li> <li>✓ Gravel extraction from rivers requires an application and permit through the Environment Impact Assessments (EIA) process, and the Natural Resources Officer of the Ministry of Land and Mineral Resources will monitor EIA compliance.</li> <li>✓ A plan is being formulated to shift to collection in forests instead of from rivers.</li> </ul>
Policy on seabed minerals	✓ As there are no independent laws, regulations and policies on seabed minerals in Fiji, there are plans to develop independent laws and regulations on seabed mineral exploration and mining.

Source: Information provided by MoLMRE

In addition to the above, huge amount of construction materials is needed to build the infrastructure proposed in the NDP2017-2021 but problems have been pointed out such as the quality of materials such as crushed rock not meeting specifications, lack of timely supply from optimal mining sites, and shortage of stockpiles<sup>207</sup>.

Since much of the quarrying, gravel extraction, etc., is done in rivers, the impact on local communities that use rivers for drinking water, washing clothes, agricultural irrigation, etc., is evident. In addition, the presence of quarrying and other activities along the coast has also been

<sup>207</sup> UNDP, 2018, Baseline Assessment of Development Minerals in Fiji, p. 61



observed, which may have a significant negative impact on Fiji's coastal environment. In response to this, the government has decided to phase out quarrying and gravel extraction from rivers and encourage the use of hard rock quarries. It has also been pointed out that hard rock quarries have the potential to produce more stable and higher quality materials, which could improve the quality of construction and durability of Fiji's roads<sup>208</sup>.

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

###### • World Bank

It funded a geothermal exploration project in Vanua Levu in 2019. It also conducted exploration in Labasa and Savusavu.

###### • The Intergovernmental Forum on Mining, Minerals, Metals and Sustainable Development (IGF)

Helping to review the Mining Act (Formulated in 1965).

###### • UNDP

Sector profiling and the ACP-EU Development Minerals Programme for the mining sector in Pacific countries and Africa, including Fiji, is being implemented with funding from UNDP and the European Commission (EUR 13.1 million for 3 years). The Development Minerals Fiji Project was also implemented<sup>209</sup>.

###### • New Caledonia

According to the information provided by MoLMRE, an MOU for training in nickel mining will be signed with the New Caledonian government.

###### • China

According to the information provided by MoLMRE, they are receiving scholarship support from China.

##### ② Japan

There is no direct reference to mining in the Country Assistance Policy (April 2019).

In collaboration with JOGMEC, Japan conducted seabed mineral resource surveys in Oceania (1985-2005).

From 2013 to 2015, Japan dispatched an expert as an “Environmental Advisor for Seabed Mineral Resources Development” to assist in the formulation of environmental guidelines and the establishment of environmental management and monitoring methods based on our extensive

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<sup>208</sup> UNDP, 2018, Baseline Assessment of Development Minerals in Fiji, p.8

<sup>209</sup> Information provided by MoLMRE

research experience in the development of seabed resources and environmental impact studies. In addition, a geothermal research project was conducted for the whole of Fiji in 2012.

As for cooperation needs from Japan, training that contributes to capacity building in the mining sector in general (mining engineering, geotechnical engineering, environmental engineering, geology, economic impact assessment, regulatory framework impact assessment, F/S, and due diligence) is expected. There is also a need for cooperation on building databases related to exploration, mining, and mineral development. Dispatch of Japanese experts and collaboration with mining-related organizations (secondment, exchange programs, internships, etc.) are also expected. In the development of mines, the introduction of infrastructure capable of supplying electricity from renewable energy sources is also expected.

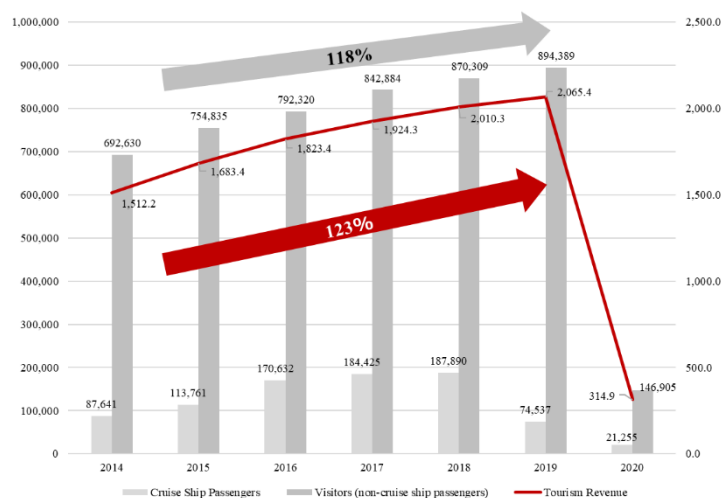
### 1.5.3.5. Tourism Industry

#### (1) Overview

In terms of tourism, the Ministry of Commerce Trade Tourism and Transport (MoCTTT) is responsible for tourism policy and tourism development planning, while Tourism Fiji is responsible for tourism marketing and promotion.

Fiji is characterized by its beautiful crystal clear waters and coral reefs, and has been used as a location for many movies. In addition to a variety of marine sports such as diving and surfing, activities in the lush rainforest, traditional performing arts such as Meke and firewalking are also used as tourism resources. Levuka, the former capital of the island of Obarau, is registered as a World Heritage Site as well as a historical port town with European architecture. There are luxury resorts and golf courses where the wealthy can stay, and it is also known as a candidate for overseas weddings. It is one of the most developed countries in the Pacific region in terms of tourism.

The number of visitors to Fiji had been on an upward trend from 2014 to 2019 (before COVID-19), growing 118% for 5 years. Tourism spending (excluding International Airfare) also increased by 123% for 5 years, but both declined sharply in 2020. The number of visitors by cruise ships also increased through the year, accounting for about 22% of all visitors from 2016 to 2018, but dropped to about 8% in 2019<sup>210</sup>. The percentages of visits to each region based on the denominator of the total number of overnight stays in 2019 are Denarau (20%), Coral Coast (17%), Suva (16%), Nadi (15%), and the Mamanuca Islands (11%), while the other regions have less than 4% each.



Source: Fiji Bureau of Statistics

Figure 18 Number of Visitors to Fiji and Tourism Spending

<sup>210</sup> According to the information provided by MoCTTT, the cyclone Mona in January 2019 and cyclone Sarai in December 2019 led to the cancellation of cruise ships.

In the number of visitors, excluding cruise ship passengers, by purpose, the percentages have not changed significantly between 2014 and 2019. The majority of visitors are on vacation (73-79%), visiting friends and relatives (6-10%), transit to other Pacific countries (6-9%), business (3-4%), conferences (1-2%), education and training (about 1%), and other (1-4%), with the majority being for Holiday, or tourism purposes. The average spending per visitor in 2019 was FJD 2,319, with business visitors having the highest average spend per day, followed by vacation and conference visitors. The average length of stay per visitor for business purposes was also longer than for vacation and conference purposes, suggesting that the per capita impact was greater.

Table 99 Average Length of Stay per Person and Average Daily Spend per Person by Visitors or Cruise Ship Passengers to Fiji

Purpose of visit (average length of stay per 1person in 2014~2019 years (shortest to longest))	Average consumption per 1 day (FJD)						
	2014	2015	2016	2017	2018	2019	2020
Business (10.3 ~ 10.6 days)	293.6	301.6	316.8	317.8	318.9	320.0	304.3
Vacation (8.4 days)	284.3	292.0	306.2	307.3	308.4	309.5	295.2
Conference (6.9 ~ 7.1 days)	254.2	261.1	273.5	274.5	275.6	276.7	263.5
Other (14.5 ~ 14.8 days)	176.8	181.5	190.3	191.4	192.5	193.6	184.8
Education and training (25.4 ~ 25.8 days)	167.5	171.9	179.9	181.0	182.1	183.2	174.9
Transit to other Oceanic countries (1.9 days)	165.2	169.7	178.1	179.1	180.2	181.3	172.7
Visit friends and relatives (20.5 ~ 20.8 day)	77.7	79.8	83.9	85.0	86.0	87.1	83.1
Cruise ship passengers* (1.0 days)	64.6	66.4	69.6	74.1	80.1	87.3	83.2

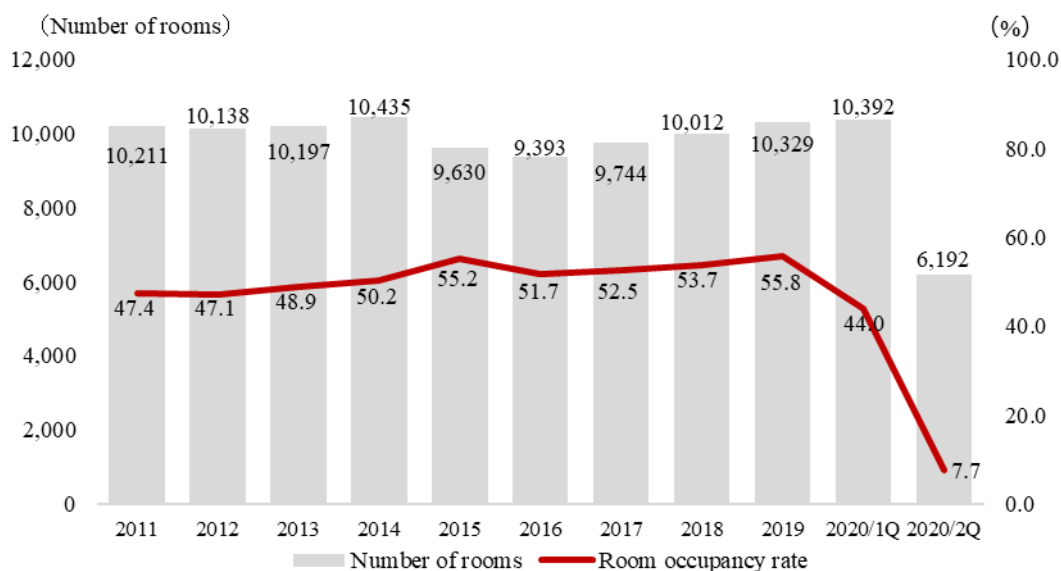
\*Assumes that cruise ship passengers are just passing through, but that 75% of them will get off the ship during the day for sightseeing, shopping, eating and drinking.

Source: Fiji Bureau of Statistics

According to the Fiji Bureau of Statistics, the top five countries of residence for visitors in 2016-2019 were Australia (41-45%), New Zealand (21-23%), the United States (9-11%), China (6-5%), and the United Kingdom (about 2%), with these countries accounting for more than 80% of the total. The sixth country was Canada until 2018, but with the resumption of Fiji Airways' direct flights between Nadi and Narita, Japan almost doubled its number of visitors in 2018, from 6,350 in 2017 to 11,903, and in 2019 it became the sixth country with 14,868, surpassing Canada's 13,269. Seasonality in the timing of visits was also apparent, with about 20% of visits in the first quarter, 25% each in the second and fourth quarters, and 30% in the third quarter from 2016-2019. This seasonality is influenced by outbound travel trends in Australia and New Zealand<sup>211</sup>.

<sup>211</sup> MoCTTT, Fijian Tourism 2021

According to the World Travel & Tourism Council's Fiji 2021 Annual Research, the travel and tourism industry GDP contribution will decrease from 32.0% (3,727.4 million FJD) in 2019 to 10.9% (985.0 million FJD) in 2020. The decline in the number of hotel rooms and occupancy rate in the second quarter of 2020 is also significant, with COVID-19 having an enormous impact.



Source: Fiji Bureau of Statistics public information

Figure 19 Number of Hotel Rooms and Occupancy Rate

For flights prior to COVID-19, Fiji was connected to Japan, New Zealand, Australia, several US cities, Hong Kong and Pacific countries. Fiji also served as a hub for foreign visitors to several Pacific countries that did not have direct flights to major overseas cities.

## (2) Development Project

The MoCTTT has a comprehensive development plan, “Fijian Tourism 2021,” to grow tourism from FJD 1.9 billion industry in 2017 to FJD 2.2 billion industry by the end of 2021, with key strategies focused on nine areas. However, this was prepared before the outbreak of COVID-19, and the ministry, in its “2020-2021 Costed Operational Plan”, listed the revitalization of the National Tourism Policy Agenda as the first strategic priority of the Department of Tourism, as well as the review and development of the Long-Term National Tourism Development Plan, and the development of the National Tourism Policy Agenda. It also states that the department will review and develop a long-term national tourism development plan and identify short-term strategies to address urgent industry issues. Other long term plans other than those mentioned above include the development of the Fijian National Sustainable Tourism Framework, the successor plan to Tourism in Fiji 2021, in collaboration with IFC and the Global Green Growth Institute (GGGI).

### (3) Issues and Measures

Issues and Measures related to the tourism sector are shown in the table below.

Table 100 Details of Issues and Measures Related to the Tourism Sector

Subject name	Details of the issue and countermeasures
Decline in tourist numbers due to COVID-19	According to information provided by the Ministry of Economy, since the COVID-19 pandemic, the tourism industry, which accounts one-third of Fiji's GDP, has stagnated due to a significant decline in tourist visits.

Source: Information provided by the Ministry of Economy

According to the information provided by the MoCTTT, due to the impact of COVID-19, many tourism industry workers have returned to their hometowns to work in different industries or start their own businesses, and the following measures have been taken in the national budget

- Stronger Together Job Support Scheme: A budget of FJD 5 million has been set aside and employers will receive a wage subsidy equivalent to the minimum wage rate of FJD 2.68 for 3 months.
- Recruitment and retraining through the National University of Fiji: FJD 1 million budget set aside
- Low interest loans for working capital: FJD 200 million in working capital for business operations at interest rates of up to 3.99%

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

- South Pacific Tourism Organisation (SPTO)

The SPTO is headquartered in Suva, Fiji, and as of October 2021 of this report, has private sector members from the governments of the following 21 countries: American Samoa, Cook Islands, FSM, Fiji, French Polynesia, Kiribati, Nauru, RMI, New Caledonia, Papua New Guinea, Samoa, Solomon Islands, East Timor, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis & Futuna, Rapa Nui (Easter, etc.), and China. It includes 200 private sector members from the governments of Wallis and Futuna, Rapa Nui (Easter, etc.), and China. It consists of marketing, research, sustainable tourism development, and finance/corporate services divisions, and works to improve access by air and sea, strengthen the Pacific brand, and develop government and private sector capacity for sustainable tourism.

In its Strategic Plan 2020-2024, the SPTO has identified 3 core priority areas: (1) regional marketing, (2) sustainable tourism planning and development, and (3) research and statistics. The 4 innovative partnership priority areas are (1) cruise and yacht sector development, (2) supporting and promoting

investment and product development, (3) improving air access and route development, and (4) capacity building and empowerment of the people of the Pacific.

The SPTO has also developed the “Pacific Tourism Statistics Strategy 2021-2030” with the support of PARIS 21, OECD and the New Zealand government, in response to the challenges of data quality, consistency and comprehensiveness, as well as gaps in the statistical capacity of various agencies in one of the priority areas of tourism statistics.

- UN World Tourism Organization (UNWTO)

Fiji is a member of the United Nations World Tourism Organization (UNWTO), and the UNWTO Office in Japan and the Asia Pacific Tourism Exchange Center (APTEC) have conducted a research project, “Sustainable Tourism Product Development in the Pacific Islands,” which focuses on 11 Pacific countries including Fiji, and conducted a workshop for high-level policy makers in each country in March 2021 to disseminate the results of the project.

- World Bank

Since 2017, the World Bank has been running the Pacific Possible campaign to examine the real transformational opportunities that exist for Pacific countries over the next 25 years and to identify the region's biggest challenges that require urgent action. One of the seven major themes is tourism, and in its 2016 publication *Tourism: Pacific Possible Background Paper No. 4*, the World Bank states that increasing demand from Chinese tourists, retirees, high-income earners, and cruise ships will accelerate growth in tourism numbers. The World Bank also issued "How Could the Pacific Restore International Travel?" on January 19, 2021, which outlined three possible phases of border crossing policies in Papua New Guinea and the Pacific countries.

- New Zealand Ministry of Foreign Affairs and Trade (MFAT)

MFAT is cooperating with the Pacific Community (SPC) in the development of the Pacific Data Hub, and aims to collect and publish tourism data through the SPC as well as the SPTO in the future<sup>212</sup>.

## ② Japan

Although there is no specific development agenda for tourism in the Country Assistance Policy (April 2019), in Development Agenda 1-1, “Expansion of Economic Activities,” it is mentioned that the country has not kept up with the construction and expansion of social and economic infrastructures (transportation (roads, bridges, airports, etc.), energy, water resources (water supply and sewerage, etc.), and renewal of aging facilities, etc.), which are supposed to receive service industries such as tourism. In Issue 2-2 “Environmental Conservation”, it is mentioned that the natural environment itself is an important industrial resource for Fiji as tourism is an important industry that supports the country's economic development.

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<sup>212</sup> JICA, January 2021, Progress report on information collection and validation study on tourism development in the Pacific region

As for tourism-related projects, JICA has been conducting “Information Collection and Confirmation Survey on Tourism Development in the Pacific Region” since March 2020.

As for the cooperation needs from Japan, according to the information provided by the MoCTTT, in terms of human resources, support is expected for re-education considering the period of return to work after COVID-19, and training for SMEs to improve their IT skills (such as facilitating access to online booking platforms). In terms of infrastructure, there are expectations for support for the renovation of sustainable tourism facilities (including the introduction of renewable energy, efficient use of water, and increased resilience to climate change), and for the development of port facilities for cruise ship climate. In addition, there are expectations for support for the development of tourism products using the heritage of Levuka.



#### 1.5.4. Climate Change and Disaster Prevention

##### 1.5.4.1. Climate Change

###### (1) Overview

The Climate Change Division of the Ministry of Economy (CCD) is mainly responsible for the climate change sector in Fiji, and is responsible for ensuring that the Budget Submission Template submitted by ministries and agencies for budget formulation includes a climate change component. The CCD's main duties are to check that the budget submission templates submitted by ministries and agencies include the climate change component, to input information into the Financial Management Information System (FMIS), and to attend international conferences such as the COP. In addition, all ministries and agencies are required to describe how they will address climate change in their Strategic Plans and appoint a climate change officer<sup>213</sup>.

Other than the Climate Change Bureau, the relevant ministries and agencies with jurisdiction over climate change are as follows.

Table 101 Climate Change-Related Ministries and Agencies (other than the Climate Change Authority)

Authorities	Operations under one's jurisdiction
Department of Energy, Ministry of Infrastructure and Meteorological Services	Renewable energy, rural electrification (shifting power from diesel to solar systems and off-grid/mini-grid solutions outside of the main 4 islands served by the EFL)
Ministry of Commerce, Trade, Tourism and Transport	Introduction of electric vehicles in public transportation (buses)
Ministry of Rural and Maritime Development and Disaster Management	Rural electrification (shifting power from diesel to solar systems and off-grid/mini-grid solutions outside of the main 4 EFL-supplied islands)
National Disaster Management Office	Implementation of climate adaptation measures in collaboration with the Commissioner of each division
Ministry of Waterways and Environment	Riverbank management, coastal management
Ministry of Women, Children and Poverty Alleviation	Approaching community, gender, and children during project implementation
Minister of iTaukei Affairs	Consideration for iTaukei in project implementation

Source: Information provided by CCD

The major natural hazards in Fiji are cyclones, floods, storm surges, droughts, and heat waves<sup>214</sup>. The country is particularly vulnerable to cyclones, and the islands of the country are directly or indirectly affected by cyclones multiple times a year. Cyclones usually occur during the rainy season

<sup>213</sup> Information provided by CCD

<sup>214</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p.10-12

from November to April and cause not only human casualties but also significant economic damage. Examples of cyclones that have caused loss of life and significant economic and infrastructure damage include Cyclone Evan in 2012, Cyclone Winston in 2016, and Cyclone Josie in 2018<sup>215</sup>. Fiji is also exposed to disasters such as sea level rise, floods, landslides, etc., and is recognized as one of the most vulnerable countries to climate change and climate-related disasters<sup>216</sup>.

Because of this vulnerability, Fiji has also been active in international cooperation on climate change and was the first country to formally endorse the Paris Agreement. Fiji was also the first country to formally approve the Paris Agreement. The country updated its Nationally Determined Contribution (NDC) in December 31, 2020, and has submitted its goal of continuing with its targets by 2030 (e.g., 30% reduction in CO<sub>2</sub> emissions from the energy sector) and achieving zero CO<sub>2</sub> emissions by 2050<sup>217</sup>.

The UNFCCC Third National Communication Report was submitted to the United Nations Framework Convention on Climate Change (UNFCCC) in 2020 as a comprehensive document on the impacts of climate change. The report extensively documented the risks that climate change poses to Fiji's communities and economy. The document identified Fiji's main areas of vulnerability to climate change as subsistence agriculture, coastal and marine resources including coral reefs, freshwater resources, and land management and use<sup>218</sup>.

#### Fiji Climate Trends and Future Projections

With regard to climate trends in Fiji, it is estimated that the temperature around the capital Suva has increased by about 0.8°C during the 20th century, suggesting an increase of about 0.1°C per decade over the past half century<sup>219</sup>. In addition, precipitation varies greatly from year to year, making it difficult to determine trends. For cyclones as well, there is uncertainty in predicting outbreak activity<sup>220</sup>.

With regard to future projections of climate, while precipitation is difficult to predict, temperatures show a consistent warming trend. In Fiji, under the highest CO<sub>2</sub> emission scenario, the temperature is projected to increase by an average of 2.7°C between 2080 and 2099 (the world is projected to increase by 3.7°C)<sup>221</sup>.

#### Impact on Natural Resources

With respect to water resources, about 70% of Fiji's population and domestic industries are dependent on surface water resources, and rainwater harvesting is common. These resources are

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<sup>215</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p.18

<sup>216</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p.2

<sup>217</sup> Fiji's Updated Nationally Determined Contribution, <https://pacificndc.org/sites/default/files/2021-01/Fiji%20Updated%20NDC.pdf>

<sup>218</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p.2-3

<sup>219</sup> Refers to changes between 1900-1917 and 2000-2017

<sup>220</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p.6

<sup>221</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p.8

particularly vulnerable to climate change, especially to the frequency and magnitude of extreme events<sup>222</sup>.

As for sea level rise, it is also a major threat to Fijian communities and livelihoods. Many of Fiji's islands are low-lying and vulnerable to flooding, and the vast coastline is vulnerable to erosion and saltwater intrusion. The clearing of mangroves has removed natural barriers to erosion and flooding, and unplanned development in the immediate coastal zone has also altered natural coastal erosion and sedimentation processes<sup>223</sup>.

As for coral reefs, their area is expected to decrease due to rising temperatures and other human activities as they are related to the ongoing acidification of the oceans caused by rising atmospheric CO<sub>2</sub> concentrations. The decline of coral reefs will have major implications not only for biodiversity, but also for economic sectors such as fisheries and tourism, as well as for local communities. As for fisheries, a significant reduction in coastal fisheries due to climate change could threaten food security, especially for households that fish for subsistence<sup>224</sup>.

#### Impact on Economic Sectors

With respect to agriculture, direct impacts of climate change include changes in carbon dioxide availability, precipitation, and temperature, while indirect impacts include water availability and seasonality, changes in soil organic matter, soil erosion, changes in distribution of pests and diseases, emergence of invasive species, and reduction in cultivated land due to submergence of coastal areas and desertification. In Fiji, there is also the possibility of crop loss due to storms. Sea level rising is expected to increase salt intrusion into the soil, and increased precipitation may exacerbate soil erosion and associated nutrient losses<sup>225</sup>.

Although Fijian agriculture is moving from subsistence to large-scale, high-productivity farming, small-scale farming is still practiced on Fiji's islands and is less resilient to potential climate change. There are also potential impacts on worker health and productivity. Global labor productivity at its peak has already declined by 10% due to global warming, and is expected to decline by up to 20% by 2050. As for the impact on international food supply, climate change is highly relevant for Fiji, which is highly dependent on food imports, especially during and after disasters<sup>226</sup>.

Fiji is experiencing rapid urbanization, but many of the settlements are unplanned and without proper infrastructure, making them vulnerable to heat stress problems caused by global warming, extreme climate events, and sea level rise. In addition, the demand for cooling by businesses and households is likely to increase significantly, which will increase the demand for energy generation

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<sup>222</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p.13

<sup>223</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p.13

<sup>224</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p.14

<sup>225</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p.14-15

<sup>226</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p.14-15

itself. Furthermore, it has been pointed out that less than 20% of the national power grid and transformers are vulnerable to flooding<sup>227</sup>.

#### Impact on the Community

Climate related disasters are a recurring problem faced by the Fijian community. In particular, when a major cyclone strikes, it causes loss of life and property, injury and spread of diseases. River flooding also has a significant impact.

On the economic front, UNISDR estimates that the average annual loss in Fiji is about FJD 130 million, mostly due to storm surge damage and high winds. The actual loss would be even higher if smaller disasters not recorded in the international disaster database are included, amounting to more than 4.2% of GDP.

In Fiji, disaster risks and losses are increasing, especially as the population grows. The number of people living in unplanned development areas has been increasing by 24% from 2007 to 2015, and development is taking place in low elevation coastal areas.

Many of the projected climate changes could disproportionately affect the poorest groups in society. For example, heavy manual laborers are generally the lowest paid and at the highest risk of productivity loss due to heat stress. Poor farmers and communities are less likely to have access to local water storage and irrigation infrastructure and technology to adapt to climate change, and communities that live in remote areas such as outer islands and rely on subsistence fishing due to insecure water availability are particularly vulnerable to climate change impacts<sup>228</sup>.

#### (2) Development Project

The climate change sector is mentioned in the NDP across sectors and is considered an important area. Fiji was the first country to ratify the Paris Climate Change Agreement in April 2016, and in line with the goal of limiting the increase in global average temperature to 1.5°C above pre-industrial levels, Fiji has set a goal of achieving net zero global greenhouse gas emissions by 2050.

The Climate Change Act 2021 is a climate change related law that provides for a comprehensive response to climate change, regulation and governance of the national response to climate change, and legislation to introduce a system for measuring, reporting and verifying greenhouse gas emissions<sup>229</sup>.

The Act stipulates 3 goals: (1) zero greenhouse gas emissions by 2050 as a long-term emission reduction goal; (2) 100% sustainable and effective management of Fiji's inland waters, archipelagic waters, territorial waters, contiguous zones and EEZs; and (3) designation of 30% of Fiji's inland waters, archipelagic waters, territorial waters, contiguous zones and exclusive economic zones as marine protected areas by 2030.

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<sup>227</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p.16

<sup>228</sup> World Bank, 2021, Climate Risk Country Profile Fiji, p. 17-18

<sup>229</sup> Climate Change Act 2021

<http://www.parliament.gov.fj/wp-content/uploads/2021/08/Bill-31-Climate-Change-Bill-2021.pdf>

### (3) Issues and Measures

According to the information provided by CCD, it is considering issuing Blue Bonds together with RBF in 3 areas listed in the table below. The total issue amount is planned to be FJD 20 million to FJD 30 million (all bonds will be issued for domestic use). As of December 2021, the F/S with ADB and World Bank was underway.

Table 102 Details of Blue Bond Issue in Fiji (planned)

Field	Overview
Green Shipping	Introduction of hybrid/electric vessels for coastal shipping. Bond of FJD 10 million will be issued. The ministry in charge is the Ministry of Commerce, Trade, Tourism and Transport.
Marine Protected Areas	Financing by Fiji Development Bank for private projects to be implemented in the Marine Protected Area. Bond of FJD 5 million will be issued.
Sustainable Fisheries	At least 2 aquaculture or marine ranching project will be developed or an existing project will be scaled up. FJD 5 million bonds will be issued. The responsible ministry is the Ministry of Fisheries.

Source: Information provided by CCD

According to the World Bank's Climate Risk Country Profile Fiji, uncertainty in climate projections poses a challenge for water resources planning and management, pointing to the need to increase water storage capacity for periods of water scarcity, improve robustness against storms and extreme weather events, and strengthen systems against pollution and water quality problems. It also points out that the management and upgrading of storm water drainage systems is also an important issue, as soil erosion and landslides during extreme weather events pose a particular risk to key water infrastructure. With regard to flooding, the report also notes that more than 20% of water resources assets (water intake, boreholes, pumping stations, and water treatment plants) are not waterproofed. It is also noted that some of Fiji's outer island communities are highly dependent on groundwater resources and coastal aquifers, which are particularly vulnerable to saltwater intrusion and overexploitation, but the situation is not monitored<sup>230</sup>.

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

##### • ADB

In relation to cyclone damage, USD 1 million was provided for the Tropical Cyclone Yasa Emergency Response Project in 2021, USD 400,000 for the Tropical Cyclone Harold Emergency Response Project in 2020, and USD 50 million for the Fiji Cyclone Emergency Response Project in 2016.

<sup>230</sup> Ministry of Disaster Management, National Disaster Risk Reduction Policy 2018-2030, p.10-13

## ② Japan

In the Country Assistance Policy (April 2019), Development Issue 2-1 "Climate Change and Disaster Risk Reduction" mentions the following from the perspective of both adaptation and mitigation: Fiji's achievement of SDG 13, contribution to the implementation of the Paris Agreement and cooperation for the realization of a low-carbon society with a focus on the promotion of the hybrid island concept as a mitigation measure, studying the power supply mix to optimize the introduction of renewable energy while ensuring the stability of the power system and efficient operation of power sources. Also, in Development Issue 1-1, "Expansion of Economic Activities," it is stated that cooperation will be provided for the development of social and economic infrastructure that will contribute to the improvement of the investment environment, while considering the impact of climate change.

Past projects include training in the field of climate change, the Regional Disaster Management System Development Plan, the Fiji Meteorological Station (FMS) observation equipment and capacity building including the Oceanic Region Meteorological Human Resource Development Capacity Building Project, the Tsunami Data Ecosystem and Repository Development Project in partnership with UNDP (USD 630,000), and the Pacific Region Hybrid Power System Installation Project (JPY 732 million).

As for the cooperation needs from Japan, according to the information provided by the Climate Change Bureau, there is a need for support (investment) for electric vehicles (buses) for the planned installation of a bus station for electric vehicles in the suburb of Suva (Nakasi) (the project site and FJD 4 million have been secured).

#### 1.5.4.2. Disaster Prevention

##### (1) Overview

The disaster management sector in Fiji is managed by the National Disaster Management Office (NDMO), a subordinate body of the Ministry of Rural and Maritime Development and Disaster Management (MoRMDD). In accordance with the Natural Disaster Management Act, the NDMO is the coordinating body of the Fiji Government in the event of a disaster and manages disaster recovery programs and other disaster activities<sup>231</sup>. The NDMO is also responsible for sharing information and providing direction to various ministries and agencies such as the Ministry of iTaukei, Ministry of Defense, Ministry of Women, Children and Poverty Alleviation.

In the disaster management sector in Fiji, the Fiji National Cluster System has been developed, which defines 9 clusters to be managed during disasters and outlines the policies to be implemented at the local and community level. Specifically, the system includes measures to be taken in each sector, such as planning and funding, water security, shelter, education, food security, health and nutrition, life safety and protection, public works, and logistics, and is coordinated with each ministry. For example, securing food is covered by the Ministry of Agriculture, while securing volunteers within the community and members with traditional wisdom on disasters is covered by the Ministry of iTaukei<sup>232</sup>.

##### (2) Development Project

The government policy for the disaster risk reduction sector is the National Disaster Risk Reduction Policy 2018-2030, which aims at “sustainable and resilient development and poverty reduction through strengthened disaster risk governance and disaster risk reduction measures” and has the following 8 principles

Table 103 Principles of the National Disaster Risk Reduction Policy 2018-2030

	Principles
1	Capacity Development
2	Participatory Approaches
3	Human Rights and Gender based Approaches
4	Safety Net Based Approaches
5	Multi-Hazard Approaches
6	Cross-Cutting Approaches
7	Coordination Mechanisms
8	Approaches to Disaster Risk Reduction

Source: NDMO, National Disaster Risk Reduction Policy 2018-2030, p.20

<sup>231</sup> Over View Report on the National Disaster Management Office, [https://www.un-spider.org/sites/default/files/Fiji%20Disaster%20Management%20Office%20\(NDMO\).pdf](https://www.un-spider.org/sites/default/files/Fiji%20Disaster%20Management%20Office%20(NDMO).pdf)

<sup>232</sup> Information provided by NDMO

According to the information provided by the NDMO, the policy has newly incorporated the perspective of disaster prevention. According to the information provided by the NDMO, the policy has adopted a new perspective of disaster prevention, and has set 122 action items. As of December 2021, the implementation of these items has been discussed among ministries and agencies, but the setting of KPIs is still under discussion. Also, customizing the Sendai Monitoring Framework for this policy has been implementing.

### (3) Issues and Measures

The issues identified through the information provided by the NDMO are as follows.

Table 104 Details of Issues Related to the Disaster Management Sector in Fiji.

Subject name	Details of the issue and countermeasures
Capacity building of officials in charge of disaster reduction in various ministries and agencies	<ul style="list-style-type: none"> <li>✓ Capacity building for the Disaster Liaison Officers in each ministry is an issue.</li> <li>✓ It is important to designate officials in charge of disaster reduction to conduct training and make them more aware of disaster reduction in the implementation of policies by each ministry and agency.</li> </ul>
Introduction of a multi-hazard early warning system	<ul style="list-style-type: none"> <li>✓ An Early Warning System is needed.</li> <li>✓ For example, some past tsunami disasters reached the coast within five minutes, and early warnings could save many lives.</li> </ul>
Development and expansion of the National Rural Development Database	<ul style="list-style-type: none"> <li>✓ Although the National Rural Development Database has been developed, it is necessary to develop and expand the GIS because it is necessary to incorporate geographical information and other data into hazard maps when considering disaster countermeasures and policies.</li> </ul>

Source: Information provided by NDMO

### (4) Direction of Cooperation

#### ① Japan

In the Country Assistance Policy (April 2019), under the development issue 2-1 “Climate Change and Disaster Risk Reduction”, as an adaptation measure, support for disaster risk reduction capacity building in terms of both hardware and software, from disaster risk reduction policy planning to capacity building for implementation, based on the “Sendai Framework for Disaster Risk Reduction 2015-2030”.

In the past, it has implemented the Nadi River Flood Control Formulation Project (USD 380 million), the dispatch of Comprehensive Disaster Management Advisors for the Pacific Region, the Mainstreaming Disaster Management Project, and the Strengthening School Tsunami Disaster Management Project in the Asia-Pacific Region in partnership with UNDP (USD 960,000). In addition, a loan facility of 5 billion yen is being prepared as Stand-by Loan for Disaster Recovery and Rehabilitation.



According to the information provided by the NDMO, the cooperation needs of Japan are expected to include capacity building and disaster awareness training for disaster management officials in various ministries and agencies, support for the introduction of the Multi-Hazard Early Warning System, and GIS development and expansion for the National Rural Development Database.

### 1.5.5. Environmental Conservation

#### (1) Overview

Regarding the environmental conservation sector in Fiji, the Ministry of Waterways and Environment (MoWE) is responsible for environmental policy and waterways management including irrigation, drainage and flood mitigation. Under the Environment Management Act 2005, the National Environment Council was established, which consists of environmental stakeholders and is responsible for assessment of environmental programs. The Department of Environment Fiji Island is also responsible for the implementation of environment-related programs and policies.

The main laws and regulations related to environmental conservation in Fiji are as follows

Table 105 Major Environmental Laws and Regulations in Fiji

Name of law or regulation
Endangered and Protected Species (Amended) Act 2017
Container deposit Regulations 2011
Environment Management (Waste Disposal and Recycling) Regulations 2007
Environment Management Act 2005
Ozone Depleting Substances Act 1998

Source: Department of Environment Fiji Island website<sup>233</sup>

#### (2) Development Project

The Fiji National Biodiversity Strategy and Action Plan 2020-2025 (NBSAP) is a strategic action plan on biodiversity endorsed by the National Environment Council. The content of the NBSAP is also a requirement for all Parties to the Convention on Biological Diversity and the 2020 Aichi Targets. The NBSAP covers a wide range of environment-related sectoral laws and regulations, including the laws and regulations listed in Table 105 and the Biosecurity Act 2008, as well as legislation for agriculture, forestry, fisheries, and infrastructure-related sectors such as water and wastewater<sup>234</sup>.

In the NBSAP, the following nine principles are proposed to “conserve and sustainably use Fiji’s terrestrial, freshwater and marine biodiversity, and maintain the processes and functions of ecosystems that are fundamental to national and regional development and of global significance”<sup>235</sup>.

<sup>233</sup> <https://doefiji.wordpress.com/downloads/acts-and-laws/>

<sup>234</sup> Department of Environment, Government of Fiji, National Biodiversity Strategy and Action Plan for Fiji 2020-2025, p.8

<sup>235</sup> Department of Environment, Government of Fiji, National Biodiversity Strategy and Action Plan for Fiji 2020-2025, p.30

Table 106 Nine Principles of the NBSAP

	Principle
1	Community participation and ownership
2	Biodiversity as a basis for all development and intergenerational equity
3	Mainstreaming and Ownership of Biodiversity
4	Gender Mainstreaming and Equality
5	Adoption of ecosystem-based management approaches
6	Comprehensive and representative management and protection of species, forests, watersheds, and oceans
7	Improve knowledge, skills, and intellectual property
8	Financial sustainability and accountability
9	Ecosystem-based adaptation and disaster risk reduction

Source: Department of Environment Fiji Island website

In addition, targets and indicators have been set for each of the following 6 areas of action.

Table 107 Areas of Efforts, Targets, and Indicators of NBSAP

Field of effort	Goals	Indicator
Improving Knowledge	<ul style="list-style-type: none"> <li>✓ Fijians' Perception of the Value of Biodiversity</li> <li>✓ Integration of traditional knowledge and practices with the latest scientific knowledge</li> <li>✓ Conservation of Sustainable Biodiversity</li> </ul>	<ul style="list-style-type: none"> <li>✓ Increased public involvement in biodiversity</li> <li>✓ Increased awareness and attitude toward biodiversity</li> <li>✓ Increased integration of traditional knowledge and practices in biodiversity conservation</li> <li>✓ Increase research and knowledge of Fiji's rich biodiversity</li> <li>✓ Increased knowledge of biodiversity used in management decisions in various sectors, including education, health, agriculture, forestry, and industry</li> <li>✓ Increased willingness to use technology and systems</li> </ul>
Establishment of protected areas	<ul style="list-style-type: none"> <li>✓ On land: identification of areas of high biological importance by the Ministry of Environment and approval by the National Environmental Council</li> </ul>	<ul style="list-style-type: none"> <li>✓ Total area of officially and unofficially recognized terrestrial and marine protected areas and locally managed areas.</li> <li>✓ Total area and number of protected areas effectively managed in accordance with agreed-upon national protected area standards for assessing management effectiveness.</li> </ul>

Field of effort	Goals	Indicator
	<ul style="list-style-type: none"> <li>✓ Marine: identification of areas of high biological importance by the Ministry of Environment and approval by the National Environmental Council.</li> <li>✓ Effective management (at least 30%) of Fiji's offshore waters and integration into the national marine protected area network</li> <li>✓ Effective management of coastal traditional fisheries (Qoliqoli) within the local management area (100%)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Measuring Ecosystem Services and Equitable Benefits from Protected Areas</li> <li>✓ Measuring trends in protected area connectivity and other area-based approaches embedded in landscapes and seascapes</li> </ul>
Species management	<ul style="list-style-type: none"> <li>✓ Protection of at least 10 known endangered species of flora and fauna, and improvement and maintenance of their conservation status (especially the most declining species)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Reducing the risk of extinction of high-priority 10 species of plants and animals</li> <li>✓ Increasing trend in populations of priority 10 species of plants and animals</li> <li>✓ Increase in the distribution of selected 10 species of plants and animals</li> </ul>
Management of non-native species	<ul style="list-style-type: none"> <li>✓ Identifying Invasive Alien Species, Pathways, Risks, and Threats to Biodiversity and Livelihoods</li> <li>✓ Control or eradication of priority invasive alien species and implementation of pathway management measures to prevent invasion and establishment by 2023</li> </ul>	<ul style="list-style-type: none"> <li>✓ Assessing and measuring the impact of invasive alien species on biodiversity and food security</li> <li>✓ Impacts of policy responses, legislation, and management plans to control and prevent the spread of invasive alien species.</li> </ul>
Enabling environment	<ul style="list-style-type: none"> <li>✓ Introduce relevant laws and policies, including access and</li> </ul>	<ul style="list-style-type: none"> <li>✓ Increased efforts in various areas to minimize impacts on biodiversity.</li> </ul>

Field of effort	Goals	Indicator
and mainstreaming	<p>benefit sharing procedures, to support the implementation of the NBSAP by ministries</p> <ul style="list-style-type: none"> <li>✓ Adoption of Fiji's Green Growth Framework by enterprises and productive sectors</li> <li>✓ Development and implementation of plans for sustainable production and consumption by stakeholders at all levels.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Increase political awareness and support for biodiversity policies</li> <li>✓ Increase in biodiversity-focused communication programs to promote private sector action and social corporate responsibility</li> <li>✓ Strengthen engagement and partnerships for awareness raising and information sharing, cross-sectoral coordination and communication</li> </ul>
Sustainable use and development	<ul style="list-style-type: none"> <li>✓ Integration of NBSAP into NDP, Green Growth Framework and other sectoral plans (renewable energy, agriculture, forestry, mining, tourism, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>✓ Eradication or significant reduction in the number of species used or extinct, including traded species.</li> <li>✓ Extent to which the value of biodiversity and ecosystem services is integrated into the organization's accounting and reporting.</li> </ul>

Source: Department of Environment, Government of Fiji, National Biodiversity Strategy and Action Plan for Fiji 2020-2025, p.3-320

### (3) Issues and Measures

According to the information obtained from the desk survey, the issues are recognized as shown in the table below.

Table 108 Details of Issues and Measures Related to the Environmental Protection Sector

Subject name	Details of the issue and countermeasures
Improve waste recycling system	✓ Due to the remote nature of the islands and the narrow recycling market, it is difficult to recycle waste in Fiji.
Increase in waste	✓ Urbanization, population growth, improved living standards, commercial and industrial development, tourism, and other developments have contributed to increased waste generation.
Securing landfill sites	✓ Customary rights of land use and the resistance of landowners to leasing their land as a disposal site make it difficult to find a landfill site.

Source: Ministry of the Environment data<sup>236</sup>

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

- ADB

In 2016, the Urban Water Supply and Wastewater Management Project (Tranche 1) provided USD 42.1 million in support of wastewater treatment<sup>237</sup>.

#### ② Japan

In the Country Assistance Policy (April 2019), under Development Agenda 2-2 “Environmental Conservation,” the following issues are identified: promoting cooperation with SPREP and other regional organizations, environment ministries, and local governments to achieve the regional waste management strategy for the Pacific region formulated by SPREP; promoting cooperation to strengthen the overall infrastructure (human resources and institutions) to improve waste management capacity in the region as a whole and at the national and local levels; and contributing to planning for the establishment of a recycling hub for venous logistics, which is a common issue in the Pacific region countries.

So far, it has implemented “the Project for Support of Improvement of Waste Management in the Pacific Region Phase 2 (J-PRISM2)”, training in the field of environmental management, and grant aid in the field of environmental management (JPY 61 million).

As for cooperation needs from Japan, based on the technical cooperation related to waste management that has been implemented in line with the waste management strategy for the entire Pacific region (as of early 2022, the Project for Support of Improvement of Waste Management in

<sup>236</sup> <http://www.env.go.jp/nature/biodic/ecdisso2014/pdf/subcommittee3/samela.pdf>

<sup>237</sup> Information provided by ADB.

the Pacific Region Phase 2 (J-PRISM2) is underway). In addition, as a recycling hub for neighboring countries, Fiji could take a leadership position in the region. Therefore, the continuation of technical assistance to other countries in the region in the form of training courses and acceptance of trainees is a potential area.

## 1.5.6. Education and Health

### 1.5.6.1. Education

#### (1) Overview

The education sector in Fiji is headed by the Ministry of Education, Heritage and Arts (MoEHA).

Fiji has 737 elementary schools, 173 secondary schools, about 900 early childhood education centers, and 17 vocational schools. The government owns 13 schools; the remaining schools are owned by community and faith-based organizations, with staff and operational funding provided by the government. Fiji has three universities and seven tertiary education institutions in the government and private Technical and Vocational Education and Training (TVET) sectors<sup>238</sup>.

The University of the South Pacific (USP) is one of only two regional universities in the world, with 12 member countries: Cook Islands, Fiji, Kiribati, RMI, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, and Vanuatu. The main campus is located in Fiji and there are campuses in all member countries.

Table 109 Number of Students at USP

	2016	2017	2018	2019	2020
Number of students	28,155	29,815	32,270	31,561	31,215

Source: Information provided by USP

#### (2) Development Project

In its Strategic Plan 2019-2023, MoEHA has set the following 4 goals for the period up to 2023: inventory assessment of various targets such as infrastructure, law, curriculum, etc., and improvement of consistency in the work environment; positioning for change; development and implementation of systems for change; and development of a continuous change environment to meet future sectoral needs and changes. KPIs have been set for each goal.

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<sup>238</sup> MoEH, Strategic Plan 2019-2023.



### (3) Issues and Measures

The issues identified through the information provided by MoEHA are as follows.

Table 110 Details of Issues Related to the Education Sector and Measures to Address

Subject name	Details of the issue and countermeasures
Budget shortfall	<ul style="list-style-type: none"> <li>✓ There is a lack of budget to run the various programs.</li> <li>✓ The budget is on a downward trend, especially with the curriculum being stopped due to COVID-19.</li> </ul>
Improved internet connection	<ul style="list-style-type: none"> <li>✓ Due to poor internet connection, distance education to remote areas such as outer islands cannot be sufficiently conducted.</li> </ul>
Inadequate science and mathematics education system	<ul style="list-style-type: none"> <li>✓ Although MoEHA recognizes the importance of science and mathematics education in primary and secondary education, Fiji is facing issues such as the small number of schools with science laboratories (only 14 out of 736 schools in primary education and 8 out of 173 schools in secondary education) and a general shortage of teachers who can teach mathematics and science (in elementary school, homeroom teachers teach all subjects).</li> </ul>
Improving the quality of teachers in Teacher Training Institutions	<ul style="list-style-type: none"> <li>✓ Although Teacher Training Institutions are implementing teacher training programs, there is room for improvement in the quality of teachers.</li> </ul>
Development of education using ICT tools	<ul style="list-style-type: none"> <li>✓ I would like to promote the development of E-Books, but the lack of knowledge is an issue.</li> <li>✓ Science and mathematics education also need to be strengthened, and there are issues such as the development of tools in the primary and secondary fields.</li> <li>✓ The company has been running the Walesi Platform, a free online education program using TV lines, since 2020.</li> </ul>

Source: Information provided by MoEHA

According to the information provided by USP, there is a gap between Fiji and other regional campuses in terms of curriculum implementation, and the challenge is to close the gap through curriculum enhancement and faculty visits. Another issue is the lack of faculty with academic background.

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

##### • Pacific Community (SPC)

The Educational Quality and Assessment Programme (EQAP) is working to focus on ICT for education and educational data, quality and systems management.

##### • The Pacific Regional Education Framework (PacREF)

PacREF is a regional policy guide endorsed by 15 members of the Pacific island countries at the Forum Education Ministers' Meeting in 2018, and PacREF 2018-2030 was adopted at this meeting.

PacREF is a regional initiative designed to help developing Pacific member states address the continuing challenge of improving the quality of education, and has 17 Pacific countries, including Fiji, as members. It has four areas of focus: quality and relevance, learning pathways, student outcomes and wellbeing, and teaching.

• Australia

In the education sector, Australia has launched a new curriculum in primary education, provided professional development for teachers and principals, and provided classrooms, etc. Education will also account for the largest share of the ODA budget for Fiji in 2021-2022, at 30%.

In addition to the above, Australia has supported scholarship programs in Cuba and China, curriculum development support in Australia, UNICEF's Water, Sanitation and Hygiene (WASH) Programme and disaster preparedness in schools, WHO's Health Promoting Schools (HPS), Safer Schools by Save the Children, etc. (HPS) of WHO, and Safer Schools of Save the Children.<sup>239</sup>

According to information provided by the USP, the USP has also received support from Japan, Australia, the United States, China, India, Korea, New Zealand, and the EU.

② Japan

In the Country Assistance Policy (April 2019), development issue 3-1 is to strengthen the education function and develop human resources. In particular, in order to improve the quality of education, Japan intends to improve curricula and teaching methods for emotional education and science and mathematics subjects, provide educational services that take into consideration socially vulnerable groups such as disabled people and women, and cooperate in human resource development through sports and vocational training. Japan's major cooperation achievements to date are as follows.

Table 111 Major Japanese Cooperation in Fiji's Education Sector

Start date	Project name
Official Development Assistance Grants	
Nov 2009	South Pacific University Information and Communication Technology Center Development Plan (Phase II)
May 2008	South Pacific University Information and Communication Technology Center Development Plan (Phase I)
Technical Cooperation	
Feb 2010	ICT Capacity Development Project, University of the South Pacific

Source: JICA website

In addition to the above, the school has also supported JICA's scholarship program and has built schools at no cost to the grassroots. The school also emphasizes emotional education subjects such

<sup>239</sup> Information provided by MoEHA

as music and art, and has accepted Japan Overseas Cooperation Volunteers for music teacher every year in the past (As of December 2021, dispatch had stopped due to COVID-19)<sup>240</sup>.

As for the cooperation needs from Japan, there are needs for support such as providing knowledge on the development of E-Books, and support for the development and design of online curriculum for vocational training<sup>241</sup>. According to the information provided by the USP, the expansion of digital education and the associated development of cyber security measures, as well as the maintenance of aging campus facilities (such as the Communication Building) are also urgent issues that require support.

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<sup>240</sup> Information provided by MoEHA

<sup>241</sup> Information provided by MoEHA

### 1.5.6.2. Health

#### (1) Overview

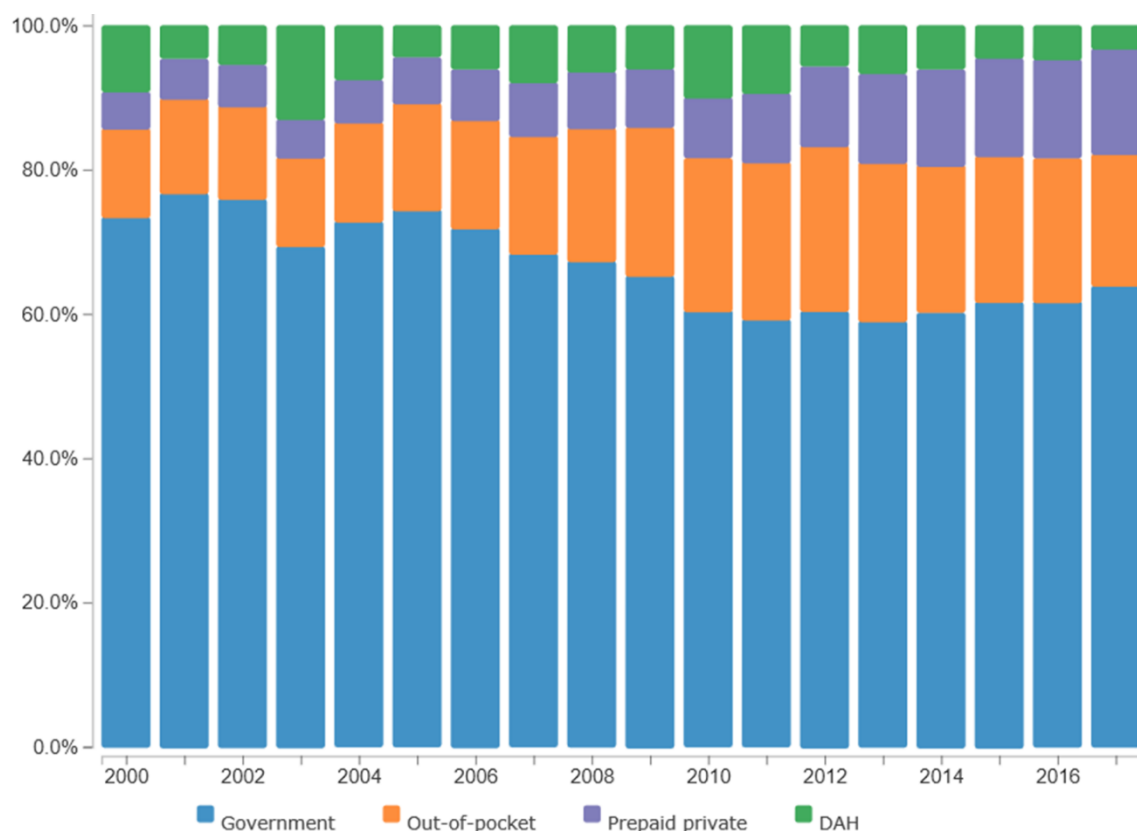
The following is an overview of the roles and status of health service delivery institutions and the service delivery system and decentralization in Fiji.

Table 112 Overview of the Roles and Status of Health Care Service Delivery Institutions, Delivery Systems, and Decentralization

Item	Overview
Role and status of service provider organizations	✓ Health and medical services are provided by the Ministry of Health & Medical Services (MoHMS). The Minister of Health & Medical Services oversees the overall health services with the support of the Assistant Minister, while the Secretary of Public Health & Hospital Services and two Deputy Secretaries are responsible for operational practices.
Service delivery system and decentralization	<p>✓ Health services are provided through 98 nurse stations, 84 health centers, 17 sub-district hospitals, and 3 district hospitals.</p> <p>✓ There are 2 specialized hospitals: Tamabua P.J. Toomey Hospital, which has tuberculosis, leprosy and medical rehabilitation units, and St. Giles Hospital, which provides mental health services. Other private hospitals are also located in the capital.</p>

Source: JICA, June 2021, Final Report of the Information Collection and Confirmation Study on Strengthening Maternal and Child Health and Community Health in the Pacific Region

In terms of the share of health expenditure in Fiji, as of 2017, the government (63.91%), self-pay (18.28%), private prepayment (14.64%), and development assistance (3.16%); the share of self-pay has not changed significantly in recent years, and the government provides free medicines to low-income households. The share of development assistance has been declining, and with regard to individual pre-payment, Fijian employers provide private health insurance through 4 major insurance companies.



Source: Global Data Health Exchange (GDHx), Institute for Health Metrics and Evaluation

Figure 20 Share of Health Care Expenditure

Healthcare expenditure as a percentage of GDP and per capita healthcare expenditure are both low. The neonatal mortality rate has achieved the SDG target, and the under-five mortality rate is close to or below the SDG target, presumably due to the fact that the majority of the national healthcare budget is invested in primary and secondary healthcare. The number of medical personnel is insufficient, and the NDP states that investment will be made to increase the ratio of doctors per 1,000 patients to one. Non-communicable diseases (NCDs) are also a major problem in Fiji. Obesity and diabetes rates are high, and NCDs are a major cause of death.

Table 113 Basic Information on Health Care

Item	Fiji	Whole world
Health care spending in % of GDP (2018) WHO recommendation is at least 5%.	3.424%	9.857%
1Medical Expenditure per capita (2018)	USD 214.554	USD 1,111.082

Average life expectancy (2017)	70.4 years old (following a number in the hito-futa-mi counting system)	72.742 years old (following a number in the hito-futa-mi counting system)
1,000 Neonatal mortality rate per capita (2019) SDG target: Less than 12	10.8	17.5
1,000 Underage mortality rate per 5 capita (2019) SDG target: Less than 25	25.7	37.7
Number of physicians per 1,000 people	0.86 (2015)	1.566 (2017)
Number of nurses + midwives per 1,000 people <sup>242</sup> The number of doctors, nurses, and midwives recommended by WHO is 4.45	3.378 (2018)	3.816 (2018)
Adult obesity rate (BMI $\geq$ 30) (2016)	30.2% Male 25.1% Female 35.3%	N/A
Hypertension ratio (SBP $\geq$ 140 or DBP $\geq$ 90, over 18 years old) (2015)	21.7% Male 22.4% Female 20.7%	N/A
Diabetes ratio (% of population 20-79 years old) (2019)	14.7%	8.812%

Source: World Bank and WHO, Strategic Plan 2020-2025 (MoHMS)

Table 114 Ranking of Diseases that Cause Death

Rank	2000	2019
1	Ischemic heart disease (20.30%)	Diabetes (23.25%)
2	Diabetes (18.49%)	Ischemic heart disease (21.23%)
3	Stroke (9.20%)	Stroke (8.44%)
4	Lower respiratory tract infection (3.99%)	Chronic kidney disease (3.94%)
5	Chronic kidney disease (3.68%)	Lower respiratory tract infection (2.91%)

Cancer does not rank in the top 5 when aggregated by individual disease, but the total of all cancer-related deaths is approximately 10.335% (2019).

Source: Global Data Health Exchange (GDHx), Institute for Health Metrics and Evaluation

As for PPP developments in the health sector, according to information provided by the Ministry of Economy, the Government of Fiji and Aspen Medical, an Australian healthcare company, have signed a 20-year PPP agreement in 2019 for the development and operation of Ba Hospital and Lautoka Hospital (the project itself has not yet started due to COVID-19). As part of the scheme, Aspen Medical will be responsible for operations and financing (20% of the total project cost),

<sup>242</sup> According to the information provided by the MoHMS, the number of medical personnel in Fiji as of January 2022 was 940 doctors, 2,975 nurses and 232 midwives, which is only 4.25 per 1,000 population.

including development, upgrading, operation and maintenance of both hospitals. FNPF, as the main investor, will finance 80% of the total project cost. The Ministry of Economy has indicated that in addition to the health service sector, there is also the possibility of introducing PPPs in the medical tourism and elderly care sectors.

(2) Development Project

In its Strategic Plan 2020 -2025, the MoHMS has laid out new strategic priorities and set the direction of the Ministry for the next 5 years to achieve UHC.

Table 115 Strategic Priorities and Goals of the MoHMS

Strategic Priorities	Goals
Reforming public health services for a population-based approach to disease and the climate crisis	Reduce morbidity from infectious and non-infectious diseases, especially among vulnerable populations.
	Improving the physical and mental well-being of all citizens (with emphasis on women, children, and youth) through preventive measures.
	Safeguards against environmental threats and public health emergencies
	Strengthening the resilience of the entire population to the climate crisis
Improving access to high quality, safe, patient-centered clinical services	Improving the health status of patients, with special emphasis on services for women, children, youth, and vulnerable populations
	Strengthen and decentralize effective clinical services, including rehabilitation, to meet the needs of the public
	Continuously improve patient safety and the quality and value of services
Promote the efficient and effective operation of health care systems	Develop a competent workforce where the contributions of all staff are recognized and valued
	Improve the efficiency of supply chain management and procurement systems, and equipment maintenance
	Implementing more efficient financial processes while reducing economic hardship for the most vulnerable.
	Maintain and ensure infrastructure that meets the needs of the service
	Use of digital technology to provide better healthcare to patients
	Continue to strengthen planning and governance across the Ministry of Health and Human Services
	Expanding collaboration with partners for a more efficient, innovative, and higher quality health care system

Source: MoHMS, Strategic Plan 2020 -2025

(3) Issues and Measures

The issues of NCDs and child obesity are common in the Pacific region. The Pacific Monitoring Alliance for NCD Action (MANA) has set up a MANA dashboard to monitor progress towards the NCDs target, and has compiled a list of countries' current strengths and areas requiring action. In addition, the Pacific ECHO has been established to address child obesity.

Table 116 Details of Issues and Measures Related to the Health Care Sector

Subject name	Details of the issue and countermeasures
Lack of skilled professionals (especially nurses and midwives)	<ul style="list-style-type: none"> <li>✓ Since most of the rare courses needed in specialized fields are offered overseas, it is expensive to send ministry staff abroad for training.</li> <li>✓ An awards program for professional development is needed.</li> <li>✓ Preparation of The Strategic Workforce Plan and the Role Delineation Plan (to be completed in 2020).</li> </ul>
Emergence of drug-resistant bacteria	<ul style="list-style-type: none"> <li>✓ Fiji is known as a “hot spot” for the overuse and misuse of antimicrobials and the emergence of bacteria and fungi that are resistant to these drugs.</li> <li>✓ Through the National Drug Resistance Committee, an interagency strategic response plan on antibiotic resistance and drug resistance is being developed.</li> </ul>
Non-communicable diseases (NCDs)	<ul style="list-style-type: none"> <li>✓ NCDs have been responsible for more than 70% of early deaths this 10 year, and the latest estimate is 78%. Most of these deaths have been recorded in the 45-59 ages group.</li> <li>✓ There has been an improvement in the fight against tobacco use, with the percentage of adults who smoke cigarettes daily decreasing from 17.5% to 16.6%.</li> <li>✓ PEN of the WHO at a specialized outpatient clinic at the primary care level.</li> </ul>
Children's ill-health	<ul style="list-style-type: none"> <li>✓ According to the Adolescent Health Status Analysis, adolescents in Fiji are burdened by ill-health, and this condition has not improved much over time.</li> <li>✓ CDc, undernutrition and overnutrition, and poor sexual and reproductive health are common among Fijian youth.</li> <li>✓ The burden of NCDs, including chronic physical illness and mental disorders, is also very high. Health risky behaviors such as drug abuse, physical inactivity, and sexual health risks are also common. School visits revealed that obesity among the younger generation was on the rise.</li> <li>✓ Violence and mishaps are important causes of preventable morbidity and mortality, especially among men.</li> </ul>

Source: MoHMS, Strategic Plan 2020-2025



According to the information provided by the MoHMS, the areas that are particularly lacking in human resources are Pathology, Radiology, Psychiatric, Dermatology, Rehabilitation Medicine, Internal Medicine, Biometric Engineering, Midwifery, Emergency and Critical Care Nursing, Infection Prevention and Control, Nursing, Information Systems, and Pharmaceutical Warehousing. In addition, there is a chronic shortage of human resources in the medical schools of Fiji National University and the University of Fiji, although they are recruiting 140 students each year.

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

###### • Pacific Community (SPC)

SPC's public health department has provided various support to Fiji, including providing resources, organizing workshops, and conducting training for the Diabetes Association.

###### • WHO

WHO established the DPS in Fiji in 2010. The Country Cooperation Strategy 2018-2022 identifies the following 7 strategic priorities for Fiji

1. Achieve the priorities set out in the new WHO global health sector strategy on sexually transmitted infections, HIV and hepatitis, and reduce tuberculosis and control multidrug-resistant tuberculosis.
2. Fiji will achieve national indicators on all NCDs and nutrition in line with global targets
3. Reduce gaps in service delivery related to mental health, disability, and rehabilitation to prevent and respond to violence and injury.
4. Building robust health systems that ensure resilience to UHC and climate change
5. Improve access to essential medicines and medical technologies, including traditional and complementary medicines, and reduce antimicrobial resistance.
6. Fiji will be able to detect, assess and respond to common epidemic diseases, and in the event of a cross-border threat or disaster, Fiji will enter into agreements with local response partners for early technical assistance.
7. Achieve improved maternal, newborn, child, and adolescent health through a life-course approach and enhanced continuum of care focused on achieving global and regional immunization targets

In response to a request from MoHMS, medical supplies were delivered to Fiji in August 13<sup>th</sup> 2021 by WHO and WFP.

###### • ADB

In Strategy 2030, which defines the guiding principles of the ADB's efforts, the ADB has identified 7 priority issues in the Asia and Pacific region, one of which is “addressing persistent poverty and reducing inequality” and the other is “improving health for all.

The Pacific Region wide project is implementing projects on health program review and analysis, government capacity and preparedness strengthening, and immunization against cervical cancer and other infectious diseases as shown in Table 117. The only other project implemented in Fiji to date is COVID-19 Emergency Response, which has been ongoing since 2020.

Table 117 ADB's Pacific Regional Project

Period	Project name
2019-2022	Supporting Improved Health Outcomes in Asia and the Pacific
2018-2020	Accelerating Universal Health Coverage in Asia and the Pacific for Strategy 2030
2018-2023	Developing the Health Sector in the Pacific
2017-2019	Systems Strengthening for Effective Coverage of New Vaccines in the Pacific

Source: ADB website

- UNICEF

In the wake of Cyclone Harold, which struck Fiji, Vanuatu, Solomon Islands and Tonga in April 2020, UNICEF is supporting the government's response to reach the children most in need in Fiji, Vanuatu and Solomon Islands.

UNICEF is also responsible for the procurement, transportation, logistics and storage of COVID-19 vaccine in collaboration with manufacturers and partners in COVAX. Since 2020, when the vaccine was still in the development stage, UNICEF has been preparing for the supply and transportation of the vaccine after approval by securing and stockpiling syringes on a large scale, securing the cold chain, and training human resources for vaccination. Vaccines are also being supplied to Fiji through COVAX, and in August 2021, the Japanese government provided vaccines through COVAX.

- World Bank

Since 2020, the Fiji COVID-19 Emergency Response Project has been implemented to detect COVID-19, confirm positive cases, strengthen contact tracing capabilities, provide medical supplies, and train medical personnel.

- Australia

Australia, with its “The Pacific Step-up” policy, is the largest development assistance partner for the Pacific region. Australia's development assistance to the Pacific region is focused on (1) health security, (2) stability, and (3) economic recovery. In the past, Fiji has provided medical equipment procurement and financial assistance, pharmaceutical supply chain review, technical assistance to the Ministry of Health and Medical Services, drafting of the national health strategic plan, training support, and midwifery training support.

- New Zealand

New Zealand has developed a Strategic Action Plan on the Well-being of Children and Youth 2021-2025 in the Pacific region. In the area of health care, the plan includes early childhood interventions

in multiple areas such as health, nutrition, care and protection, and prevention of NCDs through adolescent health programs.

- KOICA

According to the information provided by the MoHMS, 10 ambulance units were provided.

- ② Japan

Japan has set “COVID-19 Response and Recovery” as one of the priority areas for the next three years, which was announced at PALM9 held on July 2, 2021. In addition to the provision of equipment and technical cooperation for the development of the cold chain necessary for vaccination, the government announced that it would provide vaccines to countries in the Pacific region through COVAX and other organizations from mid-July onward, with the aim of providing a total of 3 million doses within this year. In addition, the two countries will work together to address the health vulnerabilities of the countries in the Pacific region, including capacity building support for health systems and technical cooperation support to reduce NCDs, which are a major risk factor for COVID-19, and will provide a wide range of support, including the development of medical facilities, provision of high-quality medical equipment, and human resource development for health and medical personnel. In addition to the above, Japan will provide a wide range of support, including the development of medical facilities, provision of high-quality medical equipment, and human resource development for health and medical personnel.

In the Country Assistance Policy (April 2019), Japan has set the improvement of health and medical services as development issue 3-2, and its policy is to support the improvement of the efficiency and quality of health and medical services, to support the improvement of lifestyle-related diseases, to cooperate in improving the efficiency of the operation of medical institutions and services, and to continue cooperation for the control of filariasis. Japan's major cooperation achievements to date are as follows.

Table 118 Japan's Major Contributions to the Medical and Health Sector in Fiji

Start date	End Date	Project name
Official Development Assistance Grants		
Jun 2002	Mar 2004	New Drug Supply Center Construction Plan
Sep 1998	Feb 2000	Construction Plan for the New Children's Ward of the Colonial War Memorial Hospital
Technical Cooperation		
2022 (planned)	-	Project for Enhancing Intensive Care Capacity Using Remote Technology in a Novel Coronavirus Epidemic
2022 (planned)	-	Strengthening Partnerships for Building Resilient Health Systems in the Pacific Region (14 countries including Fiji)
2022 (planned)	-	The Project for Prevention and Control of Non-Communicable Diseases Phase 2
Apr 2019	Apr 2023	Project for Improvement of Health Services through 5S-KAIZEN-TQM
Oct 2018	Feb 2023	Oceanic Region Wide Filaria Control Project (6 countries including Fiji)
May 2015	May 2020	Project to combat lifestyle-related diseases (Kiribati, Fiji)
Jan 2010	Apr 2014	Project to Strengthen "In-service Training Based on Field Needs" for Community Health Nurses
Feb 2005	Feb 2010	Strengthening of Regional Immunization Projects in the Pacific Region (13 countries including Fiji)
Grassroots Technical Cooperation		
2023 (planned)	-	Fiji-Ryukyu Rehabilitation Medical Education Cooperation Project (Specialty) (Ryukyu Rehabilitation Institute)
Jun 2014	Feb 2017	Fiji-Okinawa Rehearsal Island Project (Public Interest Incorporated Foundation) (Okinawa Prefecture Physical Therapists Association)

Source: Information Collection and Confirmation Study on Strengthening Maternal and Child Health and Community Health in the Pacific Region Final Report (Jun 2021) (JICA), JICA website

As for the cooperation needs from Japan, according to the information provided by the MoHMS, they are expecting the upgrading of existing facilities and equipment, and capacity building for medical professionals (similar to the "Strengthening In-service Training Based on Field Needs for Community Health Nurses" project that was implemented for community health nurses in the past). It is expected to see the same kind of capacity building. It would be expected to send experts to Fiji for training instead of training in Japan.

## 1.6. Economic and Financial Impact and Response to the Spread of COVID-19 Infection

### 1.6.1. Economic Impact and Response to COVID-19

#### Economic growth

According to information provided by the Fiji Ministry of Economy, tourism, which accounts for one third of Fiji's GDP, has stagnated since the COVID-19 pandemic. This has also led to a significant reduction in key revenue sources (e.g. VAT, corporate income tax, personal income tax, departure tax, Environment and Climate Adaptation Levy (ECAL), etc.) and disruptions and delays in the supply chain for construction materials, raw materials, and wholesale and retail commodity purchases. This has affected key industries such as construction, manufacturing, wholesale and retail, and real estate.

Regarding the economic outlook for 2022 and beyond, the GDP growth rate is projected to recover to 6.2% and 8.0% in 2022 and 2023, respectively. This is mainly due to the fact that the number of tourist visits will increase rapidly due to the opening of the country's borders, which will lead to a recovery in the tourism industry, and the economic effects will also spread to the recovery of agriculture, manufacturing, mining, construction, financial services, transportation, and wholesale and retail trade. For sectors other than tourism, the following focus areas are being considered.

According to ADB, due to the impact of the expansion of COVID-19 infection from early 2020, the GDP growth rate dropped to -19.0% in 2020, but is expected to turn positive to 2.0% in 2021 and further recover to 7.3% in 2022 due to the recovery of the tourism sector.

According to an interview with RBF as of December 2021, the outlook for Fiji's economy is that with high vaccination rates in the country, discussions on the resumption and expansion of direct flights from Japan, and an increase in flight bookings, future GDP growth projections are expected to include near double-digit growth rates from 2022 onwards.

Table 119 Fiji's GDP Growth Rate Projections by Agencies (%)

Organization (Figures in parentheses indicate the time of publication or hearing)	2021	2022	2023
IMF (Oct 2021)	-4.0	6.2	8.3
ADB (Sep 2021)	-5.0	8.8	-
Ministry of Economy (Dec 2021)	-	6.2	8.0
RBF (Dec 2021)	-	two digits	two digits

Source: ADB website, IMF website, Ministry of Economy and RBF

As shown in the table below, the Ministry of Economy intends to focus on strengthening not only the tourism industry but also primary industries, ICT, and other sectors in the future.

Table 120 Post-COVID-19 Focus Sectors in Fiji

Sector	Contents
Agriculture (other than sugarcane)	<ul style="list-style-type: none"> <li>✓ He believes that the production of rice, Cassava flour and chocolate are important for the private sector.</li> <li>✓ Rice is imported from Thailand and other countries, and the Ministry of Economy would like to increase domestic production from the perspective of food security.</li> <li>✓ As for root vegetables such as Cassava and Dalo, there are chip processors, but there are no large-scale companies that process them into flour. This is because no potential market has been identified at this time, but once started, the key to stable supply will be the establishment of consignment production to farmers.</li> </ul>
Forestry	<ul style="list-style-type: none"> <li>✓ Emphasizing downstream processing of lumber; in discussions with Tropik Wood, considering enhancing production of lumber products rather than wood chips.</li> </ul>
ICT	<ul style="list-style-type: none"> <li>✓ Emphasis is placed on BPO (Business Process Outsourcing). Fiji, with its large English-speaking population, sees this as a potential field.</li> </ul>
Elderly Care	<ul style="list-style-type: none"> <li>✓ Looking at countries with aging populations such as Japan, the Ministry of Economy believes that demand will eventually emerge in Fiji as well.</li> </ul>

Source: Information provided by the Ministry of Economy

## Employment

After the spread of COVID-19 infection, working hours and wages have been reduced in sectors such as tourism, transportation and traffic, and it is estimated that there will be about 50,000 unemployed people between 2020 and 2021. On the other hand, as of December 2021, the number of employed people has been increasing every month from July to November due to the reopening of hotels and restaurants following the convergence of COVID-19.

According to the information provided by the Ministry of Employment, Productivity and Industrial Relations (MoEPIR) on the current status and challenges of the post COVID-19 workforce, while the labor market is shrinking, the number of student graduates is increasing and there is an oversupply of mainly white-collar personnel. For blue-collar jobs such as engineering, the supply of human resources is insufficient to meet the required skills, and the mismatch between supply and demand is expanding. The stagnation of the tourism industry has also had the effect of forcing people in the tourism industry to switch to other industries such as manufacturing, construction, and agriculture. As a countermeasure, vocational skill development training is being conducted in consultation with the National Employment Center and Fiji National University. It is focused on sewing, baking, and butchering, where there are skill gaps. In addition, the Labor Mobility Program, a support program aimed at providing opportunities for seasonal work in Australia and New Zealand, is scheduled to be implemented and will be operational from December 13 as a three-year program.

## Monetary Policy

The RBF's monetary policy objectives are (1) to maintain an average inflation rate of about 3% to ensure price stability and (2) to maintain foreign exchange reserves that can cover four to five months of imports. To this end, the Overnight Policy Rate (OPR)<sup>243</sup> has been set at 0.5% since 2011, but has been further lowered to 0.25% since the growing impact of COVID-19, in an effort to promote economic growth and investment through monetary easing via a low interest rate policy. It has also implemented monetary policy to maintain sufficient foreign exchange reserves in order to control low inflation. In fact, foreign exchange reserves were successfully maintained at USD 2.2 billion (8.2 months worth of imports) as of October 2020, resulting in an inflation rate of minus 2.6% in 2020. On the other hand, from January to August 2021, prices rose by 6.5 percent, especially for fresh food and other foodstuffs and fuel<sup>244</sup>.

## Impact of the Formulation of the Next National Development Plan

According to the information provided by the Fiji Ministry of Economy, the NDP for 2022 and beyond is under review, including the setting of realistic economic targets based on the economic impact assessment of COVID-19 (including the assessment of the performance of each sector before and after COVID-19), but the timing of preparation is yet to be determined.

## Impact on Each Sector

The table below shows the impact and response of COVID-19 in each sector, based on the information provided by the relevant ministries and organizations in each sector.

Table 121 Impacts of COVID-19 and Countermeasures in Each Sector

Sector	Impacts and Countermeasures
Agriculture <sup>245</sup>	✓ In 2021, the Ministry of Agriculture established the Back to Rural Agriculture (B2RA) program <sup>246</sup> . The program provides agricultural support packages (FJD 250 worth of agricultural equipment, FJD 100 worth of agricultural materials, FJD 50 worth of cash, etc.) to Fijians who have lost their jobs due to COVID-19 and are now focusing on farming in rural areas to strengthen agricultural support and resettlement assistance (still ongoing at the time of Dec 2021).

<sup>243</sup> The OPR is the interbank interest rate determined by the central bank, and it influences changes in short-term interest rates of commercial banks. In general, when the OPR declines, the short-term interest rates of commercial banks also decline in tandem with it.

<sup>244</sup> Fiji Sun, October 23-24, 2021, What is Behind the Surge in Food, Fuel Prices?

<sup>245</sup> Information provided by the Ministry of Agriculture.

<sup>246</sup> [https://www.fiji.gov.fj/Media-Centre/News/BACK-TO-RURAL-AGRICULTURE-\(B2RA\)-PROGRAMME-LAUNCHE](https://www.fiji.gov.fj/Media-Centre/News/BACK-TO-RURAL-AGRICULTURE-(B2RA)-PROGRAMME-LAUNCHE)

Sector	Impacts and Countermeasures
Fisheries <sup>247</sup>	<ul style="list-style-type: none"> <li>✓ The number of households stocking up on non-perishable goods such as canned goods increased, and demand for packaged fish and shellfish, canned goods, and frozen foods soared.</li> <li>✓ Decreased demand for fresh seafood has resulted in food loss and waste.</li> <li>✓ Due to health and safety risks and COVID-19 protocols, offshore and inshore fishing activities have been reduced.</li> <li>✓ Increased fuel costs and delays in customs clearance and inspection by customs and health authorities resulted in higher transportation costs and lower offshore and coastal fishing activity.</li> <li>✓ Due to COVID-19 countermeasures and safety measures, the production of juvenile fish at government farms has decreased.</li> </ul>
Mining <sup>248</sup>	<ul style="list-style-type: none"> <li>✓ Production of gold, silver and iron sand continued despite the impact of COVID-19. Demand for development minerals such as crushed stone remained firm due to the construction of infrastructure to combat climate change.</li> <li>✓ On the other hand, the number of companies that have obtained Exploration Licenses has decreased from about 80 companies in 2010 to about 30 companies now. This is due to the impact of COVID-19 and the tightening of the criteria for obtaining licenses.</li> </ul>
Investment <sup>249</sup>	<ul style="list-style-type: none"> <li>✓ Due to the impact of COVID-19, the marketing budget was not allocated in 2021 and PR activities could not be carried out, which was an issue. Next year, Vodafone, Reserve Bank of Fiji, and others are expected to become sponsors, and the issue is being resolved.</li> </ul>
ICT <sup>250</sup>	<ul style="list-style-type: none"> <li>✓ While tourism is declining due to COVID-19, the expected area to investment are the ICT and BPO sectors (call center, accounting, finance, etc.), and it is believed that BPO has the potential to employ about 10,000 people, although the current employment scale is about 3,000 people</li> </ul>
Financing <sup>251</sup>	<ul style="list-style-type: none"> <li>✓ The reason for the high NPL ratio of FDBs is that only a few large customers with loans of more than 401 million FJD, not farmers or MSMEs, are rated as NPLs due to COVID-19.</li> <li>✓ If the business conditions improve after the convergence of COVID-19, it is believed that the NPL ratio of the entire portfolio will also improve.</li> <li>✓ As for potential areas for future investment, in the past 10 years or so, Fiji has been focusing on investments in the tourism industry, but after COVID-19, Fiji plans to focus on agriculture (sugarcane, rice, etc.) and MSMEs.</li> </ul>
Airport <sup>252</sup>	<ul style="list-style-type: none"> <li>✓ The master plan for Nadi Airport, including the extension of the runway, was formulated in 2018, but which was based on the demand forecast</li> </ul>

<sup>247</sup> Information provided by the Ministry of Fisheries

<sup>248</sup> Information provided by MoLMRE

<sup>249</sup> Information provided by Investment Fiji

<sup>250</sup> Information provided by the Ministry of Communications

<sup>251</sup> Information provided by FDB

<sup>252</sup> Information provided by Fiji Airports



Sector	Impacts and Countermeasures
	before COVID-19, it needs to be reviewed and the implementation of the plan has been stopped.
Education <sup>253</sup>	<ul style="list-style-type: none"> <li>✓ The budget is on a downward trend, especially with the curriculum being stopped due to COVID-19.</li> <li>✓ Musicians from Japan Overseas Cooperation Volunteers have been accepted every year, but at the time in 2021, the dispatch of these musicians had stopped due to COVID-19.</li> </ul>
Health <sup>254</sup>	<ul style="list-style-type: none"> <li>✓ The Government of Fiji and Australian medical company Aspen Medical signed 20 years PPP agreement for the development and operation of Ba Hospital and Lautoka Hospital in 2019, but the project itself has not yet started due to COVID-19.</li> </ul>

Source: Information provided by ministries and agencies in each sector.

## 1.6.2. Fiscal Impact and Response to COVID-19

### Impact on Public Debt

According to the IMF's Debt Sustainability Analysis (DSA)<sup>255</sup> based on the Article IV Consultation published in December 2021, Fiji's public debt will increase by 70.8% of GDP by the end of 2020 due to the record economic contraction and large budget deficit caused by the COVID-19 pandemic. 8%, a rise of about 22%. It is also expected to rise to 86% of GDP by the end of 2021. On the other hand, according to information provided by the Fiji Ministry of Economy, the current account deficit for 2020-2021 is 10.6% of GDP, which is below both the revised target of 11.5% and the initial target of 20.2%, and the public debt to GDP ratio is 79.8%, compared to the initial target of 83.4%, which is below the IMF's forecast.

According to the information provided by the RBF, although the public debt to GDP ratio, which was around 50% until about four years ago, has increased due in part to COVID-19, the RBF is not pessimistic because the reopening of the border in December 2021 is expected to increase tax revenues from economic recovery. In addition, the amount of debt itself is by no means excessively borrowed, and the government recognizes that it is maintaining a certain level of debt while taking into account the delicate balance between employment measures and other economic policies. As for the government's funding sources, it is believed that funding from FNPF, the largest institutional investor in Japan, is the best from the standpoint of safety. On the other hand, since the government feels the need for some external debt due to limited domestic sources of funding, it also recognizes

<sup>253</sup> Information provided by MoEHA.

<sup>254</sup> Information provided by the Ministry of Economy.

<sup>255</sup> <https://www.imf.org/en/Publications/CR/Issues/2021/12/03/Republic-of-Fiji-2021-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-510770>

the importance of utilizing concessional funding from international organizations such as the ADB, JICA, the World Bank, and the AIIB. In addition, lending from China has been decreasing, and the company plans not to accept lending from China in the future.

The Government of Fiji is participating in the Debt Service Suspension Initiative (DSSI) for COVID-19 implemented by the G20 member countries and the Paris Club, and its debt to the Export-Import Bank of China is eligible for deferred repayment. The debt owed to the Export-Import Bank of China is eligible for deferred repayment. The debt owed to JICA is also eligible for deferred repayment only for the re-extension (Phase 3, July-December 2021), and the agreement is under preparation for signing as of March 2022<sup>256</sup>.

#### Policy for Ensuring Fiscal Soundness

The basic policy for ensuring fiscal soundness after COVID-19 is to restructure public finances with the aim of putting the debt-to-GDP ratio on a downward trend. Specifically, the government will expand the tax base, implement moderate tax hikes, and simplify the tax structure, while maintaining a balance with economic recovery to ensure fiscal sustainability over the medium to long term. If revenues are likely to fall below the budget, some public spending cuts are expected (e.g., FJD 200 million for unemployment assistance, FJD 200 million for the COVID-19 reconstruction credit guarantee scheme, FJD 40 million for the Fiji reconstruction rebate package, FJD 47 million for sugar cane price support, FJD 23.1 million for preparations for the 2022 general elections, FJD 5 million for the Stronger Together employment support scheme, and FJD 4 million for Jobs for Nature). In terms of debt management, the government will focus on the prudent use of low-cost concessional funds from international organizations and other development partners, while paying attention to the risk of incurring contingent liabilities.

#### 1.6.3. Response of Each Donor to COVID-19

COVID-19-related countermeasure support by major donors is as follows

- World Bank

In 2020, the World Bank provided USD 6.4 million for the Fiji COVID-19 Emergency Response Project<sup>257</sup>.

- Australia

According to the information provided by the Australian High Commission, the government has provided financial assistance amounting to FJD 130 million as grant aid in response to COVID-19. In addition to the very large scale of the financial assistance, the fact that the financial assistance was provided “free of charge” and did not lead to an increase in the public debt ratio is unique. In addition, donor coordination meetings were held prior to COVID-19, but are no longer held. In

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<sup>256</sup> <https://www.worldbank.org/en/topic/debt/brief/covid-19-debt-service-suspension-initiative>

<sup>257</sup> <https://projects.worldbank.org/en/projects-operations/project-detail/P173903>

addition to meetings with other donors where the top management of each organization discusses general issues, the direction is to strengthen efforts to hold dialogues among those in charge at the sector level.

- Japan

Japan implemented ODA loans “COVID-19 Crisis Response Emergency Support Loan” (10 billion yen, signed in LA in March 2021) and “COVID-19 Crisis Response Emergency Support Loan Phase 2” (JPY 10 billion, planned to sign in LA in February 2022). Both projects are coordinated with ADB and will contribute to the promotion of private sector investment by strengthening public financial management, improving the policy, regulatory, and organizational frameworks for state-owned enterprises and public-private partnerships, and improving the business and investment environment<sup>258</sup>.

- ADB

According to the information provided by ADB, the following assistance is being provided to address the impact of COVID-19.

Table 122 Support for ADB's COVID-19 Compliance in Fiji

Measure	Contents
Emergency response	<ul style="list-style-type: none"> <li>✓ In 2020, ADB provided a grant of USD 2 million under the Asia Pacific Disaster Response Fund to support the government's emergency medical response to COVID-19.</li> <li>✓ In 2021, a further grant of USD 1 million under the Fund financed the provision of services to communities affected by Tropical Cyclone Yasa, which exacerbated the effects of COVID-19.</li> <li>✓ In response to the outbreak of COVID-19 and other epidemics, essential emergency medical supplies and equipment were procured through UNICEF.</li> <li>✓ Technical assistance was provided to reinforce changes in water, sanitation, and behavioral practices to prevent disease transmission. This includes awareness campaigns and the development of pandemic plans for water utilities.</li> </ul>
Fiscal and public sector management response	<ul style="list-style-type: none"> <li>✓ In 2020, the amount of the sub-program of the Sustained Private Sector-Led Growth Reform Program was increased from USD 100 million USD 200 million to support the government's response to the impact of COVID-19. Additional measures included the introduction of a gender-responsive budget, completion of a Public Expenditure and Financial Accountability Assessment, and approval of a COVID-19 compliant budget.</li> <li>✓ In 2022, USD 150 million will be contributed to the Sustainable and Climate Resilient Recovery Program to support the</li> </ul>

<sup>258</sup> [https://www.jica.go.jp/press/2020/20210303\\_11.html](https://www.jica.go.jp/press/2020/20210303_11.html)

	<p>government's broader reform agenda and increased financing needs due to the impact of COVID-19.</p> <ul style="list-style-type: none"> <li>✓ Although the government's external financing needs are expected to decline significantly in 2023 and beyond due to the expected economic recovery and debt management, the ADB will continue to support the government's debt and public financial management reform efforts through technical assistance and provide further financing options.</li> </ul>
Tourism Recovery	<ul style="list-style-type: none"> <li>✓ In 2021, a loan of USD 40 million from the COVID-19 Liquidity Support Facility was approved for Fiji Airways and co-financed with a loan of USD 25 million from the Leading Private Sector Infrastructure Fund. The funds will be used for fixed costs of Fiji Airways during the COVID-19 shutdown period and for working capital required to resume operations. ADB also advised Fiji Airports on how to achieve the resumption of international passenger traffic at Nadi International Airport and the impact of COVID-19 safety measures on operations and facilities.</li> <li>✓ In 2021, he advised the MoHMS on the establishment of a Border Health Protection Unit tasked with overseeing and implementing legislation to protect Fiji's borders from biological threats.</li> <li>✓ In 2022, ADB will implement the Enhancing COVID-19 Preparedness for Tourism Recovery Project, funded by a grant of USD 3 million from the Japan Fund for Prosperous and Resilient Asia and the Pacific, to support the resumption of international tourism. Tourism Recovery Project. The project will include improvement works and capital investment at Nadi International Airport to reduce the risk of COVID-19 infection, and enhancement of COVID-19 testing capacity in cooperation with MoHMS.</li> <li>✓ Tourism Fiji will be provided with assistance in the reconstruction of the tourism sector.</li> </ul>
Business recovery	<ul style="list-style-type: none"> <li>✓ In 2022, ADB will provide business development services and technical assistance to improve access to finance in order to help MSMEs recover from the effects of COVID-19. Specifically, in partnership with the FDB, the project aims to strengthen the Bank's operations and systems to enable it to provide loans to MSMEs.</li> <li>✓ Continue to focus on transportation, including aviation, renewable energy, and financial institutions.</li> <li>✓ It invests and finances in sectors, agribusiness, health, and tourism.</li> </ul>
Infrastructure	<ul style="list-style-type: none"> <li>✓ Continue with land transportation and urban water and sewerage management.</li> <li>✓ New investments in flood control, urban water supply and sewerage management, and port development are planned from 2022 to 2024</li> </ul>

Source: Information provided by ADB

## 1.7. Recommendations on Priority Sectors and Cooperation from JICA

### (1) Japan's Policy for Cooperation in the Pacific and Fiji

In the first part, the survey team has conducted research on the following issues for Fiji.

- Understand the current status and policies of development and the current status and policies of the investment environment
- Collection and analysis of detailed information on macroeconomic and key sectoral status and issues
- Identify sectors and issues to focus on and measures to address to achieve sustainable development and economic growth.

Since 1997, Pacific Islands Leaders Meeting (PALM) has been held every three years between Japan and the Pacific Rim countries, where the leaders of each country gather to seek solutions to various issues. In July 2021, PALM 9 was held, and the following five priority areas of cooperation were set forth.

Table 123 Key areas of Cooperation in PALM9 (2021-2024)

Priority areas for cooperation	Areas in which JICA may be able to cooperate
1 COVID-19 Response and Recovery	Support related to the new coronary vaccine, strengthening of the healthcare system, support for measures against non-communicable diseases (lifestyle-related diseases), and support for economic recovery
2 Sustainable Oceans based on the Rule of Law	Maritime security/maritime safety, marine environment, marine resources
3 Climate Change and Disaster Resilience	Palliation, adaptation
4 Strengthening Foundation for Sustainable and Resilient Economic Development	Quality infrastructure development, fiscal resilience, fostering of local industries and promotion of trade and investment, peace and stability as the foundation of the economy
5 People-to-People Exchanges and Human Resource Development	Youth and academic exchange, fostering the next generation of leaders, promoting intergovernmental exchange, cultural and linguistic exchange and education, JICA initiatives, labor mobility, strengthening the foundation for future-oriented relationships

Source: Ministry of Foreign Affairs of Japan, PALM9 Joint Action Plan (Outline).

The focus areas as expressed in PALM8 were “Maritime Order based on the Rule of Law, and Sustainability of Ocean Resources,” “Strengthening the Basis for Resilient and Sustainable Development,” “Connecting Pacific Citizens,” and “Cooperation in the International Arena,” which have much in common with the focus areas of the PALM9. The Country Assistance Policy formulated in April 2019 sets out the direction of development cooperation as follows, which is fully consistent with the PALM priority areas.

Table 124 Japan's Development Cooperation Policy with Fiji

Goals	Medium Target	Subtarget	Cooperative Program Name
Support for inclusive economic and social development and balanced nation building	1 Infrastructure development for economic development	1-1 Expansion of economic activities	Economic and social development
			Sustainable Oceans
	2 Climate change Environment	2-1 Climate change and disaster prevention	Climate change
		2-2 environmental conservation	Environmental Management
	3 Improving the quality of social services	3-1 Strengthening of education function and human resource development	Improving the quality of human resource development and education
		3-2 Improvement of health care services	Health and medicine
		3-3 Other	Improve governance capacity

Source: Business Development Plan for Fiji

While taking these directions of Japan's cooperation into consideration, this section summarizes the directions of cooperation that have been proposed so far, especially in line with the priority areas set forth in PALM 9 held in 2021, and based on the local needs identified through the information collection and analysis described above. Then, specific cooperation proposals that JICA may support for the economic development of the country will be examined.

## (2) COVID-19 Response and Recovery (PALM9 Priority Area 1)

In COVID-19 Response and Recovery, JICA is expected to provide assistance in the areas of health and medical care, such as the development of health and medical facilities, provision of health and medical equipment, support for human resource development of health and medical personnel, and technical cooperation for countermeasures against lifestyle-related diseases, as well as support for

tourism promotion for the recovery of the tourism industry when the situation of the new corona improves.

The survey revealed that there is a need for technical cooperation for upgrading existing facilities such as hospitals and health centers in the country, health care equipment, and capacity building of health care personnel. There is also a need for the development of regional hospitals, such as the Colonial War Memorial Hospital, which is Fiji's top referral hospital and where a pediatric ward was established through past grant assistance. With regard to the construction and operation of hospital facilities, there is a movement to introduce PPP at hospitals in Lautoka and Ba. It is desirable to consider the most appropriate form of cooperation, including the possibility of introducing PPPs, rather than necessarily supporting only through grant aid. With regard to the development of human resources in healthcare, it was reported that there is a chronic shortage of human resources in various fields such as pathology, radiology, psychiatry, dermatology, internal medicine, bioengineering, midwifery, emergency medical services, infection prevention, and pharmaceutical warehouse management. In general, the recruitment and training of human resources is inadequate, and technical cooperation projects such as “The Project for Strengthening the Need-Based In-Service Training for Community Health Nurses” and “Project for Improvement of Health Services through 5S-KAIZEN-TQM” and is also planning to implement a wide-area “Project for Strengthening Cooperation to Build a Robust Health System in the Pacific Region”. The need to establish a more robust health care system has been recognized more strongly than ever before due to the infection explosion and medical pressure in the country. In addition, in Pacific island countries, including Fiji, which have many remote islands, health and medical services outside the capital city are weak, and remote islands with limited means and frequency of transportation are unable to receive adequate medical care. It is assumed that fiber-optic communication networks will be developed nationwide, but support for the establishment of telemedicine systems in anticipation of such progress is also considered a potential field.

As for the “support for tourism promotion for the revival of tourism,” which will be provided once the situation of COVID-19 improves, tourism is an industry that accounts for a high percentage of Fiji's GDP, as evidenced by the large number of tourists from Australia who came to Fiji when the border was fully reopened in December 2021. The Government of Fiji believes that a certain number of tourists (short and long term) will return to Fiji, even if not to the level before the COVID-19 outbreak. Therefore, it is important to provide appropriate support based on the results of a separate JICA survey in the tourism sector. In particular, since the number of tourism workers decreased significantly during the period of COVID-19, there is a need to re-initiate various tourism human resource development activities, such as vocational training targeting the tourism sector, support for the establishment of collaboration among tourism-related entities, and development, analysis and marketing of tourism data.

### (3) Sustainable Oceans Based on the Rule of Law (PALM9 Priority Area 2)

In the area of “Sustainable Oceans Based on the Rule of Law,” there are three pillars: maritime security and safety, marine environment, and marine resources. In the area of security, JICA does not necessarily provide a lot of assistance in the areas of maritime security, surveillance and control, but it could provide cooperation in the area of maritime safety, such as maritime disaster rescue, support for the development of maritime training schools, and capacity training for the creation of nautical charts. The safe movement and transportation of people and cargo on domestic and international routes is of high importance, and it is important to develop human resources who can cope with digitalization.

In Fiji, the distance from the waste disposal site to the coastline is close, and proper waste management is also linked to the conservation of the coastal environment. In the field of marine environment, technical cooperation related to waste management has been conducted in Fiji since 2008. As of early 2022, “Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries Phase 2 (J-PRISM2)” is underway. In this cooperation over the years, Fiji has been supported in terms of recycling, human resource development and capacity building, and repository improvement, in line with the overall waste management strategy for the Pacific region. As a result, management capacity has been improved in a number of areas. However, there is still room for improvement in waste disposal reduction and disaster waste management capacity. In addition, it may be possible to promote the “Return” of “3R + Return” by establishing recycling hubs to collect and process various recyclable wastes that cannot be processed by a single country in neighboring countries as a hub for intra-regional trade routes. Furthermore, Fiji has been working on capacity building in the field of waste management ahead of other Pacific countries, and could take a leadership position in this area for its neighbors. Specifically, local governments such as Lautoka and Nadi, which have been making advanced efforts to improve the waste management capacity of countries around the Pacific region, can continue to provide technical assistance to other countries in the region in the form of lecturers and trainees.

In the area of marine resources, the promotion of sustainable fisheries is mentioned in PALM9. In this area, Fiji lacks knowledge on data collection and analysis, which is the basis for fisheries policy and coastal resource management, and it is expected that the capacity of stakeholders in areas such as statistical development and cost-benefit analysis will be improved. There is also a need for more detailed technical guidance, such as the digitization of fishery license issuance operations, sustainable fishery development in marine protected areas (e.g. sea cucumber aquaculture), capacity building in aquaculture, and maintenance of freezers and ice warehouses through solar power. In offshore fisheries, there is also an emphasis on establishing a market environment internationally that is beneficial to Fiji for fish other than tuna (diversification away from dependence on tuna exports), reducing the cost of tuna longline fishing through improved technology, and establishing traceability from point of capture to the dinner table. In line with the Fijian government's emphasis on sustainable development, the promotion of the Blue Economy is also expected (and related to the



Blue Bond that Fiji plans to issue to combat climate change). In addition to the implementation of ODA projects, it will be important to continue direct support by the private sector and to promote cooperation in a way that encourages participation in fishery activities.

(4) Climate Change and Disaster Resilience (PALM9 Priority Area 3)

The following are the main areas where JICA can provide assistance.

Mitigation: Introduction of renewable energy and development of power grid, support for sustainable forest management

Adaptation: Development of disaster-resistant infrastructure and pursuit of disaster-related equipment, support for capacity building of meteorological agencies, and support for deployment of Japanese disaster prevention technologies to Pacific island countries

Japan has been providing assistance in various fields such as disaster management, meteorology, and renewable energy. The relevant organizations in Fiji have plans to implement measures to combat global warming, mainly through the realization of fossil fuel-free means of transportation, such as the introduction of hybrid/electric ships to government-owned domestic vessels, and plans to install electric vehicles (buses) and charging stations. (e.g., through grant aid for projects in related fields). For this purpose, bonds will be issued for domestic use. From Japan's perspective, with the introduction of private sector technologies in mind, possible directions of support include the expansion of means of transportation using renewable energy and support for the efficient operation and management of public transportation through digitalization. In addition, with regard to increasing the ratio of renewable energy and improving the power grid, the EFL has seen steady progress in these initiatives, with investments from China Electric Power Company and the Japan Bank for International Cooperation (JBIC). In implementing these initiatives, it is important to explore possibilities for cooperation, including in rural areas, such as technical cooperation on infrastructure development and efficient energy management, including the elimination of bottlenecks in power transmission and distribution.

In Fiji, the Climate Change Bill was passed in September 2021, making the country the first small island nation to legislate carbon neutrality by 2050. To achieve this goal, more measures will be required in many sectors that play an important role in Fiji's economy, such as agriculture, manufacturing, electricity, and transportation, which will likely lead to higher business costs and lower profits. Therefore, in addition to the direct technical support and investment mentioned above, Japan's support should also include financial support for corporate activities that require investment in climate change countermeasures and environmental conservation, such as low-interest loans through the formation of two-step loan projects and the establishment of a low-carbon society support fund. This could be effective.

The need for disaster reduction in Fiji is self-evident from the fact that cyclones have hit the country almost every year in recent years, causing human and economic damage. In addition to such high-

frequency climatic disasters, Fiji is also vulnerable to low-frequency large-scale risks such as earthquakes and tsunamis, slow-onset disaster risks such as coastal erosion caused by sea level rise due to climate change, and wide-area disaster risks such as non-seismic tsunamis and volcanic ash caused by the large-scale eruption of an underwater volcano in neighboring Tonga in January 2022. The environment is susceptible to all kinds of disaster risks. Therefore, it is of utmost importance to have an accurate understanding of these disaster risks, and to cooperate in formulating policies and plans based on this information and in promoting investment in disaster prevention in advance. In addition, given the characteristics of small island states, it is also important to develop multi-hazard warning systems (including further development of GIS), and to take measures related to disaster preparedness, such as disseminating disaster information to communities and establishing evacuation systems and processes, especially in rural areas and remote islands where human resources are the main factor. In addition to the direct disaster management agencies, such as the NDMO and the Meteorological Department, the following measures can be considered: strengthening the disaster management system (mainstreaming disaster management) through capacity building and raising awareness of disaster management among disaster management officials in various ministries and agencies; expanding the forecasting and warning system that can be shared among multiple countries in the event of a wide-area disaster; and responding to urgent financial needs in the event of an unfortunate disaster and cooperating to realize “Build Back Better”.

(5) Strengthening Foundation for Sustainable and Resilient Economic Development (PALM9 Priority Area 4)

“Strengthening Foundation for Sustainable and Resilient Economic Development”, the most relevant priority area of cooperation in this study, focuses on the following areas: quality infrastructure development, fiscal resilience, development of local industries and promotion of trade and investment, and peace and stability as a basis for economic development.

In Fiji, the government has been stable since the elections in 2014, and peace and stability have been achieved, and JICA's cooperation should be based on this foundation, supporting the necessary infrastructure development and strengthening, industrial development, and promotion of trade and investment, which are realistic and necessary.

## 1) Infrastructure Improvement

There are many different areas of infrastructure development, and this survey found many needs in each area as follows.

Table 125 Needs for Infrastructure Development

Field	Main needs
Airport	Support based on the Nadi Airport Development Master Plan (may be revised in the future due to COVID-19), including the extension of the horizontal runway, Renovation of Nausori Airport Terminal
Harbors	Relocation and expansion of Suva Port
Roads and Bridges	Capacity building and institutional strengthening (including road planning and design, risk assessment, climate change countermeasures, procurement and contract management), construction quality assurance management, signal system improvement, establishment of intelligent transportation system, development of standard specifications, manuals and guidelines, development of road asset management system, construction of Rewa-Vutia Bridge, construction of construction of the Rewa-Vutia Bridge, maintenance of piers in various locations, replacement and renovation of domestic 40 bridges
ICT	Expansion of telecommunication infrastructure in rural areas and remote islands: Support for expansion of the Telecentre project, Fiji Connectivity Project (development of Wifi hotspots in rural areas in the northern region)
Energy (General)	Support for energy storage facilities in government facilities, increased investment in IPPs, investment in all areas of transmission and distribution, capacity building in analysis, evaluation and design in F/S implementation
Hydroelectric power generation	Support for F/S on expansion possibilities and project formation and implementation
Wind power generation	Research on wind resources (assumed to be for investors) and implementation of pilot projects
Waste Power Generation	F/S for waste disposal sites and power generation
Water and sewer services	Expansion of purified water supply by EPS in rural and remote island areas Technical guidance by non-revenue water experts, improved efficiency in fee collection, improved operation and maintenance capacity in the water supply and sewerage sector (especially in water purification plant management)

Source: Various interviews during the field survey

### Transportation Infrastructure

As for the airports, the need for expansion of the functions of international airports was confirmed. As of the time of this survey, passenger demand has decreased significantly due to the impact of COVID-19, but it is possible to consider the possibility of participating in the development and operation of the airport, considering the recovery of the tourism industry to a certain extent, the

growth of cargo demand, and the importance of the role of Nadi Airport as a regional hub. As for Nausori Airport, the runway has recently been upgraded (November 2021), and the airport also has international routes to Tuvalu, Tonga, and Auckland (before the COVID-19), it will be necessary to reconstruct the airport terminal to meet the demand. High quality infrastructure development is not limited to the development of airport facilities and equipment, which entails large project costs, but also includes safe, efficient, and profitable airport operations. Various forms of involvement, such as ODA, PPP, and private investment, can be considered.

Although it was not possible to identify enough needs for port development, it is considered necessary to improve the handling capacity for imports, exports, and transshipment, especially in the international ports of Suva and Lautoka. The port of Suva also needs to improve slipways for regular inspections of ships, but the current port area is too small, and relocation and expansion are urgently needed. There is also a need to secure enough water depths to accommodate the global increase in the size of container ships. The ADB has already conducted a site selection survey and is likely to provide loans for the relocation and expansion of the port of Suva, but since the total project cost exceeds JPY 30 billion, co-financing is also needed. One possible future cooperative project is for Japan to provide co-financing together with the ADB to support smooth logistics. In the field of ports, investment from Sri Lanka has already been made, and it may be possible to make similar investments in port operations and take part in joint management with the Fijian government.

As for roads and bridges, although a certain level of maintenance and management has been achieved, various needs were observed, such as human resource development of engineers, establishment of management systems, replacement of bridges, and maintenance and management. Since toll roads do not exist in Fiji, and the maintenance and management of roads and bridges do not generate revenue, it is difficult to take various actions within a limited budget. It is desirable to provide support for efficient maintenance and management, such as the establishment of a maintenance management system using digital technology and the outsourcing of comprehensive maintenance and management to the private sector (Availability Payment, etc.). For road and bridge maintenance, it is important to support capacity building through the dispatch of experts, while considering the implementation of projects with yen loans and the introduction of PPP that integrates maintenance and long-term maintenance management.

### ICT

The development of telecommunication networks and the introduction of IT are basically done by the Fijian government itself or through foreign investment, and there is little support available in terms of infrastructure development. However, in the areas of supporting the establishment of e-government and the development of telecommunication environment in rural areas and remote islands, it would be possible to support the expansion of the Telecentre through grassroots and human security grant aid. In addition, to realize telemedicine in health care, it is necessary to develop and maintain domestic optical fiber cable networks. In urban areas, private companies are expected to develop the network, but in rural areas and remote islands, it is important to develop the domestic

optical fiber network through financial cooperation and PPP from the perspective of correcting economic and social disparities.

### Energy

In the energy sector, EFL includes investments by China Electric Power Company and Japan Bank for International Cooperation (JBIC), and, increasing the ratio of renewable energy is a goal in terms of NDCs (nationally determined contributions). In this regard, support through channels such as ODA, PPP, and private investment is needed to further investigate the potential of hydropower, utilize renewable energies such as wind and solar, and explore power generation from waste. In addition, since there is instability in the amount of power generated from renewable energy sources, it will be necessary to expand the power infrastructure in a wide range of areas, including grid stabilization through the immediate monitoring of power generation status and the development of power transmission and distribution networks to support this. In terms of private investment, the introduction of IPPs is also considered to be essential for achieving NDCs.

In rural areas and remote islands, there are villages that are not connected to the grid, and the challenge is to build, operate, and maintain hybrid power generation in a profitable manner. Since technological advances have been made in solar power generation and other technologies, it would be practical to provide support to engineers to improve their abilities to build highly effective power systems.

### Water and Sewerage

It was revealed that Fiji's water supply and sewerage systems have very low tariffs, and WAF has not been able to adequately maintain the facilities and their maintenance. In order to ensure a stable supply of safe water, it is necessary to improve the financial situation through technical guidance by non-revenue water experts, improving the efficiency of fee collection, and improving the operation and maintenance management capacity of the water and sewage sector. In addition, since water and sewage networks are not fully developed in rural and remote island areas, it is important to expand the supply of purified water using the bio-purification method (EPS), which utilizes the purification capacity of nature, especially for waterworks, to realize the supply of safe water and sustainable maintenance and management.

Once the financial situation is in a state of improvement, it will be easier for private companies to enter the waterworks business, so it will be necessary to formulate and implement plans for maintenance and management, including setting tariffs, over the medium to long term.

## 2) Economy in General

From the perspective of fostering industry and promoting trade and investment, cooperation in the following areas can be identified

### Agriculture and Forestry (see above for fisheries)

Although a certain amount of agricultural activities has been carried out in Fiji, there is a high need for the dissemination and deployment of advanced agricultural technologies. There is a need for the development of soil maps and appropriate agricultural land use planning through the use of ICT. In addition, there is a possibility of supporting agricultural development (production, logistics, processing, etc.) using ICT based on agricultural land use planning, if leases are available on state-controlled or freehold land, or on traditionally owned land, which accounts for almost 90% of the land in Fiji. From the perspective of fostering the private sector, there is also the possibility of supporting the development of agricultural roads to improve access to markets for the agricultural products produced, and the expansion of sales channels for value-added agricultural products to overseas markets. In order to expand agriculture (domestic and overseas) toward the production of commercial agricultural products nationwide, grant assistance in the form of technical cooperation on farming and the establishment of distribution networks, as well as the construction and operation of distribution markets, is likely to be needed.

As for forestry, it became clear that cooperation that contributes to the improvement of research capacity necessary for seedling breeding and the planting and production of high value-added tree species is expected. Another potential area is the improvement of wood processing technology. In order to go beyond the domestic market and target overseas markets, it is necessary to select and harvest tree species with high added value, and to ensure a level of profitability in the international market, including subsequent distribution costs. In this regard, JICA's cooperation with the sector is not easy, but support for technical capacity building seems to be a possibility.

### Mining

Support is expected in various technical fields related to mineral resource development (capacity building on mineral engineering, geotechnical engineering, environmental engineering, geology, economic impact assessment, regulatory impact assessment, due diligence, and F/S). In addition, guidance by Japanese experts, including the establishment of a database for exploration, mining, and mineral development, is the most practical measure.

Electricity is required for mining in the development of mines, and it is expected that electricity will be supplied through renewable energy generation, which may be financed by private investment. In addition to power generation, it is also possible to provide infrastructure support, such as loans for the construction of access roads and surrounding roads.

### Economics, Investment, and Finance

Due to the impact of COVID-19, Fiji's tourism industry was hit hard and led to a significant drop in GDP. In this survey, many respondents expressed their expectation that the tourism industry will recover steadily after 2022. However, the survey team also tried to understand what are the sectors that can be diversified based on the future structure of Fiji's economy.

Although Fiji still has a large population of young people, it is expected that the population will gradually age in the same way as in Japan. Therefore, the development and operation of facilities for the care of the elderly and the development of human resources for nursing care are likely to become potential fields. In addition to tourism, other sectors that are expected to attract foreign investment in the future include agriculture, ICT, business process outsourcing (BPO), cinematography, forestry, fisheries, and the health sector. In addition to ports, airports, and roads, there are other potential PPP projects such as affordable housing, operation of elderly care facilities, and maintenance and management of government facilities. It would be beneficial to conduct a PPP feasibility study to promote private investment.

The foundation for supporting these private sector activities is the stability of the financial sector. While Fiji's financial markets are generally well established and do not require basic support, there are expectations for technical assistance from experts in the areas of digital financial literacy, improving access to finance for micro, small and medium enterprises (MSMEs), establishing financial institutions for MSMEs, and green finance.

#### (6) People-to-People Exchanges and Human Resource Development (PALM9 Priority Area 5)

In “People-to-People Exchanges and Human Resource Development”, six pillars have been identified, one of which is the continued implementation of JICA's technical cooperation, including the dispatch of volunteers and acceptance of trainees. JICA has been supporting the University of the South Pacific for many years in the establishment and operation of the USP-Net system linking Fiji with other countries in the Pacific region. Since Fiji is also a country that practically plays a role as a hub of the Pacific region, it is desirable to develop and maintain the higher education environment through digital education, strengthening cyber security measures, and improving facilities through the expansion of this system.

As for support for the domestic education sector, promotion of E-Learning (introduction of systems, development of teaching materials and curricula, support for strengthening the capacity of teachers, etc.) could be a potential target for support to eliminate the disparity between urban and rural areas. In addition, to realize this, it will be essential to develop high-speed communication networks, especially in rural areas and remote islands, so it will be necessary to support the laying of optical fiber networks and the installation of base stations from the perspective of regional development.

#### (7) Others

In line with the PALM9 priority areas of cooperation, the survey team has examined the areas and matters where JICA could cooperate. However, it is difficult to cooperate with all of them in the same way in terms of human resources and financial resources. Considering the future direction from the viewpoint of past cooperation, the following areas are potential fields for Japanese ODA, PPP, and support with the potential to induce private investment:

- Infrastructure development support (considering connectivity within Fiji and with neighboring countries)
- Industrial sectors that can strengthen ties with Japan, such as tourism, fisheries, and mining

And in Fiji, where climate and disaster risks are high, cooperation on climate change and disaster prevention will continue to be essential to mitigate the negative impacts on these development and investment activities and to ensure maximum results. It is also important to support the introduction of ICT to improve business efficiency, develop industrial human resources, and support the education and health sectors as social infrastructure.

In terms of cooperation schemes, projects that require large amounts of money will need to be implemented through yen loans or the use of overseas investment and loans (including PPP), while monitoring Fiji's debt situation. In the case of grant aid projects, it is advisable to explore the implementation of projects targeting a single country, and to consider the implementation of projects that are expected to benefit a wide area (e.g. disaster prevention, health, etc.), if the projects lead to the strengthening of the economic relationship between Fiji and Japan. Various types of technical cooperation could be considered with a view to building the capacity of those involved in Fiji, while assessing the possibility of securing experts, and then implementing them through wide-area development. In addition, information contributing to the strengthening of trade and investment relations should be further shared with international organizations such as the Pacific Islands Center, which will lead to the strengthening of economic relations between the two countries.

The implementation of various assistance cannot be achieved by Japan alone, but also requires cooperation with the Fijian government and other donors. It is expected that JICA and other donors will further strengthen the dialogue at the sectoral level and provide effective assistance, as there is generally a certain environment in Fiji that facilitates complementary segregation and co-financing among donors.



## 2. Federated States of Micronesia

### 2.1. Overview of the Federated States of Micronesia (Geography, Population, Domestic Politics, Diplomacy, etc.)

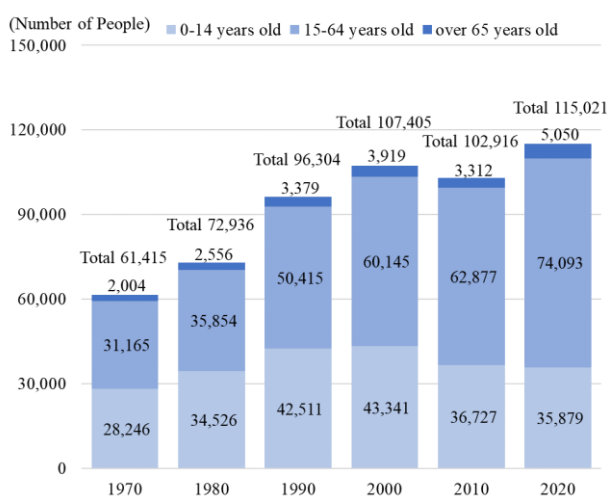
#### 2.1.1. Geography and Population

The Federated States of Micronesia (FSM) consists of the four states of Chuuk, Pohnpei, Yap, and Kosrae, spread over 607 islands in an area of approximately 3 million square kilometers. 700 square kilometers is about the size of Japan's Amami Oshima Island. The capital is Palikir in Pohnpei State, which was relocated from Colonia in 1989. The official language of the FSM is English and eight other local languages, and the US dollar is widely used in the country. It has a population of about 115,000 (World Bank, 2020). The population growth rate was negative for a while (decreasing by 0.4% per year between 2000 and 2010) due to migration to the U.S. and low birth rate, but has started to increase again in recent years. In terms of demographics, the working-age population (15-64 years old) accounts for most of the population (64%), indicating that the potential working population accounts for a high percentage of the population (Figure 22). The urban population ratio is about 23%, a slight downward trend compared to the 1980s, when the urban population ratio was at its highest at about 25% (World Bank, 2020).



Source: Ministry of Foreign Affairs of Japan website

Figure 21 Location of the FSM



Source: World Bank Open Data

Figure 22 Demographics of the FSM

#### 2.1.2. Domestic Politics, Diplomacy, etc.

The political and diplomatic situation in the FSM is shown in the table below. The head of state is President David W. PANUELO, who took office in 2019. In the early years of the country's existence, a de facto agreement (the “Gentlemen's Agreement”) was made to elect the President on a rotating basis from the 4 states that make up the Union to ensure fairness among the states. In recent years, as the rotation of states has run its course, the “gentlemen's agreement” has not necessarily been observed.

Table 126 Politics and Diplomacy in the FSM

Form of government	Presidential system
Ruler	President David W. PANUELO (Inaugurated in May 2019, 4-year term)
Legislation	Legislative power is vested in the Bundestag. The Bundestag has a parliamentary system. Four members elected from each state (4-year term) and 10 members elected according to the population ratio of each state (2-year term) (5 from Chuuk, 3 from Pohnpei, 1 from Yap, and 1 from Kosrae), for a total of 14 members. Political parties don't exist.
Administration	Under the Office of the President, the following agencies are responsible for administration. Department of Justice, Department of Foreign Affairs, Department of Resource & Development, Department of Finance and Administration, Department of Department of Health and Social Affairs, Department of Education, Department of Transportation, Communication, and Infrastructure, Department of Environment, Climate Change & Emergency Management, Public Auditor, Postmaster General, Office of Public Defender, Supreme Court
Local system	Each state government has its own state constitution, and the three powers of executive, legislative, and judicial are separated. The head of the state government is a popularly elected lieutenant governor, who serves a term of 4 years. Members of the state legislature are also elected by popular vote, with the number of members determined by the state's population.
Justice system	The judicial power of the federal government is vested in the Supreme Court and in lower courts established by relevant laws. The Supreme Court is composed of no more than 5 justices appointed by the president under a chief justice.
National defense	It does not have its own military. Under the Compact Agreement <sup>259</sup> with the US, the US has authority and responsibility for the security and national defense of the FSM, but there are currently no US military bases <sup>260</sup> . There are no US military bases in the FSM.
Member international and regional organizations, trade agreements	International organizations: ADB, CTBTO, FAO, ICAO, IMF, IOM, ITSO, ITU, OIE, OPCW, UN, UNESCO, World Bank, WHO, WMO, etc. Regional Organizations: ACP, APCC, APPU, APT, ESCAP, FFA, PICTA, PIDF, PIDP, PIF, PNA, SOPAC, SPC, SPREP, etc.

Sources: Ministry of Foreign Affairs of Japan website, materials from the Japanese Embassy in the FSM, FSM government website, websites of various organizations and agreements

Although there was a “gentleman's agreement” that the three regions of Polynesia, Melanesia, and Micronesia would take turns serving as Secretary-General of the PIF, in the February 2021 election

<sup>259</sup> The Compact Agreement refers to the Compact of Free Association between the United States and Palau, the FSM, and the RMI countries.

<sup>260</sup> As of 2021, discussions are underway with the US on the possibility of establishing a base.

for Secretary-General, the candidate from the Micronesia region (RMI Ambassador to the United States Gerald Zackios, the RMI's ambassador to the United States) was not elected. In response, the five Micronesian countries (Palau, FSM, Kiribati, Nauru, and the RMI) issued a joint statement on February 9 of the same year, saying that they would begin the formal process of withdrawing from the forum, and planned to do so by February 2022<sup>261</sup>.

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<sup>261</sup> In mid-February 2022, Micronesian nations announced that they would suspend the withdrawal process from the PIF, and no final decision has been made.

## 2.2. Economic Analysis of the Federated States of Micronesia

### 2.2.1. Economic Overview, Structure, Employment, Wages and Prices

#### 2.2.1.1. Economic Growth

The FSM's economy is dependent on foreign aid, and its trade deficit is increasing due to the growing demand for imported food, clothing, and consumer goods. GDP growth has been positive in recent years, but the migration of skilled Micronesians to the U.S. in search of jobs has resulted in a loss of human capital and long-term productivity. According to the ADB, due to COVID-19, the GDP growth rate in 2020 is negative 5.4%, but is projected to improve to negative 1.8% in 2021 and positive 2.0% in 2022 with the opening of borders.

Table 127 FSM Macroeconomic Indicators

	2015	2016	2017	2018	2019
Real GDP growth rate (%)*1	4.6	0.9	2.6	0.2	1.2*
Total nominal GDP (million USD)*1	316	332	367	402	413*
Nominal GDP per capita (USD)*1	3,050	3,197	3,522	3,854	3,952*
Consumer price inflation (annual average, %)*1	-0.1	-0.5	0.1	1.4	1.5
Unemployment rate (%) *1	No data	No data	No data	No data	No data
Current account balance (million USD)*1	14	24	38	85	63*
Trade balance (million USD)*2	-161	-150	-150	-120	-153
Export value (million USD)*2	86	92	110	142	96
Exports to Japan (million JPY)*3	539	659	798	2,024	1,505
Import value (million USD)*2	247	242	260	262	249
Import value to Japan (million JPY)*3	2,559	1,332	3,045	2,094	1,957
Balance of external debt (million USD)*4	81	80	80	75	71*

Sources: \*1 World Economic Outlook Database (IMF); \*2 World Bank Open Data; \*3 Statistical Handbook 2020 (Pacific Islands Center); \*4 Key Indicators for Asia and the Pacific 2021 (ADB). \* denotes forecast figures.

The FSM became independent in 1986 after being ruled by the US as a UN Trust Territory after World War II. Under the Compact of Free Association signed with the U.S. at the time of independence, a total of USD 940 million was provided over a 15-year period until 2003. In May 2003, the United States signed an Amended Compact, which was ratified in May 2004. The United States will provide USD 1.844 billion (USD 92 million annually) in financial assistance (consisting of two pillars: General Financial Assistance and the Compact Trust Fund) over the 20-year period from 2004 to 2023.

As of the end of 2020, 91.85% of the fund balance will be funded by the US and the remaining 8.15% by the FSM. The investment rate by the end of 2020 has been positive, except for 2008, 2009,

FY2011, and FY2015, when it recorded a significant loss of 17.20%. According to the Compact Trust Fund's annual report at the end of FY2020, for the distribution of funds in FY2024, the medium scenario assumes an average annual investment rate of 5.5% and withdrawal of 4.5% of the reserve balance from FY2020 to FY2023, resulting in a withdrawal amount of 49.1 million USD. USD, which is less than the inflation-adjusted amount of financial assistance planned for FY2023 (USD 80.6 million).

### 2.2.1.2. Economic Structure

Looking at the economic structure of the FSM by industry, in 2018, the proportions of “agriculture, forestry, and fisheries,” “real estate,” and “education” are high in that order. The percentage of the secondary industry is very small, totaling 0.5%, and the tertiary industry accounts for a high percentage.

There has been no significant change in the percentage of each industry's GDP based on the data from 2014 to 2018.

Table128 Industry's Share of GDP<sup>262</sup> (%)

	2014	2015	2016	2017	2018
Primary industry	26.4	27.6	26.0	25.1	25.1
Secondary industry					
Mining and quarrying	0.0	0.0	0.0	0.0	0.0
Manufacturing industry	0.3	0.4	0.5	0.5	0.5
Tertiary industry					
Construction industry	2.9	2.4	2.4	2.4	2.0
Electricity and gas supply services	1.8	1.7	1.8	1.9	1.9
Water, wastewater, and water management	0.0	0.0	0.0	0.0	0.0
Wholesale and retail trade, auto repair	9.8	9.8	10.7	10.8	10.6
Transportation and warehousing	5.3	5.2	5.8	5.8	5.9
Accommodation and food services	1.6	1.7	1.7	1.8	1.8
Information and communication industry	No data	No data	No data	No data	No data
Finance and insurance	2.9	3.4	3.3	3.4	3.9
Real estate business	12.9	12.6	12.8	13.0	13.1
Professional and Technical Services	0.0	0.0	0.0	0.0	0.0
Management support services	0.0	0.0	0.0	0.0	0.0
Public administration and defense, etc.	11.3	11.2	11.0	10.8	10.8
Education	12.9	12.3	11.9	11.6	11.5
Health and Social Welfare	5.5	5.2	5.2	5.3	5.3
Arts & Entertainment	0.0	0.0	0.0	0.0	0.0
Other service industry	1.4	1.4	1.4	1.5	1.5
(minus)financial intermediary services	-1.3	-1.4	-1.6	-1.5	-1.8
Taxes imposed on production and import	6.6	6.9	7.3	8.0	8.5
(minus) Subsidies	-0.3	-0.4	-0.4	-0.4	-0.7

Source: Key Indicators for Asia and the Pacific 2021 (ADB)

### 2.2.1.3. Employment, Wages and Prices

Many workers are self-sufficient, and 70% of employed adults are supported by payments from government salaries (working in the public sector) funded by financial assistance from the Compact

<sup>262</sup> Real price basis in 2004, USD basis. No data for 2019.

with the United States. Other major sources of cash income include remittances from immigrants to the US and social security benefits for working in the US.

The minimum wage in the public sector in the FSM is shown in the table below. For Pohnpei Province, the minimum wage for the private sector is also set at USD 1.75 per hour. The GNI per capita (Atlas method) is USD 4,010 (2019, World Bank), which is classified as a lower-middle income country by the World Bank according to income level.

Table129 Hourly Minimum Wage

Federal government	Chuuk State	Pohnpei State	Yap State	Kosrae State
USD 2.65 (plus a living allowance of USD 40.00 every other week)	USD 1.25	USD 2.00 (plus a living allowance of USD 30.00 every other week)	USD 1.60	USD 1.42

Source: Country Reports on Human Rights Practices for 2015, US. Department of State

In terms of prices, inflation in the early 2000s was moderate, averaging a modest 2.1% through 2007 in the early years of the revised compact. However, inflation peaked in 2008 and 2009, when the global recession began, reaching 6.6% and 8.2% respectively. Over the course of the amended compact, the inflation rate moderated, but reached as high as 6.3% in 2012. In 2015, the CPI remained unchanged, and in 2016, the CPI turned negative and entered a deflationary period. In 2017, the CPI rose by a modest 0.7%, but in 2018, it returned to its normal rate of 1.7%<sup>263</sup>. According to ADB, the supply-side disruptions associated with COVID-19 raised the inflation rate to 1.6% in 2020. According to the FSM, the Consumer Price Index as of end-December 2020 was -0.33%<sup>264</sup>.

## 2.2.2. Financial Situation and Public Debt

### 2.2.2.1. Financial Situation

The FSM's fiscal situation has been in surplus due to increased revenue from increased grants under the Compact Agreement with the United States and a large amount of corporate taxation, although expenditure has increased due to increased costs from public sector payroll and inefficient public procurement.

Revenue is based on economic aid to various sectors under the Compact with the United States and tax revenue from the fishing sector, a major industry. There has also been an increase in World Bank assistance and corporate tax receipts from investment companies located in the FSM (including one-

<sup>263</sup> Graduate School USA, 2020, FSM FY 2018 - Economic Review, 15-16

<sup>264</sup> FSM Statistic Office, <https://www.fsmstatistics.fm/economics/>

time gains from the sale of foreign assets), which have been increasing over the years. In terms of expenditures, employer compensation tends to remain high, as most of the FSM's employees are in the public sector. In addition, while public investment spending has been increasing year by year on the back of economic assistance from the Compact and the World Bank, IMF analysis suggests that inefficient public procurement practices have also contributed to the increase in spending on goods and services.

Table130 FSM Revenue and Expenditure Breakdown

	2018	2019	2020	→Forecast (million USD)					
				2021	2022	2023	2024	2025	2026
Total Revenue	320.4	320.7	282.5	294.4	282.3	285.6	264.5	261.3	269.5
Tax revenue	129.5	105.2	50.3	45.7	47.4	49.5	51.7	52.9	54.5
Grants*1	105.2	129.3	146.2	169.2	150.6	148.3	69.3	62.7	67.5
Other	85.8	86.1	86.0	79.5	84.3	87.7	143.5	145.6	147.5
Total expenditures	223.0	248.9	280.1	289.2	270.5	275.1	283.3	284.5	294.0
Employer compensation	74.5	76.6	75.5	74.9	77.4	82.0	85.7	88.6	91.2
Expenditure on goods and services	94.9	91.3	98.9	87.7	90.5	95.9	100.3	103.6	106.7
Interest expense	0.9	1.8	1.9	1.9	2.0	1.9	1.8	1.9	2.1
Subsidies	0.2	0.3	15.2	10.2	5.3	0.4	0.4	0.4	0.4
Grants	4.4	4.5	4.5	4.4	4.6	4.9	5.1	5.2	5.4
Acquisition of non-financial assets	38.6	64.7	59.0	59.7	71.8	78.0	78.3	73.7	77.9
Other	9.5	9.7	24.9	50.3	18.8	12.1	11.6	11.0	10.3
Fiscal balance	97.4	71.7	2.4	5.2	11.8	10.4	-18.7	-23.2	-24.5

\*1 Contributions to the Compact Trust Fund are not included.

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Federated States of Micronesia, p.27

#### 2.2.2.2. Public Debt

In terms of public debt, most of it is external debt, with the main creditors being the ADB, the US Department of Agriculture, and the European Investment Bank (EIB)<sup>265</sup>. There has been no new borrowing since 2009, and debt repayment is progressing, with the total amount decreasing to USD 80 million in 2017. In addition, as mentioned above, economic growth has remained positive, and the ratio to GDP has improved to the low 20% range in 2017.

According to the IMF's projections, the repayment of external debt has progressed since 2018, and public debt in 2023 has decreased to USD 44 million. Although the ratio of public debt to GDP is also expected to improve to around 10%, public debt is expected to increase from 2024 onwards due to the end of the compact in 2023 and the weakness of public finances dependent on economic aid,

<sup>265</sup> IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Federated States of Micronesia



rising to USD 87 million in 2026 and around 18% of GDP (see details in 2.2.4 Debt Sustainability Analysis).

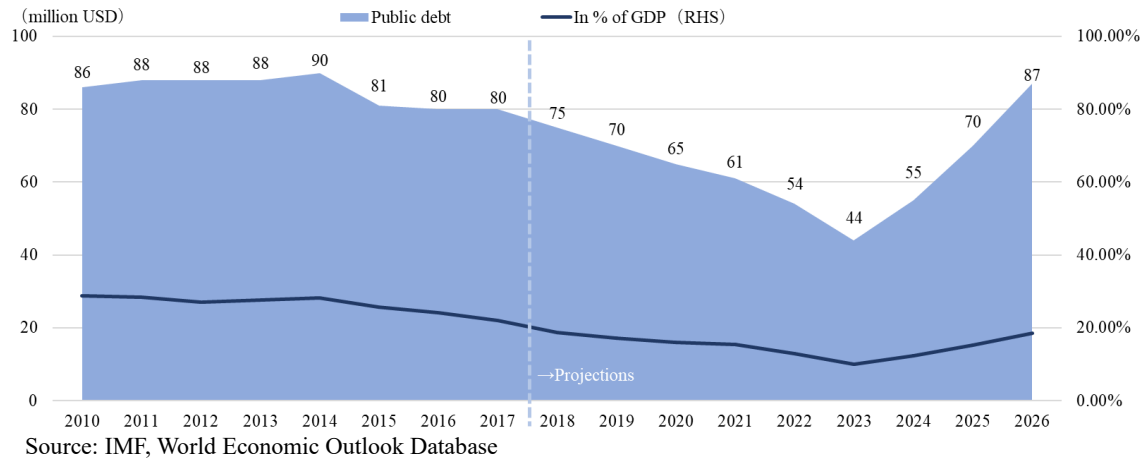


Figure 23 FSM's Total Public Debt and its Ratio to GDP

As for the economic assistance under the Compact with the United States, in addition to the economic assistance to each sector as mentioned above, a Compact Trust Fund has been set up, which is funded by the Trust Fund Committee consisting of the U.S. Department of the Interior and the FSM authorities, mainly based on contributions from the United States. The FSM contributed USD 30.26 million to the fund only in 2005, the first year of the fund's operation, and the rest was funded entirely by the US<sup>266</sup>. According to the IMF analysis for 2021, the balance of the Compact Trust Fund is expected to reach 190.4% of GDP by 2020.

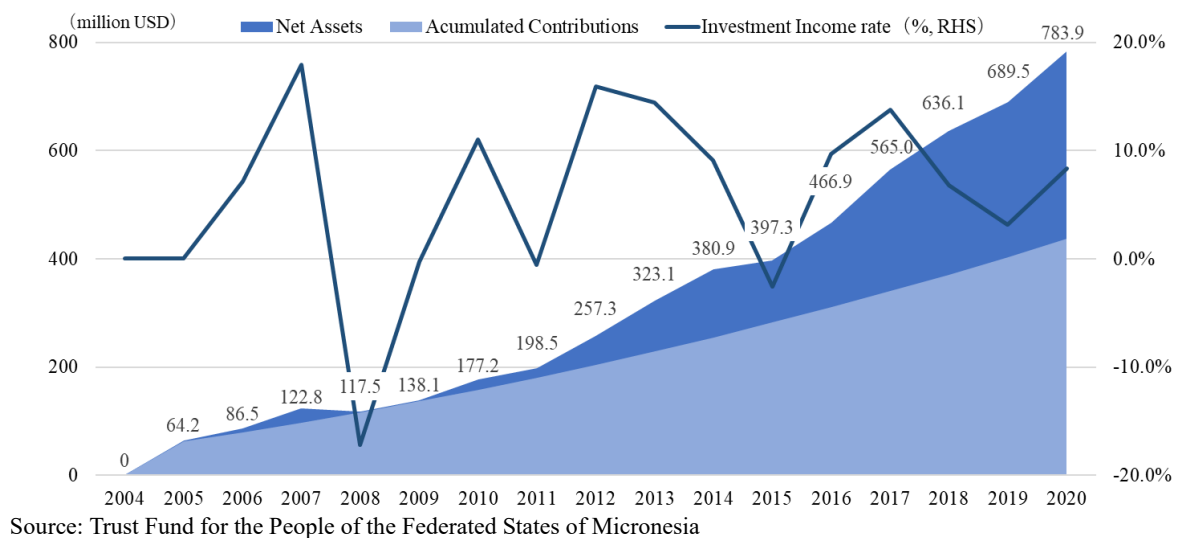


Figure 24 Performance of the Compact Trust Fund of the FSM

<sup>266</sup> Trust Fund for the People of the Federated States of Micronesia

Apart from the Compact Trust Fund, the FSM Trust Fund, which is the FSM's own trust fund, was established in 1999 and started operations with an initial contribution of USD 3 million from national and state coffers<sup>267</sup>. While the Compact is still under negotiation in 2024 and beyond, the amount of contributions to the FSM Trust Fund continues to increase to ensure financial sustainability. In 2008 and 2010, the FSM accepted trust fund contributions of USD 1 million each from China, and since 2016, the FSM has been contributing USD 5 million annually of its tax revenue to the fund. In addition, a bill has been passed to contribute 50% of corporate tax revenue and 20% of fishery license revenue to the fund, and as of the end of 2020, net assets at the end of the fiscal year stood at USD 307.3 million, with a positive return on investment<sup>268</sup>.

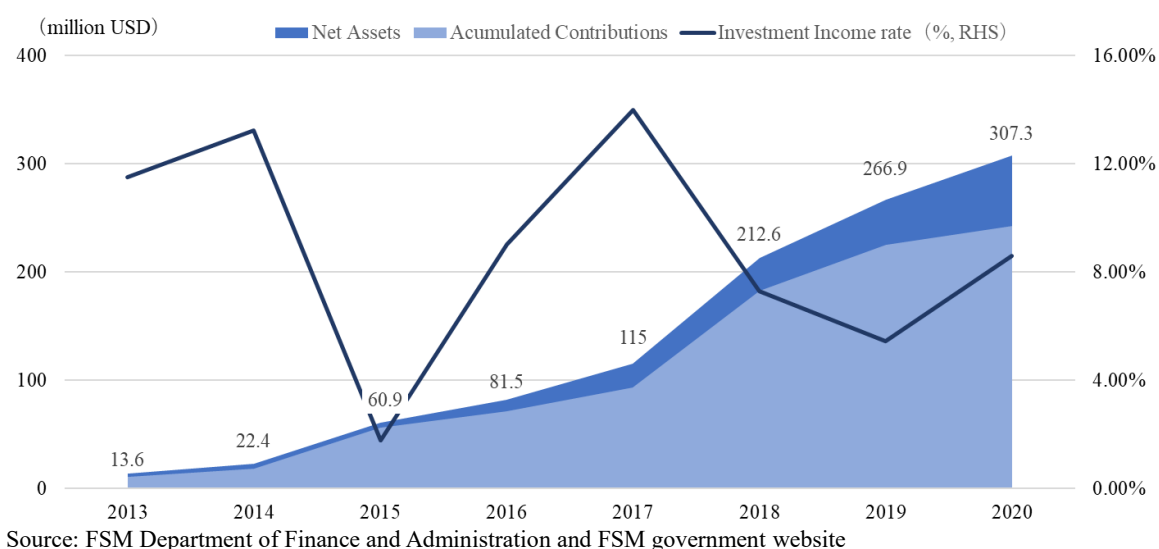


Figure 25 Investment Status of FSM Trust Fund

### 2.2.3. Balance of Payments and External Debt

#### 2.2.3.1. Balance of Payments

The FSM's current account balance has maintained a surplus in recent years, underpinned by assistance from the US Compact. In particular, 2018 saw a significant current account surplus due to an increase in the income balance, including corporate tax revenues and fishing license fees, as well as the financial balance, mainly due to investments in the FSM Trust Fund. Due to COVID-19, the economic contraction is likely to deepen in 2021, but a gradual recovery is expected if the border is reopened in 2022 or later. As for 2024 and beyond, the current account balance will be significantly affected if the compact, which is still under negotiation, is not continued. Since the FSM does not have a central bank and uses the USD as legal tender, it has no foreign exchange

<sup>267</sup> The FSM Trust Fund Actions are required to effectively and efficiently achieve the goals of the fsm trust fund Report No. 2021-02, Office of the National Public Auditor

<sup>268</sup> Economic & Fiscal Update 2019, FSM Department of Finance and Administration

reserves, and the government's USD deposits essentially serve as reserves in case of short-term liquidity shocks.

Table 131 Trends in the FSM Balance of Payments

	2018	2019	2020	→Forecast (million USD)					
				2021	2022	2023	2024	2025	2026
Current account balance	84.6	70.2	12.1	4.7	4.7	-1.5	-23.8	-23.6	-25.4
Trade balance	-128.5	-125.0	-117.8	-132.7	-128.5	-136.6	-130.0	-131.5	-135.2
Export	47.2	59.6	53.1	53.3	65.0	71.0	73.6	76.0	78.3
Import	175.7	184.6	170.9	186.1	193.5	207.6	203.6	207.5	213.4
Service account	8.3	-48.0	-54.9	-58.4	-51.9	-53.5	-55.3	-56.5	-57.5
Net income	10.3	46.3	46.4	40.9	44.4	45.6	99.6	100.5	101.2
Transfers	194.5	196.9	138.4	154.9	140.7	143.0	61.9	63.9	66.1
Capital account Balance	19.6	21.3	20.2	33.9	46.1	50.4	55.4	47.9	51.8
Financial account balance	136.4	91.5	32.3	38.6	50.8	48.9	31.6	24.3	26.4
Errors and Omissions	32.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Federated States of Micronesia, p.29

Table 132 FSM's Current Account Balance in % of GDP

	2018	2019	2020	→Projections (%)					
				2021	2022	2023	2024	2025	2026
Current account balance	21.0	17.0	3.0	1.2	1.1	-0.4	-5.1	-4.9	-5.2
Trade balance	-32.0	-30.3	-28.9	-32.8	-30.8	-30.9	-28.1	-27.5	-27.5
Export	11.7	14.4	13.0	13.2	15.6	16.1	15.9	15.9	15.9
Import	43.7	44.7	42.0	46.0	46.4	47.0	44.0	43.4	43.4

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Federated States of Micronesia, p. 29

### 2.2.3.2. External Debt

As mentioned earlier, most of the public debt is external debt; since the country borrowed heavily to finance development projects in the early 1990s, the debt-to-GDP ratio has been on a downward trend and stood at 20.3% in 2018. The bulk of the country's external debt in 2018 was borrowed from the ADB, the most recent being two new omnibus infrastructure development loans for renewable energy projects in Yap State in 2017. There is also a loan from USDA's Rural Utilities Services to FSM Telecom and a loan from the Bank of Guam to FSM Petro Corp. The central government accounts for the largest share of foreign debt at 54%, followed by Yap (17%), Chuuk (13%), Pohnpei (12%), and Kosrae (4%)<sup>269</sup>.

<sup>269</sup> Economic & Fiscal Update 2019, FSM Department of Finance and Administration Budget & Economic Management Division

Table 133 Trends in FSM's External Debt

	2018	2019	2020	→Projections					
				2021	2022	2023	2024	2025	2026
External debt (million USD)	75.4	77.3	65.4	61.0	60.8	60.2	76.5	98.2	122.0
in % of GDP	18.8	18.7	16.1	15.1	14.6	13.6	16.5	20.6	24.8

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Federated States of Micronesia, p.3

Table 134 Cumulative Loans, Grants, Equity Investment Technical Assistance, and Trade and Supply Chain Finance and Microfinance Program Commitments (million USD)

Sector	Total amount
Public Sector Management	75.3
Water and Other Urban Infrastructure and Services	50.10
Energy	25.36
Agriculture, Natural Resources, and Rural Development	10.20
Multisector	9.60
Education	9.05
Health	2.24
Transport	1.53
Finance	0.97
Industry and Trade	0.37
Information and Communication Technology	0.08
Total	184.83

Source: Asian Development Bank Member Fact Sheet, 2021

As shown in the table on the above, ADB, which accounts for most of the external debt, has been providing assistance since 1990 in risk management through improved public financial management, cost reduction through expanded supply of renewable energy, disaster risk financing and provision of safe water and sanitation services, human resource development, and private sector development. So far, it has provided USD 83.5 million in loans, USD 66.8 million in grants, USD 26.6 million in technical assistance, and USD 8 million in co-financing under ADB management.

The ADB's lending policy is to lend only directly to the FSM government and not to state and state-owned enterprises (with the exception of the Yap State Renewable Energy Project mentioned above, which was directly financed by the ADB and guaranteed by the FSM government). As for the financing of state and state-owned enterprises, the FSM government is supposed to provide the funds directly from the loans provided by the ADB to the FSM government (the terms and conditions of the loans are the same as those stipulated by the ADB).

## 2.2.4. Debt Sustainability Analysis

### 2.2.4.1. Summary

According to the IMF's DSA<sup>270</sup> published in October 2021, the FSM remains at high risk of defaulting on its debt. In the baseline scenario, since the compact is assumed to expire in 2023, the debt will start to increase from 2024, with the external debt to GDP ratio at 44.2% in 2031 and 81.1% in 2041, and the public debt to GDP ratio at 45.1% in 2031 and 82.3% in 2041. As a result, the Present Value (PV) of external debt to GDP and the ratio of public debt to GDP are projected to exceed the thresholds within the projection period. Due to liquid assets, mainly the FSM Trust Fund, the debt is expected to be sustainable to a certain extent. The debt is expected to be sustainable to a certain extent due to liquid assets, mainly FSM Trust Fund, but steady structural reforms are needed to promote gradual fiscal consolidation and private sector growth. It is also noted that the vulnerability of the FSM to climate change and natural disasters is a major risk, and that a strategy to strengthen its ability to cope with climate change is also needed.

### 2.2.4.2. Assumptions of DSA

The DSA's analysis includes debt owed by the FSM's central and state governments, as well as the guaranteed debt of important state-owned enterprises. The FSM uses the USD as legal currency, and external debt is defined based on the location of the lender.

### 2.2.4.3. DSA's Macroeconomic Forecast (Baseline Scenario)

In conducting the DSA, macroeconomic projections and various scenarios up to 2041, which incorporate economic events expected at the time of analysis, are prepared, and future debt dynamics are projected based on these projections. The main assumptions underlying the baseline scenario are as follows;

- Real GDP growth rate will decline to -1.8% in 2020 and -3.2% in 2021 due to the impact of the COVID-19 pandemic and related containment policies.
- Inflation is expected to rise after 2020, but converge to 2% in the long run, in line with the US inflation rate.
- The fiscal balance will show a modest surplus in 2020-23, with a sharp increase in COVID-19-related expenditures expected to be adequately covered by foreign funds and fishery licenses, but the fiscal situation will deteriorate due to the expiration of the Compact starting in 2024.
- The FSM Trust Fund accumulates unspent funds from fishery license fees, fiscal revenue surpluses, and temporary foreign grants, and the fund's balance is USD 307 million at the end of 2020, or about 75% of GDP. The baseline assumes that the return on investment is

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<sup>270</sup> <https://www.elibrary.imf.org/view/journals/002/2021/237/article-A003-en.xml>

higher than the nominal GDP growth rate and does not take into account any withdrawals from the fund, so that the balance of the fund will grow slowly and reach about 130% of GDP by the end of 2041. This assumption is in line with the authorities' intention to continue building the fund beyond 2023 for the benefit of future generations.

- As the fiscal balance remains in surplus and grants are still plentiful, no new debt is expected to be incurred until 2023.

Table 135 FSM's Key Macroeconomic Indicators and Fiscal Projections (Baseline Scenario)

	Actual	Projections		
	2020	2021	2022-2023	2024-2041
Real GDP growth rate (%)	-1.8	-3.2	1.9	0.6
Inflation rate (%)	0.5	2.6	2.6	2.1
Fiscal balance (% of GDP)	0.6	1.3	2.6	-5.0
Current account balance (% of GDP)	3.0	1.2	0.4	-4.6

Source: IMF, Federated States of Micronesia: Staff Report for the 2021 Article IV Consultation-Debt Sustainability Analysis, p.4

Based on the above assumptions, the movements of public and external debt under the baseline scenario are as follows.

Table 136 FSM's Public Debt Projections and Drivers of Change (Baseline Scenario)

	Actual	(In percent of GDP, unless otherwise indicated)							
	2020	2021	2022	2023	2024	2025	2026	2031	2041
Public sector debt	16.5	15.3	14.6	13.6	17.1	21.3	25.6	45.1	82.3
of which: external debt	16.1	15.1	14.6	13.6	17.8	21.9	26.0	44.2	81.1
Change in public sector debt	-3.1	-1.2	-0.7	-0.9	3.5	4.2	4.3	3.8	3.1
Identified debt-creating flows	-0.3	-0.9	-3.2	-3.1	3.5	4.3	4.4	3.8	3.1
Primary deficit	-1.1	-1.8	-3.3	-2.8	3.7	4.5	4.6	4.4	3.4
Primary (noninterest) revenue	69.3	72.8	67.7	64.6	57.2	54.7	54.8	45.8	43.4
of which: grants	35.9	41.9	36.1	33.5	15.0	13.1	13.7	6.6	6.4
Primary (noninterest) expenditure	68.3	71.1	64.3	61.8	60.9	59.2	59.4	50.2	46.8
Automatic debt dynamics	0.8	0.8	0.1	-0.3	-0.2	-0.1	-0.2	-0.6	-0.3
Real interest rate	0.2	0.3	0.2	0.1	0.1	0.0	-0.1	-0.4	0.1
Real GDP growth	0.4	0.6	-0.1	-0.5	-0.3	-0.1	-0.1	-0.2	-0.4
Exchange rate depreciation	0.2	...	...	...	...	...	...	...	...
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financing: Foreign Financing: Privatization (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contingent liabilities, etc.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Residual, including asset changes	-2.9	-0.2	2.5	2.2	0.0	-0.1	-0.1	0.0	0.0

Source: IMF, Federated States of Micronesia: Staff Report for the 2021 Article IV Consultation-Debt Sustainability Analysis, p.9

Table 137 FSM's External Debt Projections and Drivers of Change (Baseline Scenario)

(in percent of GDP unless otherwise indicated)

	Actual	Projections						2031	2041
	2020	2021	2022	2023	2024	2025	2026		
External debt	16.1	15.1	14.6	13.6	17.8	21.9	26.0	44.2	81.1
of which:PPG	16.1	15.1	14.6	13.6	17.8	21.9	26.0	44.2	81.1
Change in external debt	-2.7	-1.0	-0.5	-1.0	4.2	4.1	4.1	3.7	3.1
Identified external debt-creating flows	-2.7	-0.6	-1.2	0.0	5.0	4.9	5.1	4.8	4.8
Current account deficit, excluding interest payments	-3.4	-1.6	-1.6	-0.1	4.8	4.5	4.8	4.6	3.6
Deficit in balance of goods and service	42.4	47.3	43.2	43.0	40.1	39.4	39.2	37.5	34.7
Exports	24.0	24.2	31.7	32.2	32.1	32.1	32.1	32.1	32.1
Imports	66.4	71.5	75.0	75.2	72.2	71.4	71.2	69.5	66.7
Others	-45.9	-48.9	-44.8	-43.1	-35.3	-34.8	-34.4	-32.9	-31.1
FDI	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Automatic debt dynamics ※1	0.7	1.0	0.4	0.0	0.1	0.3	0.3	0.2	1.2
Contribution from nominal interest rate	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.4	1.5
Contribution from real GDP growth	0.3	0.5	-0.1	-0.4	-0.2	-0.1	-0.1	-0.2	-0.4
Contribution from price and exchange rate changes	-0.1	...	...	...	...	...	...	...	...
Residual, incl. change in gross foreign assets ※2	0.0	-0.4	0.6	-0.9	-0.7	-0.8	-1.0	-1.1	-1.7

※1 Derived as  $[r - g - r(1+g) + ea(1+r)] / (1+g+r+gr)$  times previous period debt stock, with  $r$  = nominal effective interest rate on external debt;  $r$  = change in domestic GDP deflator in US dollar terms,  $g$  = real GDP growth rate,  $e$  = nominal appreciation (increase in dollar value of domestic currency), and  $a$  = share of domestic-currency denominated debt in total external debt.

※2 For projection, line includes the impact of price and exchange rate changes

Source: IMF, Federated States of Micronesia: Staff Report for the 2021 Article IV Consultation-Debt Sustainability Analysis, p.8

The indicators for assessing debt sustainability in the baseline scenario are (1) the ratio of external PPG (PV) to GDP, (2) the ratio of external PPG (PV) to exports, (3) the ratio of PPG principal and interest payments to exports, (4) the ratio of PPG principal and interest payments to imports, and (5) the ratio of public debt (PV) to GDP.

Of those indicators, (1) the ratio of outward PPG (PV) to GDP, (2) the ratio of outward PPG (PV) to exports, and (5) the ratio of public debt (PV) to GDP are projected to exceed the threshold in 2041<sup>271</sup>.

<sup>271</sup> The thresholds for each indicator are determined according to the country's debt burden capacity classification. The debt burden capacity is based on the Country Policy and Institutional Assessment (CPIA) and the Composite Indicator (CI), which is an indicator that considers factors such as the country's real GDP growth rate, overseas remittances, reserves, and overall global growth rate. The CI below 2.69 is classified as "Weak", between 2.69 and 3.05 as "Medium", and above 3.05 as "Strong". The FSM's CI is "Weak," and the applicable thresholds are 30% for the ratio of external PPG to GDP (PV basis), 140% for the ratio of external PPG to exports (PV basis), 10% for the ratio of external PPG principal and interest payments to exports, 14% for the ratio of external PPG principal and interest payments to revenue, and 35% for the ratio of public debt to GDP (PV basis). Translated with www.DeepL.com/Translator (free version).

Table 138 FSM Debt Sustainability Indicators (Baseline Scenario)

	Actual	Projections							(%)	
	2020	2021	2022	2023	2024	2025	2026	2031	2041	Threshold
PV of PPG external debt-to-GDP ratio	14.3	13.5	12.5	11.1	11.9	12.7	13.8	23.1	56.7	30.0
PV of PPG external debt-to-exports ratio	59.4	55.8	39.2	34.3	36.9	39.7	43.1	71.9	176.7	140.0
PPG debt service-to-exports ratio	6.7	6.7	5.6	5.3	5.1	5.0	4.3	3.4	8.1	10.0
PPG debt service-to-revenue ratio	4.8	5.2	5.6	5.5	3.9	3.9	3.4	2.7	7.0	14.0
PV of public debt-to-GDP ratio	14.7	13.7	12.5	11.1	11.1	12.1	13.4	24.0	57.9	35.0

Source: IMF, Federated States of Micronesia: Staff Report for the 2021 Article IV Consultation-Debt Sustainability Analysis, p.5 • 8 • 9

#### 2.2.4.4. DSA Scenario Comparison (Stress Testing)

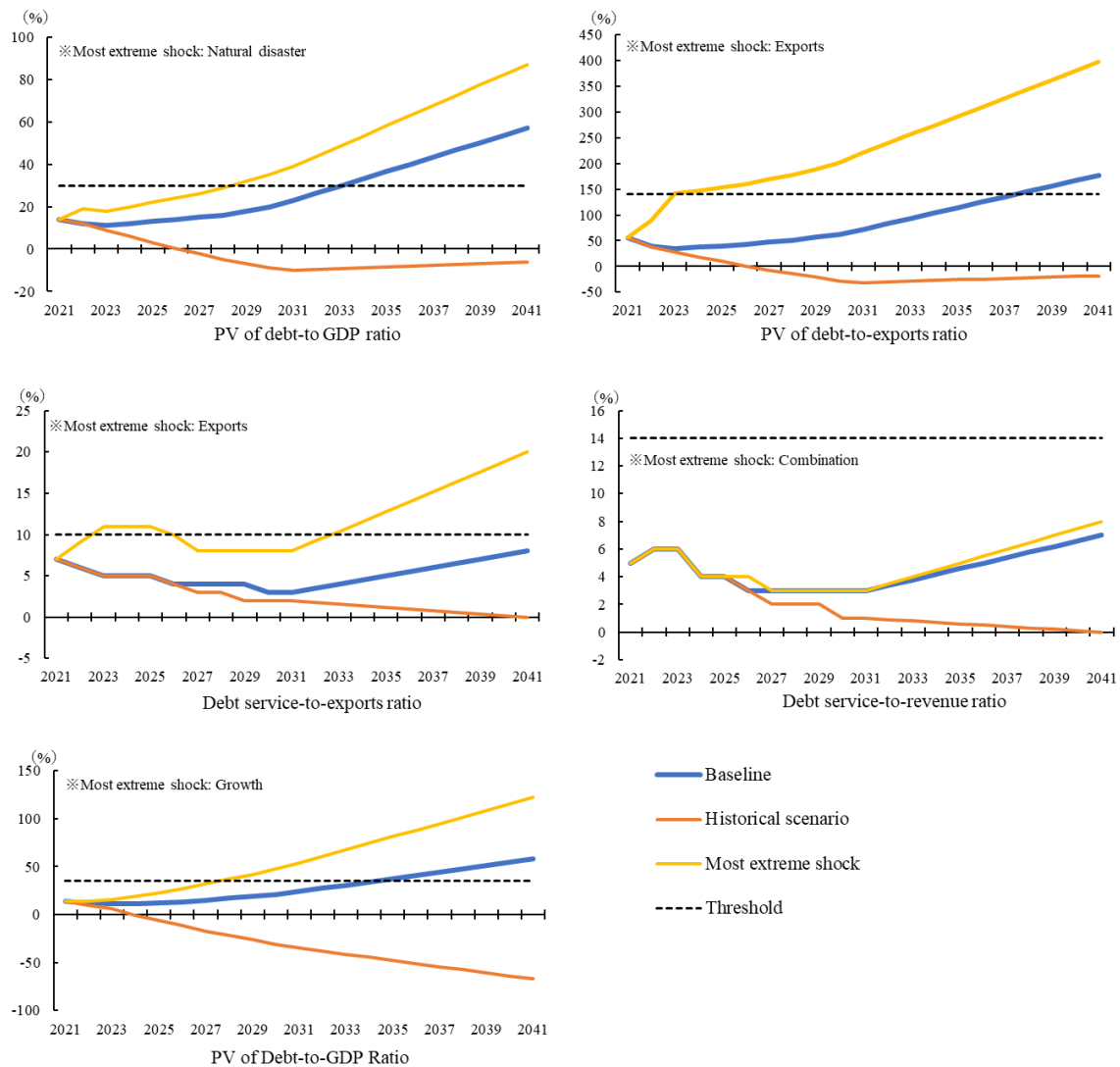
In the DSA, in addition to the baseline scenario, various alternative scenarios<sup>272</sup> that incorporate the effects of changes in macroeconomic events and natural disasters are developed and stress tested. The FSM's DSA compares the baseline scenario, the historical scenario<sup>273</sup>, and the most extreme shock scenario<sup>274</sup>, and points out that external debt is vulnerable to natural disasters and changes in exports, and public debt is vulnerable to changes in GDP growth.

<sup>272</sup> The stress tests include (1) a standard scenario common to each country that reflects changes in various macroeconomic indicators (scenarios are created for real GDP growth, primary balance, exports, exchange rate depreciation, and changes in a combination of these factors. The interaction between variables is also considered), (2) Tailored scenarios that reflect the impact of contingent liabilities and natural disasters, (3) Customized scenarios that reflect events unique to the target country.

<sup>273</sup> In order to validate the baseline scenario, the average values of macroeconomic variables for the past 10 years are stretched over the forecast period.

<sup>274</sup> Among the alternative scenarios, the scenario with the highest ratio before 2030 will be presented. The case of a scenario that exceeds the threshold only once will also be presented (however, if there are other scenarios with higher impact, they will not be used to determine debt sustainability).





Source: IMF, Federated States of Micronesia: Staff Report for the 2021 Article IV Consultation-Debt Sustainability Analysis, p.10-13

Figure 26 DSA Indicator Scenario Comparison in FSM

#### 2.2.4.5. Conclusion

Both external debt and public debt are assessed as high risk, as neither will be exceeded within the next 10 years, but are expected to exceed the thresholds over the forecast period of the next 20 years.

Stress tests have revealed the vulnerability of debt to shocks such as natural disasters, export volatility and fluctuations in GDP growth, highlighting the urgent need to adjust public finances and implement broad-based structural reforms to promote growth, develop strategies to address climate change, and improve debt management capacity.

Although the debt is expected to increase in the future, assets, including the FSM Trust Fund, can be viewed as a buffer for debt repayment capacity and debt sustainability. To keep the debt on a

sustainable trajectory going forward will require steady fiscal adjustments and continued disbursement of subsidies to support the FSM's development needs.

The assessment of the risk of future defaults will largely depend on the outcome of the renegotiation of the Compact Agreement. It is concluded that continued financial cooperation through the renewal of the Compact Agreement with the US will reduce fiscal pressures and risks to long-term fiscal and external debt sustainability.

#### 2.2.4.6. Status on the Compact Agreement

According to information provided by the Joint Committee on Compact Review and Planning, which is responsible for the FSM's compact negotiations, it is not possible to comment on the status of the negotiations.

The 2022 Compact budget has already been approved, and according to the US Department of the Interior, Office of Insular Affairs, USD 61 million was bilaterally approved in November 2021 for the FSM's 2022 Compact funding. The breakdown is as follows. In addition to the table below, USD 17.62 million has been approved for infrastructure projects in previous years<sup>275</sup>.

Table 139 Breakdown of the Compact Agreement Budget in 2022 for the FSM

Sector	Amount (thousand USD)
Education	28,318
Health	23,82
Infrastructure	6,231
Strengthen reporting and accountability	1,574
Public sector capacity building	1,207
Environmental conservation	102
Private Sector Development	43
Total	61,295

Source: US Department of the Interior website<sup>276</sup>

<sup>275</sup> <https://www.doi.gov/oia/press/Interior-Announces-%2461-Million-in-Compact-Funding-for-Fiscal-Year-2022-Government-Operations-in-the-Federated-States-of-Micronesia>

<sup>276</sup> <https://www.doi.gov/oia/press/Interior-Announces-%2461-Million-in-Compact-Funding-for-Fiscal-Year-2022-Government-Operations-in-the-Federated-States-of-Micronesia>

## 2.3. Development Policy and Investment Policy

### 2.3.1. Development Policy and Sectoral Development Policy

#### 2.3.1.1. Strategic Development Plan 2004-2023

The Strategic Development Plan 2004-2023 (SDP) was prepared in 2003 as a result of the implementation of amended Compact Agreement. The Compact Agreement's new financial procedures required the FSM to transmit the SDP to the United States and to provide a framework on which to base annual grant applications for the Compact Agreement sectors. The SDP outlines strategic goals and activities to achieve them in the 8 areas: (1) private sector development, (2) agriculture, (3) fisheries, (4) tourism, (5) environment, (6) health, (7) education, and (8) gender.

Table 140 Strategic Objectives of the 8 sectors in the SDP

Field	Strategic Objectives
(1) Private Sector Development	1. Create a sound economic policy environment that supports outward-oriented, private sector-led growth
	2. Improve the competitiveness of production factors in the fsm and promote private sector development
	3. Improve the direct investment environment and expand support services for entrepreneurs and business development
	4. Reduce the direct role of government in the economy
	5. Provide efficient and cost-effective economic infrastructure to support competitive private sector development.
(2) Agriculture	1. Well-resourced and appropriately focused agricultural sector that operates consistently within a stable policy framework
	2. Increase productivity of traditional farming systems for household nutritional and traditional needs and cash income
	3. Increase the amount of surplus goods available for sale, which can then be sold by private companies to local and regional markets
	4. Promote environmentally sound and sustainable production
(3) Fishery	1. Stakeholders and personnel contributing to the management and development of fisheries and marine resources are appropriately trained and skilled to participate effectively in sector activities
	2. Coastal and inshore marine resources are monitored and managed in a consultative and participatory manner that respects traditional practices, utilizes established scientific methods, and maintains biodiversity and resource richness
	3. Coastal and inshore marine resources are effectively utilized to meet subsistence needs/microfishing needs and optimized for the social and economic benefit of stakeholders within sustainable parameters
	4. Marine resources are monitored and managed in the best possible manner to ensure that yields remain within sustainable parameters.
	5. Marine resources are used in a manner that ensures the best possible economic benefit to the FSM
(4) Tourism	1. Make tourism a major economic activity in the FSM

Field	Strategic Objectives
	2. Integrate the tourism sector with national economic planning and development
	3. Create an attractive and supportive environment for private tourism industry investors.
	4. Invest incrementally in tourism product development to diversify and expand the range of attractions and activities for visitors.
	5. Establish the tourism sector in the fsm at a sufficiently high level to earn a premium in the global market in the diving, eco- and cultural sectors, through the gradual introduction of national quality standards
	6. Promote inter-sectoral collaboration and maximize the use of local products and services
	7. Involve fsm residents in tourism sector development
	8. Promote and sell the fsm to appropriate markets and market segments to tap the potential of the tourism sector.
	9. Ensure that tourism is developed in an environmentally sustainable manner and contributes positively to environmental protection and cultural preservation
	10. Set up a reliable system to measure tourism activities in the fsm to ensure correct monitoring of progress
	11. Progressively develop tourism services that are acceptable in the international tourism market through planned training programs
	(5) Environment
2. Improve and enhance the human environment (improve waste management (3R) and pollution control)	
3. Reduce energy use and shift to renewable energy sources. Minimize greenhouse gas emissions.	
4. Enhance the benefits derived from the sustainable use of FSM resources and ensure that these benefits are shared equitably among stakeholders	
5. Manage and protect the country's natural environment. Protect, conserve, and sustainably manage marine, freshwater, and terrestrial ecosystems in a complete and functional FSM.	
6. Increase environmental awareness and education, and increase the involvement of FSM citizens in the conservation of the country's natural resources	
7. Establish effective biosecurity (border control, quarantine and eradication) programs to effectively protect FSM biodiversity from the impacts of exotic invasive species.	
8. Create a sustainable finance mechanism for environmentally friendly and sustainable resource initiatives	
9. Strengthen and recruit domestic technical capacity to support environmental programs	
(6) Health	1. Improve primary medical services
	2. Improve secondary medical services
	3. Prioritizing health promotion services for key health issues

Field	Strategic Objectives
	4. Develop a sustainable healthcare financing mechanism
	5. Improve capacity and accountability systems
(7) Education	1. Improving learning quality in FSM
	2. Improving the quality of instruction in FSM
	3. Integrating performance measurement and data-driven decision-making systems
	4. Strengthen participation and accountability of the education system to the local community
	5. Education is related to the life and ambitions of FSM people
(8) Gender	1. Strengthen and promote the cultural, economic, legal, political and social development of women and children throughout their life cycle
	2. Strengthen women's leadership skills and roles
	3. Mainstream gender issues in decision-making, policy and strategic development planning.
	4. Maximize women's contribution to and participation in the democratic development process by creating opportunities for their active involvement
	5. Strengthening the organizational capacity of the FSM's women's programs
	6. Strengthening the organizational capacity, effectiveness, and impact of youth organizations
	7. Strengthening youth development through social, economic, and political participation
	8. Building social protection and social welfare services for older citizens
	9. Address the special economic, political, and social needs of people with disabilities and people with special needs.

Source: Strategic Development Plan 2004-2023

## 2.3.2. Investment Policies and Systems for Attracting Foreign Capital

### 2.3.2.1. Investment Policy

In the FSM, the Division of Trade and Investment in the Department of Resources and Development (DoRD) oversees matters related to trade and investment. The main responsibilities of the division are as shown in the table below. The Federated States of Micronesia Investment Guide-A Step-by-step Handbook was published for Investors (the Handbook) in 2015 to promote investment. There are no government programs or incentives to attract foreign investment, but according to information provided by the department, agriculture, aquaculture, ICT, and ecotourism are among the sectors that should be promoted for foreign investment.

Table 141 Department of Trade and Investment, Ministry of Natural Resources and Development

- Formulate and promote efficient trade and investment policies for the nation in cooperation with relevant stakeholders
- Improving and promoting an environment conducive to domestic and foreign investment
- Seek and protect support services from all possible sources to improve FSM's competitive advantage and expand entrepreneurial and business development
- Facilitate the development of an environment that supports export-oriented, private sector-led growth

Source: DoRD website

### 2.3.2.2. System

#### (1) Investment Incentives and Regulations

The FSM and each 4 state have 5 different laws regarding foreign investment, including the following:

1. FSM Foreign Investment Act
2. Pohnpei Foreign Investment Act of 2018
3. Chuuk Foreign Investment Act of 2017
4. Kosrae Foreign Investment Act of 2005
5. Yap Foreign Investment Act

According to the Handbook, the following activities are prohibited in the FSM.

Table 142 Prohibited Activities

Target area	Activities
Overall FSM	<ul style="list-style-type: none"> <li>• Weapons Manufacturing</li> <li>• Minting of coins for currency or printing of banknotes</li> <li>• Nuclear power or radiation related business</li> <li>• Business related to the manufacture and sale of biological and chemical weapons</li> </ul>
Within the jurisdiction of Kosrae State	<ul style="list-style-type: none"> <li>• Production of toxic and biotoxic substances</li> <li>• Gambling and casino facilities</li> <li>• Fishery using sodium/cyanide or compressed air</li> </ul>
Within Yap State jurisdiction	<ul style="list-style-type: none"> <li>• Capture or sale of non-living resources within the internal waters of the State</li> </ul>
Within the jurisdiction of Chuuk and Pohnpei States	<ul style="list-style-type: none"> <li>• No industries except those prohibited in the Federation.</li> </ul>

Source: The Federated States of Micronesia Investment Guide - A Step-by-step Handbook for Investors

The 7 sectors listed in the table below are administered by the federal government, while all other sectors are administered by state governments.

Table 143 Areas Controlled by the Federal Government

<ul style="list-style-type: none"> <li>• Banking</li> <li>• Insurance business</li> <li>• Telecommunications industry</li> <li>• International and domestic transportation</li> <li>• Fishing in the Exclusive Economic Zone</li> <li>• Resource exploitation in the Exclusive Economic Zone, on the continental shelf or sea floor beyond the territorial sea (other than fishery)</li> <li>• Provision of goods and services under federal government contracts or federally approved international cooperation projects</li> </ul>
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Source: The Federated States of Micronesia Investment Guide - A Step-by-step Handbook for Investors

In addition, business fields for which no special conditions are required are defined as the Green List, and business fields for which certain conditions are imposed on foreign investors are defined as the Amber List, as shown in the table below.

Table 144 Green List and Amber List

Green List (a list of business sectors for which no special conditions are required)	
Overall FSM	<ul style="list-style-type: none"> <li>• Banking</li> <li>• Telecommunications industry</li> <li>• Fishing in the FSM Exclusive Economic Zone</li> <li>• Domestic and international aviation</li> <li>• International transport industry</li> <li>• Development of resources in the Exclusive Economic Zone, on the continental shelf or sea floor beyond the territorial sea (other than fisheries)</li> <li>• Provision of goods and services under federal government contracts or federally approved international cooperation projects</li> </ul>
Within Chuuk State jurisdiction	<ul style="list-style-type: none"> <li>• Ecotourism</li> <li>• Intrastate Air Service</li> <li>• Professional Services</li> <li>• Export of locally produced products</li> <li>• In-state boat transportation and dry dock services</li> </ul>
Within the jurisdiction of Pohnpei State	<ul style="list-style-type: none"> <li>• Joint ventures in which at least 60% of all shares are owned by FSM nationals</li> <li>• Businesses in which foreign investors have made an initial investment of USD 250,000 (USD 50,000 in the professional services sector) or more.</li> <li>• Services (excluding tourism), retail trade, exploration, development, and exploitation of mineral resources onshore and offshore where foreign investors' shareholding does not exceed 49% of total shares</li> <li>• Allow US citizens who have resided in the FSM for at least 5 consecutive years to have the same privileges as FSM citizens to do business in the US as an exception to the requirements for foreign investment permits.</li> </ul>
Within the jurisdiction of Kosrae and Yap States	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>



Amber List (a list of business sectors that impose certain conditions on foreign investors)	
Overall FSM	<ul style="list-style-type: none"> <li>• Banking, other than those presented in Title 29 of the FSM Code</li> <li>• Insurance business</li> </ul>
Within Chuuk State jurisdiction	<ul style="list-style-type: none"> <li>• Casino</li> <li>• Lottery</li> <li>• Real estate business</li> <li>• Intermediary business</li> <li>• Business activities that involve excessive environmental pollution, ecological balance, destruction of local culture and traditions, and consumption of natural resources.</li> </ul>
Within the jurisdiction of Kosrae State	<ul style="list-style-type: none"> <li>• Real estate brokerage</li> <li>• Tourism other than ecotourism</li> <li>• Projects related to trade in live reef fish and capture of corals</li> </ul>
Within the jurisdiction of Pohnpei State	<ul style="list-style-type: none"> <li>• Joint ventures in which foreigners own 40% or more of the total shares</li> <li>• Businesses in which foreign investors have invested less than USD 250,000 (USD 50,000 in the professional services sector) in the initial investment.</li> <li>• Services (excluding tourism), retail trade, exploration, development, and exploitation of mineral resources onshore and offshore, where foreign investors hold at least a 49% of the total shares</li> </ul>
Within Yap State jurisdiction	<ul style="list-style-type: none"> <li>• Commercial fishing (any commercial fishing including, but not limited to, catching, processing and commercial trading of fish in state waters)</li> <li>• Exploration and drilling for seabed mineral resources and other non-living resources in the state's fishing areas</li> <li>• Wholesale and retail trade</li> <li>• Handicraft production</li> <li>• Hairdressing business</li> <li>• Textile manufacturing</li> <li>• Vehicle repair business, small engine repair business, equipment repair business</li> <li>• Printing company</li> <li>• Video, cinema, film production</li> <li>• Construction industry</li> <li>• Vehicle rental and equipment rental</li> <li>• Restaurant, bar, billiard room</li> <li>• Agriculture and livestock</li> <li>• Lawyer's business</li> <li>• Coin Laundry</li> <li>• Sewing and alteration services</li> <li>• Cab trade</li> <li>• Consultancy</li> </ul>

Source: The Federated States of Micronesia Investment Guide - A Step-by-step Handbook for Investors

(5) Steps companies enter the market and procedures

The steps required to start a business in the FSM are shown in the table below.

Table 145 Necessary Steps to Start a Business

	Procedure (Organizations and institutions in charge)	Instruction with the Handbook
Step1	Determination of legal form	Regardless of the legal form (sole proprietorship, partnership, corporation, etc.), it is possible to conduct business in the FSM. However, the federal and state governments recommend joint management or joint ventures with local partners.
Step2	Decide on a company name (Registrar of Corporation)	This step is only relevant when the investor plans to open a business under a new name in the FSM. If applicable, it is recommended to consult with the Corporate Registration Department to ensure that the company name is not already registered in the FSM.
Step3	Company registration or establishment (Corporate Registration Bureau)	After the investor has finalized the legal form and company name, the company is registered or granted legal personality.
Step4	Obtain a Foreign Investment Permit (from the federal Ministry of Natural Resources and Development or a state government agency)	This step applies to companies that are 100% owned by non-FSM citizens or companies in which foreign investors have a real stake of 30% or more.
Step5	Obtain licenses/permits from relevant ministries (relevant federal or state agencies)	Some business activities require licenses/permits to be issued by the federal government and/or the respective state governments before opening for business.
Step6	Obtain business license from relevant local government (relevant local government)	As a general rule, all businesses operating in the FSM are required to obtain a business license from the local government of the location where the business will be conducted.

	Procedure (Organizations and institutions in charge)	Instruction with the Handbook
Step7	Enrollment in the Social Security System (FSM Social Security Administration)	After obtaining all permits and relevant licenses and licenses, the investor needs to obtain a Social Security Number, which can be applied for in USD 10. For foreign companies, the Social Security Numbers of the members of the Board of Directors are also required.
Step8	Recruitment of workers (Division of Immigration and Labor, FSM Department of Justice)	It is the employer's responsibility to ensure that the employee has a Social Security number or obtains one from the Federal Social Security Office in the FSM. A foreign investor with a valid Foreign Investment Permit is automatically entitled to an Exatriate Worker Authorization (EWA) 1for a management position. The EWA will be issued by the Division of Immigration and Labor in consultation with the DoRD.
Step9	Open a domestic bank account	In general, investors who wish to conduct business in the FSM need to open a bank account in the FSM, among other things. Currently, there are 2 commercial banks in the FSM, the Bank of FSM and the Bank of Guam, both of which have a number of requirements. The requirements vary depending on the type of account the investor wishes to open.
Step10	Taxation (Division of Revenue and Taxation, FSM Department of Finance and Administration)	After operation, Gross Revenue Tax (GRT) needs to be declared.

Source: The Federated States of Micronesia Investment Guide - A Step-by-step Handbook for Investors

#### (6) Challenges for Foreign Investment and Potential Areas of Cooperation

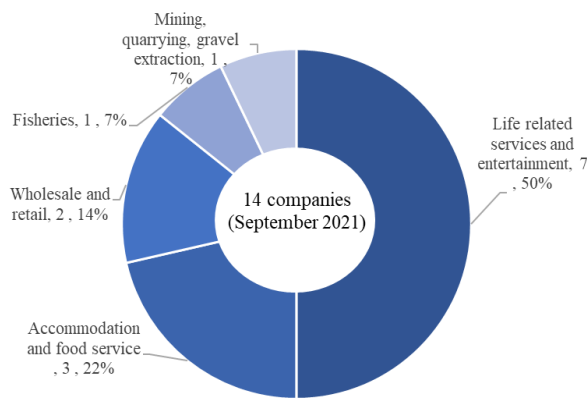
According to information provided by DoRD's Division of Trade and Investment, the challenges are that each of the five laws on foreign investment has different contents and requires separate foreign investment permits, that there is no focus on marketing and promotion, and that related legal frameworks such as intellectual property rights to protect innovations and ideas are not yet in place.

The cooperation needs from Japan are expected to include the development of an online system for collecting and publishing statistical data on foreign investment, staff training for maintaining the system, and support for the development of a strategic action plan for marketing and promotion by dispatching senior volunteers.

## 2.4. Private Investment

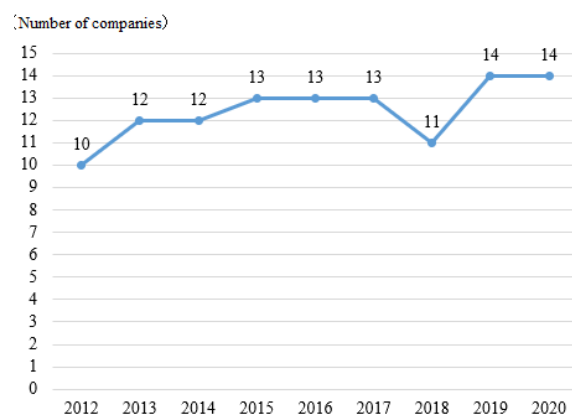
### 2.4.1. Current Status and Trends of Private Investment

Regarding the trend of Japanese companies entering the FSM, the number of Japanese companies entering the FSM during 2012-2020 has been hovering around 10-14, and the number of companies has remained flat. In terms of the breakdown by industry, of the 14 companies with bases in the FSM as of September 2021, half are in the lifestyle-related services industry, suggesting that many companies will enter the FSM in tourism-related fields. According to information provided by the DoRD's Division of Trade and Investment, data on foreign direct investment in the FSM has not yet been compiled.



Source: Ministry of Foreign Affairs of Japan, Survey of Japanese Residents Abroad

Figure 27 Breakdown of Japanese Companies by Industry (Number, Percentage)



Source: Ministry of Foreign Affairs of Japan, Survey of Japanese Residents Abroad

Figure 28 Number of Japanese Companies in Japan (each October)

### 2.4.2. Private Investment Policies and Institutions

The FSM Action Plan for the period up to 2023, prepared in 2015, recognizes that the country should shift to an industrial structure driven by the private sector, rather than relying on public investment and ODA for economic growth and employment. The following tax incentives have been implemented as measures to attract private investment. The corporate tax rate is 21%, which is lower than the average rate of 28.43% in Oceania<sup>46</sup>. The corporate income tax is not applied to all companies operating in the FSM, but is imposed only on Major Corporations<sup>277</sup>. On the other hand, businesses other than major corporations are subject to gross receipts, which is based on total sales.

<sup>277</sup> Under the provisions of Chapter 3 Income Tax Regime for FSM Corporations, Subchapter 1, a company operating in the FSM (excluding banking business) that has paid-in capital or capital contributions of USD 1 million or more or the sum of paid-in capital or capital contributions of USD 10 million or more in its first year of operation is subject to corporate income tax. If the company is a captive insurance company as defined in title 37 of the Act, regardless of the amount of capital, it is subject to corporate income tax. <http://fsmfaw.org/fsm/code/code2014/FSMCode2014Tit54Chap03.html>

Table 146 List of Incentives for Private Companies in the FSM

Hierarchy	Applicable industries	Period	Contents
Tier 1	All companies, including those in the tourism industry	During the operation period of the project	<ol style="list-style-type: none"> <li>1. Deduction/exemption from gross receipts tax (wages, salaries and other regularly paid benefits)<sup>278</sup> <ul style="list-style-type: none"> <li>• No taxation if total annual sales do not exceed USD 2,000</li> <li>• If total annual sales do not exceed USD 10,000, the total taxable amount is USD 80 per year.</li> <li>• If total annual sales are more than USD 10,000, tax is imposed on total sales multiplied by 3%.</li> </ul> </li> <li>2. Social security payments not included in taxable income</li> <li>3. No minimum capital requirement</li> <li>4. No legal restrictions on repatriation of capital</li> <li>5. Flexible market conditions</li> <li>6. Use of public land for large investment projects (Kosrae and Pohnpei States)</li> </ol>
Tier 2	Export manufacturing only		<ol style="list-style-type: none"> <li>1. Exemption from gross receipts tax</li> <li>2. A system for refunding the amount of import taxes paid on goods purchased for export.</li> <li>3. No export tax</li> </ol>
Tier 3	Fishery processing industry in Japan only		<ol style="list-style-type: none"> <li>1. Preferential allocation for fishing operation days within the fishing vessel operation day quota<sup>279</sup></li> </ol>

Source: DoRD, A Step-by-step Handbook for Investors 2015 Edition and Department of Finance and Administration homepage TITLE 54 TAXATION AND CUSTOMS

The FSM has a regional trade agreement and a bilateral trade agreement with the United States.

Table 147 FSM's Trade Agreements and Overview

Trade agreement				
	Name	Situation	Member Year	Overview
	Articles of Confederation	Already in effect	1986	Exemption from import duties on goods exported to the US, except for the exceptions listed on the right.

<sup>278</sup> <https://dofa.gov.fm/wp-content/uploads/2018/12/FSMCode-Taxation-of-Wages-Salaries-Gross-Revenues.pdf>

<sup>279</sup> Vessel Day Shcem (VDS) refers to the daily catch quotas enforced in each country based on the Nauru Agreement, which was signed to promote sustainable fishing in the Pacific Ocean countries.

				Imports of watches and other timekeeping devices, buttons, textiles, shoes, handbags, briefcases, gloves, leather goods, and tuna from the Marshall Islands, a member of the FSM and the Articles of Confederation (only if stored in airtight containers during transport), in excess of the annual consumption of tuna imported in closed containers for consumption in the United States. Tuna imported by sealed container for consumption in the US <sup>280</sup>
Preferential Trade Agreements				
Name	Situation	Member Year	Contents	
EU Regulation (No. 978/2012) <sup>281</sup>	Already in effect	2012	All goods exported to the EU are subject to GSP-based tariff rates or duty-free.	
SPARTECA	Already in effect	1981	Preferential tariffs applied by Australia and New Zealand to imports from countries that are members of the Pacific States Forum. Goods from member countries are duty-free and can be exported to Australia and New Zealand without import quotas (sugar exports in Australia are excluded).	
GSP	Already in effect	1971	A system under which developed countries (Japan, Australia, New Zealand, Canada, the United States, etc.) apply tariff rates lower than general tariff rates to agricultural and mineral products imported from developing countries, including the FSM.	
Free Trade Agreement Under Negotiation				
Name	Situation	Member Year	Contents	
The Pacific Agreement on Closer Economic Relations Plus (PACER)	Already in effect	Undecided	The FSM is a member but has not yet ratified it.	
Pacific Island Countries Trade Agreement (PICTA)	Already in effect	Undecided	It is an agreement for regional cooperation and integration through trade among 14 Pacific nations, but the FSM has not ratified it.	

Source: DoRD, A Step-by-step Handbook for Investors 2015 Edition

<sup>280</sup> Amended Compact of Free Association (2003), <https://www.state.gov/wp-content/uploads/2019/02/04-625-Micronesia-Compact-Amendment.pdf>

<sup>281</sup> Kenji Uetsuki, [https://dl.ndl.go.jp/view/download/digidepo\\_8196098\\_po\\_02550105.pdf?contentNo=1](https://dl.ndl.go.jp/view/download/digidepo_8196098_po_02550105.pdf?contentNo=1)

### 2.4.3. Financial Sector (Overview of Government and Private Financial Institutions and Their Services)

#### (1) Overview

The financial sector of the FSM is regulated and supervised by the Federated States of Micronesia Banking Board (FSMBB)<sup>282</sup>. The Bank of Federated States of Micronesia, headquartered in the FSM, and the Bank of Guam, headquartered in Guam, operate under the supervision of the FSMBB. Other financial institutions that are not under the supervision of the FSMBB include the FSM Development Bank (FSMDB), which is owned by the central and state governments of the FSM, insurance companies, the FSM Insurance Plan (Mi Care), which provides health insurance services, credit unions, money transfer companies, and housing corporations<sup>283</sup>. As for the insurance business, many Japanese captive insurance companies have been established in the FSM<sup>284</sup>.

#### Overview of Commercial Banking in the FSM

The financial condition of the commercial banks in the FSM is as follows: total assets including loans and equity capital have been on an increasing trend from 2014 to 2018, and net income has been positive due to growth in interest income. Deposits are dominated by two commercial banks, the Bank of FSM (40%) and the Bank of Guam (60%), with FSMDB having no deposits. Deposits held by both commercial banks are insured by the Federal Deposit Insurance Corporation (FDIC) to ensure depositor protection. The FDIC also monitors the safety and soundness of banks, essentially acting as a supervisory body for commercial banks. As for interest rates, the average lending rate in 2018 was 15.4% for individuals, 7.6% for corporations, and 0.2% for time deposits. In addition, the Bank of Guam provides general banking services, including deposit services, mortgage and auto loans for individuals, and working capital, real estate loans, and other lending services for corporations.

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<sup>282</sup> According to the information provided by the FSMBB, the main roles of the FSMBB are to protect the interests of depositors, to license and supervise banks, and to promote the soundness, stability and safety of the banking system, and it is responsible for the regulatory and supervisory functions of the banking system.

<sup>283</sup> From FSMBB website

<sup>284</sup> Captive insurance is an insurance company established and owned by a company (other than an insurance company) for the purpose of spreading the insurance risk of the parent company. According to the FSM Captive Council, more than 20 Japanese captive insurance companies are located in the FSM, along with Bermuda, the Cayman Islands, and Hawaii.

Table 148 Financial Condition of Financial Institutions

	(million USD)				
Major Balance Sheet Items	2014	2015	2016	2017	2018
Total assets	270.4	263.3	313.9	333.9	362.2
Current assets	193.1	177.5	230.8	254.3	276.6
Loan	61.5	78.4	75.4	71.6	77.3
To Corporate	34.8	41.3	42.6	37.5	43.1
To individuals	26.6	37.2	32.8	34.1	34.2
Total liabilities	250.0	241.0	291.3	309.5	334.7
Deposits	243.9	234.2	283.8	298.0	326.3
Shareholders' equity	19.4	21.0	22.4	24.3	27.5
Major income statement items	2014	2015	2016	2017	2018
Total revenue	8.1	8.7	10.5	11.5	13.7
Of which: interest income	6.6	7.0	8.7	9.7	11.9
Net income	1.3	1.8	3.0	3.7	5.8

Source: FSM Statistics Office

According to the FDIC, the Tier 1 capital ratio as of June 2021 will be 41.9% for FSM Bank and 12.6% for Bank of Guam. According to the FDIC, the Tier 1 capital ratios as of June 2021 will be 41.9% for FSM Bank and 12.6% for Bank of Guam, and these ratios have remained high since COVID-19. As for the NPL ratio, data through 2015 shows that it is 2.0%, and the current ratio is on the rise, indicating no particular problem with the soundness of management. On the other hand, the loan-to-deposit ratio has been hovering in the 20%-30% range, and loan amounts have been weak relative to customer deposits.

Table 149 Financial Indicators for FSM Financial Institutions (Commercial Banks)

Key Financial Indicators	2014	2015	2016	2017	2018
Tier 1 capital adequacy ratio					
(FSM Bank)	39.1	23.9	27.3	39.1	37.2
(Bank of Guam)*1	10.6	11.2	11.4	11.3	12.1
NPL ratio	2.6	2.0	No Data	No Data	No Data
Current ratio	79.2	75.8	81.3	85.3	84.8
loan-deposit ratio	25.2	33.5	26.6	24.0	23.7

\*1 Figures are based on consolidated financial statements.

Source: FSM Statistic Office, FDIC (Tier 1 capital adequacy ratio), World Bank Open Data (NPL ratio)



## Overview of FSMDB

FSMDB is a government-affiliated development finance institution that started its operations in 1980. According to the information provided by the FSMDB, it will focus on tourism, but will also prioritize investment in infrastructure. Investment and financing in the infrastructure sector will be prioritized. According to the information provided by the FSMDB, the focus sectors will be tourism, but priority will be given to investment and financing in the infrastructure sector. In particular, for construction materials needed for infrastructure construction, priority will be given to investment and financing in companies that conduct sand mining and rock crushing in an environmentally friendly manner, and credit lines for the import of construction materials will be provided.

It has offices in all of FSM's four provinces (Pohnpei, Kosrae, Chuuk, and Yap), and its shareholders are the FSM government, which owns an 98.7% stake, and the provinces of Chuuk (1.0%) and Kosrae (0.3%).

The loan menu mainly provides long-term loans and working capital lines of credit for corporations, personal loans for automobiles and educational expenses, and renewable energy housing loans. The basic loan terms range from 1 to 25 years (average loan term is about 12 years). Interest rates for commercial loans range from 5% to 7%, residential loans from 9%, and personal loans from 5% to 15%. Both movable and immovable property can be used as collateral.<sup>285</sup>

In addition, with the support of ADB's Health Expenditure and Livelihood Support Program<sup>286</sup>, a new loan for micro, small and medium businesses was established. The loan offers 3% interest rates (no interest for 2 years after the loan), up to USD 10,000 for microenterprises and USD 30,000 for small and medium-sized enterprises (SMEs)<sup>287</sup>.

As for the company's financial condition from 2016 to 2020, the NPL ratio was 47.38% in 2020, down by 29% from the previous year,<sup>288</sup> but the profit level remained stable at a positive level, and loans and net assets are on an increasing trend.

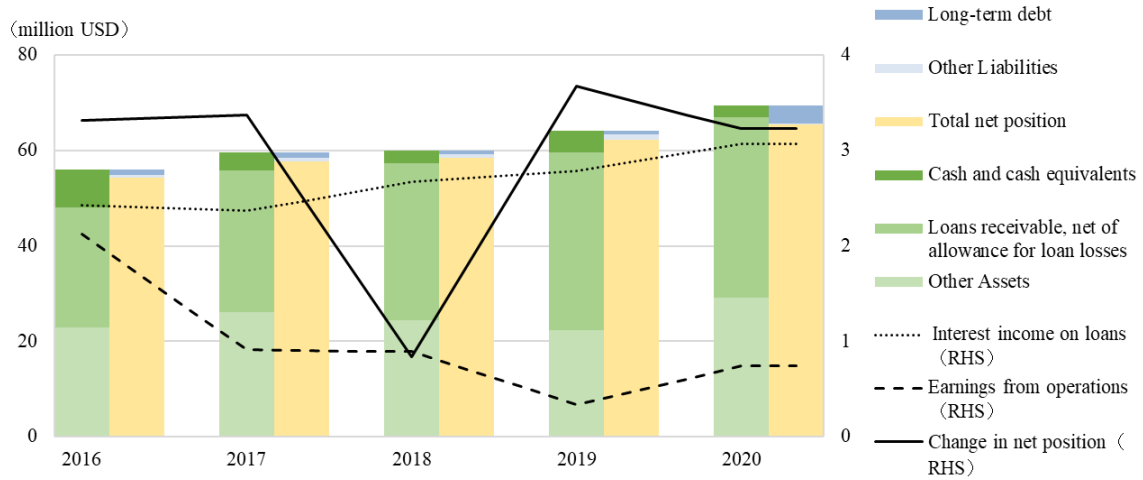
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<sup>285</sup> Information provided by FSMDB

<sup>286</sup> This is being done as part of a package of measures to mitigate the social and economic impacts of COVID-19.

<sup>287</sup> From the FSMDB website

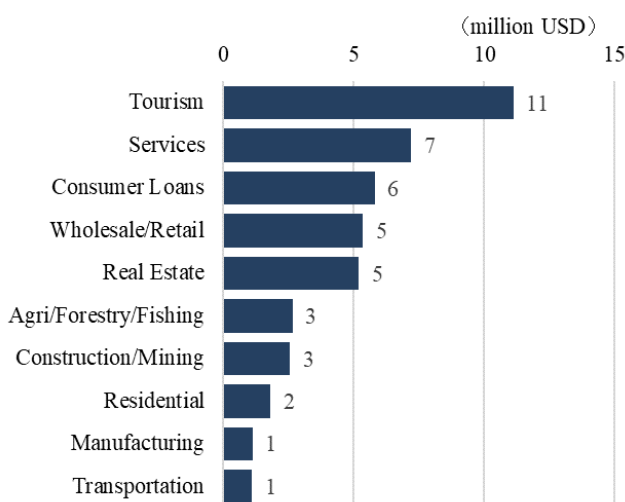
<sup>288</sup> According to the information provided by the FSMDB, at the request of the European Investment Bank, the NPL ratio increased significantly because loans that had been subject to payment deferrals or changes in repayment schedules due to COVID-19 were also classified as NPLs. There is no relationship between the increase in the loan amount and the increase in the NPL ratio.



Source: FSMDB Annual Report

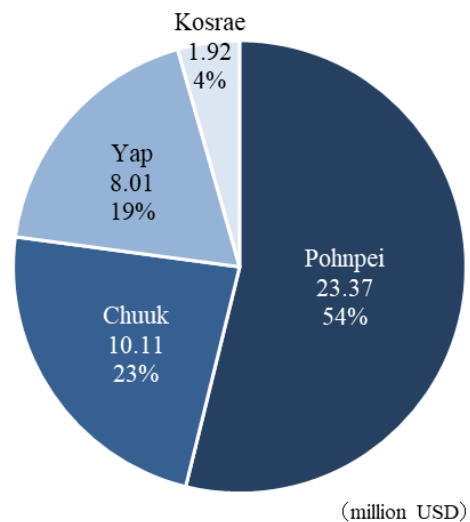
Figure 29 FSMDB's Financial Status

In the FSMDB's industry portfolio, tourism accounts for the largest share, followed by services and consumer loans. In 2020, the FSMDB was severely affected by COVID-19, and it took measures such as deferment and reduction of debt and interest payments, funded by government subsidies, for borrowers engaged in the tourism industry, which was particularly hard hit, and loans were only about half of the original budgeted amount, which affected the FSMDB's customer service and performance<sup>289</sup>. The regional portfolio has the largest share of Pohnpei, where the head office is located.



Source: FSMDB Annual Report 2020

Figure 30 FSMDB's Portfolio by Industry



Source: FSMDB Annual Report 2020

Figure 31 FSMDB's Portfolio by Region

<sup>289</sup> From FSMDB Annual Report 2020

## (2) Development Project

According to the FSM 2023 Action Plan, with the support of the World Bank and the IMF's Pacific Financial Technical Assistance Center (PFTAC), the Public Financial Management Roadmap 2017-2020 has been created to improve vulnerabilities in public financial management, including the legal and regulatory framework, financial management system improvement, corruption reduction, and capacity building.

## (3) Issues and Measures

According to the IMF, the only financial institutions currently under the supervision of the FSMBB are commercial banks, and the FSMDB and credit unions, which contribute significantly to the provision of credit to the private sector, should also be placed under the supervision of the FSMBB to ensure their soundness. In addition, commercial banks are substantially supervised by the FDIC under the Compact Agreement with the United States, but the FSMBB needs to strengthen its supervision of commercial banks in order to cope with the situation after the Compact Agreement ends in 2023.

According to the ADB, there are few projects that can be financed in the FSM, which is why the loan-to-deposit ratio of commercial banks is low in financial indicators. One of the reasons for this, according to the IMF, is that commercial banks are not able to use land as collateral<sup>290</sup>, which hinders the promotion of private investment because commercial banks are not able to adequately protect their claims<sup>291</sup>. In the view of the FSMDB, in addition to the above collateral problems, the FDIC regulations under which commercial banks are regulated have also had an impact.

According to the information provided by the FSMBB, in order to increase the number of projects that can be financed, the FSMBB may consider investing in priority sectors identified in the National Development Plan, such as fisheries and agriculture, and setting a ceiling on loan interest rates. Another issue to be considered is whether credit unions and FSMDBs, which are not currently under the supervision of the FSMBB, should be placed under the supervision of the FSMBB in the future.

According to information provided by the FSMDB, the FSM's land tenure system prohibits the sale or ownership of land, which makes it very difficult to liquidate collateral, even though it is legally possible, and hinders financing. Most of the private companies in the FSM find it difficult to prepare reliable financial statements and to obtain audit certification, which makes it very difficult to understand the status of their businesses.

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<sup>290</sup> The Bank of Guam and the Bank of Federated States of Micronesia, which has a small amount of foreign capital, are both effectively unable to pledge land as collateral. The IMF has mentioned that collateralization of land leases is a possible solution.

<sup>291</sup> IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Federated States of Micronesia

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

According to the information provided by the FSMBB, it has received support from the World Bank and the FDIC, especially in the area of financial inclusion, and has received technical assistance from the World Bank and the IMF in the form of initiative reviews and recommendations based on the reviews, and capacity building training in the form of workshops and seminars. The IMF also provides technical assistance to FSMBB in 2021, including the development of financial soundness indicators, improvement of data sources and regular monitoring<sup>292</sup>.

##### ② Japan

One of the cooperation needs from Japan is the lack of progress in integrating climate change risk into the banking regulatory and supervisory framework, and there are expectations for cooperation in this area. In addition, the FSMBB has placed the FSMDB under its supervision, which is one of the issues to be considered in the future, and there are expectations for technical advice in this area.

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<sup>292</sup> Federated States of Micronesia: Technical Assistance Report-Financial Soundness Indicators Mission

## 2.5. Sectoral Analysis

### 2.5.1. Public Infrastructure (Including Transportation, Urban Planning, Water and Sewerage, and Telecommunications)

#### 2.5.1.1. Transportation

##### (1) Overview

##### ① Roads and Bridges

The total road length of the FSM is 388km, of which 184km are paved roads and 204km are unpaved roads. Most of these roads are on the islands of Chuuk, Pohnpei, Yap, and Kosrae, with only small footpaths on the other islands.

Table 150 Road Extension Distance

Pavement	Unpaved	Total
184km	204km	388km

Source: Logistic Capacity Assessment Website<sup>293</sup>

##### ② Airports and Harbors

The FSM has international airports in each province of Chuuk, Kosrae, Pohnpei, and Yap, as well as several regional airports. The outline of each airport is shown in the table below.

Table 151 Overview of airports and airfields in the FSM

Location	Airport Name	Number of runways	Runway length
Chuuk State	Chuuk International Airport	1	1,831 x 46 m
Chuuk State	Houk Airfield	1	411 x 15 m
Chuuk State	Mortlock Islands Airfield	1	411 x 15 m
Chuuk State	Onoun Airfield	1	366 x 23 m
Kosrae State	Kosrae International Airport	1	1753 x 46 m
Pohnpei State	Mwoakilloa Airfield	1	366 x 30 m
Pohnpei State	Pingelap Airfield	1	366 x 30 m
Pohnpei State	Pohnpei International Airport	1	1829 x 46 m
Pohnpei State	Sapwuahfik Airfield	1	366 x 23 m
Yap State	Fais Airfield	1	914 x 23 m
Yap State	Ulithi Airfield	1	914 x 23 m
Yap State	Woleai	1	366 x 23 m
Yap State	Yap International Airport	1	1829 x 46 m

Source: Division of Civil Aviation website<sup>294</sup>

<sup>293</sup> <https://dlca.logcluster.org/display/public/DLCA/2.3+Micronesia+Road+Network>

<sup>294</sup> <https://tci.gov.fm/civilaviation/index.html>

In terms of ports, the FSM has one international port in each state. The Port of Pohnpei is the most important logistical facility, with two wharves: the main wharf for cargo ships, purse seiners, carriers, and domestic passenger ships, and the Takatik fishing port used by purse seiners. The facilities of the Port of Pohnpei are shown in the table below<sup>295</sup>.

Table 152 Facilities of Pohnpei Port

Facility	Various factors or elements
Quay, mooring facilities	Main wharf 327m (depth below mean water level 10.5m) Apron 20m, concrete pavement
Water area facilities, navigation aids	Turnout D = 400m, -10m shipping lane (approx. 100m wide), shipping lane sign
Cargo handling facilities, storage facilities, etc.	Warehouse in main wharf yard (1) 1,150m <sup>2</sup> Warehouse in main wharf yard (2) 875m <sup>2</sup>
Harbor welfare facility	Pohnpei Port Authority Office Building Fence and Gate Management Facility

Source: JICA, July 2019, Micronesia, Micronesia Regional Port Development Basic Information Collection and Verification Study, p.18

## (2) Development Project

### ① Roads and Bridges

#### Infrastructure Development Plan FY2016-FY2025

The Infrastructure Development Plan FY2016-FY2025 has been formulated by the Department of Transportation, Communication & Infrastructure based on consultations with the in 2015. The plan has set the following sectoral targets for roads and pedestrian facilities and plans to invest FJD 2.9 million for 10 years from 2016.

<sup>295</sup> JICA, July 2019, Study on collection and verification of basic information on port development in the Micronesian region, Micronesia, p.i

Table 153 Targets set in Infrastructure Development Plan FY2016-FY2025

The goal is to provide the road and pedestrian facility infrastructure described below.	
1.	The condition, capacity, reliability, and safety of transportation facilities are adequate to enable the realization of market opportunities in all regions of the country, including labor market opportunities, and to improve the level of integration between the state and national economies.
2.	Effectively and efficiently meet the demands of roadway and pedestrian infrastructure, including concrete/asphalt paving of all major roadway systems.
3.	Incorporate sidewalks into the design and construction of roads.
4.	Expand cross-island and intra-island roads to facilitate agricultural and other development.
5.	Resilience to the effects of climate change.

Source: Infrastructure Development Plan FY2016-FY2025, Volume 1 p.16

Table 154 Investment in Roads and Pedestrian Facilities Planned for the 10 Years from 2016

(Unit: million USD)

Sector	Whole country	Chuuk state	Kosrae state	Pohnpei state	Yap state	Total
Roads and pedestrian facilities	-	95.0	51.0	45.0	18.1	209.0

Source: Infrastructure Development Plan FY2016-FY2025, Introduction p.V

In addition, a priority project list has been prepared for each state as shown in the table below.

Table 155 List of Priority Projects in the Road and Pedestrian Facilities Sector in Chuuk State

Project name	Required amount (USD)
Weno Road & Services Improvement Project - Phase 1	2,000,000
Weno Road & Services Improvement Project - Phase 2	42,504,000
Faichuk Road Improvements	24,750,000
Tonoas Road Improvements	8,250,000
Fefen Road Improvements	11,550,000
Uman Pedestrian Road Improvements	4,400,000
Establish Asphalt Plant and Core Equipment	1,500,000
Total amount required	94,954,000

Source: Infrastructure Development Plan FY2016-FY2025, Volume 3, p.12

Table 156 List of Priority Projects in the Road and Pedestrian Facilities Sector in Kosrae State

Project name	Required amount (USD)
Inland Road - Section 1, Malem to Yesing to Utwe	11,495,000
Inland Road - Section 2, Mutunnenea to Sialat to Yekula	5,091,000
Inland Road - Section 3, Malem to Pilyuul to Tenwak	5,098,000
Inland Road - Section 4, Cross Island Road, Okat to Tofol	7,614,000
Inland Road - Section 5, Utwe to Walung	15,363,000
Lelu Causeway Road, Sidewalk and Protection Improvements	600,000
Lelu Farm Road Improvements (5.19 miles)	1,038,000
Utwe Farm Road Improvements (2.82 miles)	564,000
Malem Farm Road Improvements (5.66 miles)	1,132,000
Tafunsak Farm Road Improvements (2.10 miles)	420,000
Establish Asphalt Plant	1,500,000
<b>Total amount required</b>	<b>50,995,000</b>

Source: Infrastructure Development Plan FY2016-FY2025, Volume 4, p.14

Table 157 List of Priority Projects in the Road and Pedestrian Facilities Sector in Pohnpei State

Project name	Required amount (USD)
Rehabilitate/Resurface Primary Road - Phase 1	4,500,000
Rehabilitate/Resurface Primary Road - Phase 2	4,500,000
Improve Shoulders and Drainage on Primary Road	1,000,000
Upgrade Unsealed Secondary Roads - Phase 1	13,500,000
Rehabilitate/Resurface Secondary Roads - Phase 1	3,240,000
Rehabilitate/Resurface Secondary Roads - Phase 2	3,240,000
Improve Primary and Secondary Road Bridges	12,000,000
Provide Pedestrian Safety Facilities	1,000,000
Provide Road between Dehpehk and Takaieu	2,000,000
<b>Total amount required</b>	<b>44,980,000</b>

Source: Infrastructure Development Plan FY2016-FY2025, Volume 5, p.16

Table 158 List of Priority Projects in Roads and Public Facilities Sector in Yap State

Project name	Required amount (USD)
Replacement Bridges - Tagreng, Ganir, Donoch, Tagaaniyal	6,600,000
Gagil-Tomil Road Improvements	5,500,000
Maap Road Improvements	1,200,000
Colonia Road Improvements	2,760,000
Yap Loop Road Resurfacing	500,000



Project name	Required amount (USD)
Establish Asphalt Plant & Core Equipment	1,500,000
Total amount required	18,060,000

Source: Infrastructure Development Plan FY2016-FY2025, Volume 6, p.13

② Airports and Harbors

Infrastructure Development Plan FY2016-FY2025

The Infrastructure Development Plan FY2016-FY2025 sets sector targets for air and sea transport as shown in the table below, with a planned investment of FJD 99.11 million for air transport infrastructure and FJD 78.71 million for sea transport infrastructure for 10 years from 2016.

Table 159 Targets Set in Infrastructure Development Plan FY2016-FY2025

<p><u>Airport</u></p> <ol style="list-style-type: none"> <li>1. Provide adequate air transport facilities and services in terms of condition, frequency, capacity, reliability and safety so that market opportunities can be realized in all regions of the country.</li> <li>2. It will enable airline airports to improve safety and eliminate load restrictions.</li> <li>3. Improve all airports in the country to the required level of safety.</li> </ol> <p><u>Harbors</u></p> <ol style="list-style-type: none"> <li>1. Market participation opportunities can be realized in all regions of the country, including labor market opportunities, and the level of integration between the state and national economies can be improved.</li> <li>2. Provide improved dock facilities to meet the needs of both fishing and commercial vessels.</li> <li>3. Promote modern, safe and efficient interstate and inter-island passenger and cargo shipping operations.</li> <li>4. Coordinate and promote the maintenance of navigation signs.</li> </ol>
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Source: Infrastructure Development Plan FY2016-FY2025, Volume 1, p.17

Table 160 Investment in Air and Marine Transport Infrastructure Planned for 10 years from 2016

(Unit: million USD)

Sector	Whole country	Chuuk State	Kosrae State	Pohnpei State	Yap State	Total
Air transport infrastructure	0.5	34.2	31.0	0.6	32.8	99.1
Marine transportation infrastructure	-	8.5	21.6	6.7	41.9	78.7

Source: Infrastructure Development Plan FY2016-FY2025, Introduction p.V

In addition, a priority project list has been prepared for the country as a whole and for each state as shown in the table below.

#### Airport

The priority project list for the airport sector is as follows

Table 161 List of Priority Projects in the Airport Sector for the Country as a Whole

Project name	Required amount (USD)
Safety and Security Management Systems for International Airports	500,000
Total amount required	500,000

Source: Infrastructure Development Plan FY2016-FY2025, Volume 2, p.7

Table 162 List of Priority Projects in the Airport Sector in Chuuk State

Project name	Required amount (USD)
Chuuk Runway, Taxiway and Apron Rehabilitation	30,000,000
Ta Airstrip Improvements	800,000
Onoun/Ulul Airstrip Improvements	2,345,000
Houk Airstrip Improvements	1,055,000
Total amount required	34,200,000

Source: Infrastructure Development Plan FY2016-FY2025, Volume 3, p.13

Table 163 List of Priority Projects in the Airport Sector in Kosrae State

Project name	Required amount (USD)
New Airport Terminal & Facilities	11,000,000
Airport Runway Extension & Safety Area Improvement	20,000,000
Total amount required	31,000,000

Source: Infrastructure Development Plan FY2016-FY2025, Volume 3, p.15

Table 164 List of Priority Projects in the Airport Sector in Pohnpei State

Project name	Required amount (USD)
Extend Cargo Storage Facilities	200,000
Pingelap Airstrip Improvements	85,000
Mokil Airstrip Improvements	65,000
Sapwuahfik Airstrip Improvements	289,000
Total amount required	639,000

Source: Infrastructure Development Plan FY2016-FY2025, Volume 5, p.18

Table 165 List of Priority Projects in the Airport Sector in Yap State

Project name	Required amount (USD)
Yap International Airport Runway Extension	17,500,000
Yap International Airport New Terminal	11,000,000
Yap International Airport Perimeter Road	3,000,000
Fais Airstrip Improvements	1,235,000
Ulithi Airstrip Improvements	35,000
Total amount required	32,770,000

Source: Infrastructure Development Plan FY2016-FY2025, Volume 6, p.15

## Ports

The priority projects in the port sector are as follows

Table 166 List of Priority Projects in the Port Sector in Chuuk State

Project name	Required amount (USD)
Chuuk Lagoon Dock Facilities	6,625,000
Weno Commercial Port Improvements	1,375,000
Chuuk State Multi-Role Vessel	500,000
Total amount required	8,500,000

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume 3 Chuuk State Infrastructure Development Plan FY2016-FY2025, p.13

Table 167 List of Priority Projects in the Port Sector in Kosrae State

Project name	Required amount (USD)
Pacific Tuna Industries Facility Rehabilitation	500,000
Marine Transport Infrastructure Improvements	1,050,000
Safety and Accessibility Improvements at 3 Harbors	20,000,000
Total amount required	21,550,000

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume Kosrae State Infrastructure Development Plan FY2016-FY2025, p.115

Table 168 List of Priority Projects in the Port Sector in Pohnpei State

Project name	Required amount (USD)
Pohnpei Port - Dredging of Channel & Anchorage	1,200,000
Improve Navigational Aids - Pohnpei & Outer Islands	250,000
Improve Port Precinct Lighting and Fencing	100,000
Provide Floating Dock/Work Platform	150,000
Remove Sunken Vessels	5,000,000
Total amount required	6,700,000

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume Pohnpei State Infrastructure Development Plan FY2016-FY2025, p.117

Table 169 List of Priority Projects in the Port Sector in Yap State

Project name	Required amount (USD)
Colonia Commercial Port Improvements	15,000,000
Colonia Port Channel & Anchorage Improvements	26,000,000
Colonia Port Berthing Facilities Improvements	400,000
Yap State Multi-Role Vessel	500,000
Total amount required	41,900,000

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume Yap State Infrastructure Development Plan FY2016-FY2025, p.14

The provinces of Chuuk, Kosrae, Pohnpei, and Yap developed a master plan for the international airports in their respective states in 2012. The Master Plan divides the Capital Improvement Program into three phases: Phase 1 (2012-2016), Phase 2 (2017-2021), and Phase 3 (2022-2031). A summary of each state's program is shown in the table below.

Table 170 Capital Improvement Program in Chuuk State

Phase	Project name	Cost (USD)
Phase 1 (2012 to 2016)	Electrical Vault (Chuuk State/FAA collocated)	1,300,000
	Remove/Mitigate Obstructions: Approach and Airfield Environment	130,000
	Shoreline Revetment Upgrade	1,950,000
	Pave Existing Drainage Swale	2,600,000
	New Public Access Road and New AOA Perimeter Fence	3,250,000
	ARFF Truck Access Road: Apron to Backside of ARFF	650,000
	New Airport Parking Lot and Lighting Upgrade	585,000
	Fire Hydrants: Public (Landside) Of Terminal Building	97,500
Phase 2 (2017 to 2021)	Central Security/AOA Access Facility	195,000
	Remove/Mitigate Obstructions: Approach and Airfield Environment	217,500
	Runway Rehabilitation	43,500,000
	GPS Precision Approach	580,000
	LED Upgrade for Airfield Lighting	725,000
	Maintenance Workshop/Yard	362,500
Phase 3 (2022 to 2031)	Mixed Use Cargo Facility	870,000
	Remove/Mitigate Obstructions: Approach and Airfield Environment	262,500
	Runway Seal Coat and Airfield Marking Upgrades (X2)	3,500,000
	Upgrades to Airfield Lighting & Signage	2,625,000
	ARFF Rehabilitation	5,250,000
Terminal Rehabilitation	3,500,000	

Source: Chuuk International Airport Master Plan, p. 10-3 to 10-4

Table 171 Capital Improvement Program in Kosrae State

Phase	Project name	Cost (USD)
Phase 1 (2012 to 2016)	Runway Extension including Environmental Assessment and Design	24,700,000
	Remove/Mitigate Obstructions: Approach and Airfield Environment	130,000
	New Airport Access Road	1,560,000
	New Airport Parking Lot and Lighting Upgrade	390,000
	Fire Hydrants: Public (Landside) Of Terminal Building	97,500
	Engine Generator	780,000
	Bridges Rehab/Widening	2,600,000
Phase 2 (2017 to 2021)	Remove/Mitigate Obstructions: Approach and Airfield Environment	58,000
	Runway Seal Coat and Airfield Marking Upgrade	1,450,000
	New Terminal Construction	8,700,000
	Airport Security Facility/AOA Access	435,000
	Quarantine/Medical Facility	580,000
	GPS Precision Approach	1,087,500
	LED Upgrade for Airfield Lighting	725,000
Maintenance Workshop/Yard	1,015,000	
Phase 3 (2022 to 2031)	Remove/Mitigate Obstructions: Approach and Airfield Environment	70,000
	Runway Seal Coat and Airfield Marking Upgrades (X2)	3,500,000
	Upgrades to Airfield Lighting & Signage	2,187,500
	Terminal Area Vehicle Parking Lot & Area Lighting	437,500
	ARFF Rehabilitation	2,625,000
	Terminal Rehabilitation	2,625,000

Source: Kosrae International Airport Master Plan, p. 10-3 to 10-5

Table 172 Capital Improvement Program in Pohnpei State

Phase	Project name	Cost (USD)
Phase 1 (2012 to 2016)	Airside Erosion Control /Response to Rising Tides	1,690,000
	Airfield Perimeter Fence	1,500,000
	Remove/Mitigate Obstructions: Approach and Airfield Environment	780,000
	GPS Approach	520,000
	LED Lighting Upgrades	650,000
	Rehabilitation of Departures Parking Lot	910,000
	Central Security Facility/AOA Access	292,500
	Sanity Sewer: New line to Connect Terminal to Sewer Line	3,900,000
	Upgrade Area Lighting (Landside)	195,000

Phase	Project name	Cost (USD)
	Fire Hydrants: Public (Landside) Of Terminal Building	97,500
Phase 2 (2017 to 2021) Optional 1	Seal Coat and Marking Upgrades	1,450,000
	Remove/Mitigate Obstructions: Approach and Airfield Environment	725,000
	Facilities Maintenance Structure	290,000
	New CIA Terminal/Hangar Complex	5,800,000
	Access Road/Parking: CIA Complex & Helicopter/T Hangars	1,305,000
	Apron Fillet Area (next to Helicopter Operations)	435,000
	Helicopter T Hangars	1,450,000
	Perimeter Fence	725,000
	ARFF Station Access Road	1,232,500
Phase 2 (2017 to 2021) Optional 2	Runway/Taxiway Seal Coat and Marking Upgrades	1,450,000
	Remove/Mitigate Obstructions: Approach and Airfield Environment	725,000
	Facilities Maintenance Structure	108,750
	Access Road/Parking: Helicopter/T Hangars	1,450,000
	Apron Fillet Area (next to Helicopter Operations)	435,000
	Helicopter T Hangars	725,000
	New CIA Terminal Building	4,350,000
	New CIA Hangar	2,900,000
	Apron Expansion	8,700,000
	Perimeter Fence	725,000
	ARFF Station Access Road/Parking for/CIA Terminal & Hangar	1,250,000
Phase 3 (2020 to 2031)	Remove/Mitigate Obstructions: Approach and Airfield Environment	525,000
	Runway Seal Coat and Airfield Marking Upgrades (X2)	3,500,000
	Upgrades to Airfield Lighting & Signage	2,187,500
	Runway Rehabilitation	59,500,000
	ARFF Rehabilitation	2,100,000
	Terminal Rehabilitation	3,500,000
	Jug Handle Taxiway	4,200,000

Note: There are two options for the phase 2 of the Capital Improvement Program in Pohnpei State.

Source: Pohnpei International Airport Master Plan, p. 9-4~9-7

Table 173 Capital Improvement Program in Yap State

Phase	Project name	Cost (USD)
Phase 1 (2012 to 2016)	Relocation of Electrical Vault	780,000
	Runway Safety Area Improvements	Runway 25 - 1,950,000 Runway 7 - 3,250,000
	Airfield Service Road (Along Perimeter Fence)	3,640,000
	Remove/Mitigate Obstructions: Approach and Airfield Environment	390,000
	Terminal Building Upgrades	2,080,000
	Central Security Facility/AOA Access	390,000
	Upgrade Area Lighting (Landside)	325,000
	Fire Hydrants: Public (Landside) Of Terminal Building	97,500
Phase 2 (2017 to 2021)	Runway/Taxiway Seal Coat and Marking Upgrades	2,175,000
	Remove/Mitigate Obstructions: Approach and Airfield Environment	435,000
	Water Storage Tank/Lines/Pumps (Potable & Fire Water Storage)	1,740,000
	GPS Precision Approach	580,000
	LED Upgrade for Airfield Lighting	725,000
	Ground Service Equipment Yard and Maintenance Area	870,000
	Mixed Use Warehouse: USPS & Airlines	725,000
	Aircraft Hanger	2,900,000
	Health Center/Quarantine Area	362,500
Vehicle Parking Lot & Access Road Upgrade	1,812,500	
Phase 3 (2022 to 2031)	Remove/Mitigate Obstructions: Approach and Airfield Environment	122,500
	Runway Seal Coat and Airfield Marking Upgrades	1,100,000
	Upgrades to Airfield Lighting & Signage	2,187,500
	Runway Rehabilitation	59,500,000
	Runway Extension	17,500,000
	ARFF Rehabilitation	3,500,000
	Terminal Rehabilitation	2,625,000
Water System & Sewer Upgrades	2,400,000	

Source: Yap International Airport Master Plan, p. 8-3 ~ 8-5



### (3) Issues and Measures

According to the Infrastructure Development Plan FY2016-FY2025, there is a shortage of funds for infrastructure management in all infrastructure sectors except for the water and sewerage sector and the energy sector, which can expect to collect fees from users<sup>296</sup>.

As for the port, JICA's "Data Collection Survey on Port Development in Federated States of Micronesia (July 2019)" summarized the problems of Pohnpei Port. The following table shows the issues pointed out by the study.

Table 174 Challenges for Pohnpei Port

Subject name	Issue Details
Problems with water facilities	<ul style="list-style-type: none"> <li>✓ The biggest problem is the shape and width of the access routes, as well as the scattered shoals and inadequate navigational support facilities, which make the entry and exit of container ships operating the regular routes dangerous.</li> <li>✓ In particular, the narrow passage width at the mouth of the harbor, i.e., at the opening of the atoll, and the strong currents that are generated make the situation extremely dangerous.</li> </ul>
Mooring Facility Issues	<ul style="list-style-type: none"> <li>✓ The second major problem is the lack of mooring facilities, which is caused by the fact that the main wharf of Pohnpei Port has both commercial port and fishing port functions.</li> </ul>
Problems as a container wharf	<ul style="list-style-type: none"> <li>✓ Since the performance of the existing quay is unknown, it is not clear whether it can withstand the collision force and towing of large cargo ships exceeding 10,000 DWT.</li> <li>✓ In addition, the load capacity of the quay apron is unknown, making it difficult to install heavy cargo handling machinery.</li> <li>✓ Since the container yard is unpaved, transportation and stacking of containers is unstable, and the efficiency of cargo handling operations is also affected.</li> <li>✓ Due to inadequate lighting facilities, cargo handling operations are limited to daytime, and the nighttime berthing time of container ships cannot be utilized for cargo handling. It is also essential to improve the lighting facilities for security reasons.</li> <li>✓ There are facilities that do not need to be located on the wharf, which constrains cargo handling operations.</li> </ul>
Inadequate facilities that should be provided for a port	<ul style="list-style-type: none"> <li>✓ Water supply and fueling facilities, waste disposal facilities, and fire fighting facilities are inadequate or missing.</li> </ul>

Source: JICA, July 2019, Data Collection Survey on Port Development in Federated States of Micronesia

<sup>296</sup> Infrastructure Development Plan FY2016-FY2025, Volume 1, p.45

(4) Direction of Cooperation

① Non-Japanese Partners

• ADB

ADB's recent project achievements are shown in the table below: a grant agreement of USD 5.5 million was signed in November 2021 to fund the preparation of a road project (approval was in October 2021). The funds will be used for: (1) screening of road sections suitable for testing advanced construction technologies and selection of sub-projects as candidates for subsequent investment projects; (2) Feasibility study and due diligence on institutional, financial, procurement, and safeguard aspects of the selected subprojects; (3) Procurement of services for detailed design, preparation of bidding documents, and procurement management support; and (4) Capacity building for project start-up activities will be carried out<sup>297</sup>.

Table 175 Recent Projects by ADB

Approval date	Project name
Oct 2021	Preparing the Sustainable Road Infrastructure Investment Project
Oct 2019	Pacific Region Infrastructure Facility Coordination Office-Leveraging Infrastructure for Sustainable Development
Aug 2012	Pohnpei Port Development Project

Source: ADB website<sup>298</sup>

• World Bank

The Federated States of Micronesia Prioritized Road Investment and Management Enhancements Project (commitment amount: USD 40 million) was approved in May 2021. The funds will be used to improve the resilience of the country's main road network to natural disasters and climate change<sup>299</sup>.

The Federated States of Micronesia Maritime Investment Project (grant amount: USD 38.5 million) was also approved in May 2019. The project will improve and repair drainage facilities, terminal structures, berthing facilities, and apron facilities at Kosrae, Pohnpei, Chuuk, and Yap ports<sup>300</sup>.

• China

The Phonpei Secondary Road Project, funded by China (FJD 14.31 million), was completed and the handover ceremony was held in September 2021<sup>301</sup>.

<sup>297</sup> <https://www.adb.org/projects/55009-001/main>

<sup>298</sup> <https://www.adb.org/projects/country/fsm/sector/transport-1064/sector/transport-and-ict-1372>

<sup>299</sup> <https://projects.worldbank.org/en/projects-operations/news-media/P172225>

<sup>300</sup> <https://www.worldbank.org/en/news/press-release/2019/05/10/two-projects-set-to-improve-safety-efficiency-climate-resilience-of-maritime-operations-in-federated-states-of-micronesia-and-marshall-islands>

<sup>301</sup> <https://gov.fm/index.php/fsm-publicinfo/announcements/35-pio-articles/news-and-updates/531-14-300-000-pohnpei-secondary-road-project-complete-thanks-to-generous-assistance-from-people-s-republic-of-china-please-tell-my-dear-friend-president-xi-jinping-that-micronesia-says-thank-you-president-panuelo-says-to-ambassador-huang>

## ② Japan

Japan has set “Strengthening Foundation for Sustainable and Resilient Economic Development” as one of the priority areas for the next three years, which was announced at PALM 9 held on July 2, 2021. One of the action plans for this priority area is to “strengthen connectivity through quality infrastructure development - ports, airports, ships, roads, ICT, etc.; build capacity for effective management, maintenance and utilization of quality infrastructure through dispatch of experts, etc. The Japanese government will continue to strengthen its support for the development of infrastructure, including roads, in line with its policy of “building the potential for cooperation in the field of financial infrastructure.

In the Country Assistance Policy (April 2019), development issue 1-1 is to strengthen the foundation for economic growth. Under the “Program for Strengthening the Capacity to Develop and Maintain Economic and Social Infrastructure,” Japan will: (1) provide equipment necessary for the security of airports, seaports, and post offices; (2) accept trainees to improve the capacity to maintain and manage existing infrastructure; and (3) expand port docks to reduce congestion at docks and improve logistics infrastructure. Japan's major cooperation to date includes a preparatory study for cooperation in The Project for Pohnpei Port Expansion, which began in FY2020.

When considering the direction of cooperation, it would be effective to check the progress of priority projects listed in the Infrastructure Development Plan FY2016-FY2025 and consider the details of cooperation in collaboration with other donors.

The Infrastructure Development Plan FY2016-FY2025 identifies the lack of funding for infrastructure management as an issue. Regarding the improvement of infrastructure maintenance and management in general, Japan, together with the ADB, the World Bank, Australia, New Zealand, and other countries, has formed the Pacific Region Infrastructure Facility (PRIF) to support the improvement of infrastructure operation and maintenance in the region. While utilizing this framework, it would be effective to consider the details of cooperation with other donors.

As for airport infrastructure, it is necessary to check the progress of the Capital Improvement Program, which is formulated in each state's master plan for international airports, and to study the details of cooperation in cooperation with other donors.

For ports, it would be beneficial to proceed with project formation based on the recommendations of the “Data Collection Survey on Port Development in Federated States of Micronesia” (July 2019) (JICA).

#### 2.5.1.2. City Planning

##### (1) Development Project

No specific plan has been formulated.

##### (2) Direction of Cooperation

Since no development plan has been formulated and cooperation by partners other than Japan has not been confirmed. Though it is necessary to confirm the support needs for development planning, it is considered premature to consider support other than planning.

### 2.5.1.3. Water and Sewerage

#### (1) Overview

In Chuuk, where about half of the FSM's population lives, the government-owned Chuuk Public Utilities Corporation (CPUC) runs the water, sewage, and electricity utilities. According to a socioeconomic survey conducted by the CPUC and ADB from June 3-26, 2020 among 1,514 households in 11 villages in Weno, 19% of the households are connected to the CPUC's water supply system, 20% to the sewerage system, and 10% to the electricity system. Twenty-one percent of the households reported that they rely on CPUC water for domestic use such as bathing, cooking, cleaning and laundry. Deep wells and rainwater were the main sources of water for bathing, while deep wells were the most common source of water for washing, and water tanks and rainwater were the primary sources of domestic and drinking water. Drinking water came from rainwater tanks (58%), plastic bottles purchased at stores (29%), and CPUC water (1%); 4% of households used water from the Chuuk Public Utility Corporation for cooking; 78% of households reported that they had access to safe drinking water from rainwater; and the majority of households reported that they had access to safe drinking water from rainwater<sup>302</sup>.

Pohnpei Utilities Corporation (PUC) and Yap State Public Service Corporation (YSPSC) provide water, sewage, and electricity services in Pohnpei and Yap, respectively, where the FSM capital is located.

#### (2) Development Project

The FSM has prepared an Infrastructure Development Plan FY2016-2025 (IDP) for each state, and projects are prioritized in three phases: Phase 1 (FY2016-2019), Phase 2 (FY2020-2022), and Phase 3 (FY2023-2025). In the water and wastewater sector, the goal is to achieve all water and wastewater projects. The following five goals are common to all states in the water and wastewater sector, and priority projects are planned in each state based on these goals.

1. Meeting the demand for water and wastewater infrastructure in an effective and efficient manner
2. Improve existing water intake, treatment, and distribution systems
3. Evaluate and establish a technically appropriate liquid waste management system.
4. Expand coverage and begin upgrading wastewater facilities to contribute to improved public health and environmental conditions
5. Contribute to the prevention of water-borne diseases through the provision of potable water.

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<sup>302</sup> Chuuk Water Supply and Sanitation Project (CWSSP) Final report socioeconomic survey findings on Weno March 2021 (Chuuk Public Utilities Corporation)

Table 176 Priority Projects in the Water and Sewerage Sectors in Each State

State	Summary of Priority Projects
Chuuk	<ul style="list-style-type: none"> <li>● Weno Water Supply Improvements (Phase I) Rehabilitation of storage tanks, replacement of high-loss distribution lines, expansion of the distribution system, metering of all unpaid properties connected to the distribution system, and retrofitting of water treatment equipment to reduce reliance on groundwater.</li> </ul>
Pohnpei	<ul style="list-style-type: none"> <li>● Extend Water Distribution - COM to Diadi (Phase I), Extend Water Distribution - Diadi to NMS (Phase I), Extend Water Distribution - KinaKapw to Lehn Diadi (Phase I) Extend water distribution system.</li> <li>● Develop New Surface Water Supply Sources (Phase I), Develop New Sub-Surface Water Supply Sources (Phase I) Develop additional surface and groundwater sources to meet the water supply needs of the Pohnpei expansion area.</li> <li>● Improve Existing Wastewater System (Phase I) Improve collection sewers and building connections within the existing wastewater system, especially in Kolonia Town.</li> <li>● Improve Water Supply Distribution - Phase 1 (Phase 1/2) Replacement of galvanized pipes and upgrading of wells, upgrading of Nanpil dam, upgrading of water treatment plant and MO plant, and installation of cash meters for all users.</li> <li>● Connect Sokehs Island to Kolonia Wastewater Plant (Phase 1/2) A sewerage system will be constructed around Sokehs Island and connected to the Kolonia Wastewater Treatment Plant.</li> <li>● Improve Water Supply in Outer Islands (Phases 1/2/3) In areas with high rainfall, provide improved rainwater collection and storage systems with basic and effective filtration. In areas with low rainfall, provide alternative solutions such as solar-powered micro desalination and storage systems.</li> </ul>

State	Summary of Priority Projects
Yap.	<ul style="list-style-type: none"> <li>● Central Water - Refurbish Water Storage Tanks (Phase I) The Central Water system water storage tanks will be refurbished in accordance with the recommendations of a recent engineering assessment.</li> <li>● Central Water - Replace Water Treatment Plant (Phase I) Replace the existing water treatment system with a new system of sufficient size and capability to meet the needs of the Central Water system.</li> <li>● Central Water - Water Well Renewal &amp; Replacement (Phase I) Replace existing wells that no longer provide the required amount of water.</li> <li>● Southern Water - Treatment Plant/Distribution Improvements (Phase I) Upgrade the current water treatment plant and replace divider valves and other distribution equipment that are impacting the reliability and availability of water supplies to customers.</li> <li>● Southern Water - Well Rehabilitation (Phase I) Rehabilitate existing wells to ensure a minimum production of 15gpm.</li> <li>● Southern Water - Water Storage (Phase I) Increase the storage capacity of the Southern Water system by adding 55,000gallon water storage tanks.</li> <li>● Southern Water - Office &amp; Storage Improvements (Phase I) Provide improved office and storage facilities for use by the Southern Yap Water Authority.</li> <li>● Central Wastewater - Renew Treatment Plant Outfall (Phase I) Replace 3,000feet of sewer treatment drainage pipe and sprinkler system.</li> <li>● Central Water - Water Main Rehabilitation Phase 1 (Phase 1/2) Rehabilitate approximately 25 % of the water mains in the Central Water system based on risk factors such as age, type, excessive maintenance, water loss, groundwater intrusion, and network criticality.</li> <li>● Central Water - Water Main Rehabilitation Phase 2 (Phase 2/3) Rehabilitate an additional approximate 25% of the water mains in the Central Water system based on risk factors such as age, type, excessive maintenance, water loss, groundwater intrusion, and network criticality.</li> <li>● Central Wastewater - Sewer Main Rehabilitation Phase 1 (Phase 1/2) and Central Wastewater - Sewer Main Rehabilitation Phase 2 (Phase 2/3) Rehabilitate approximately 4,500feet of sewer pipe in the Kolonia sewer system based on risk factors such as age, type, over-maintenance, water infiltration, and network criticality, as shown in the Sewer Master Plan.</li> <li>● Yap Septic Tank Program (Phase III) Implement a community/residential/commercial based septic tank program as a cost effective approach to improve wastewater management in untreated wastewater areas of Yap.</li> </ul>

State	Summary of Priority Projects
Kosrae	<ul style="list-style-type: none"> <li>● Malem Water System Improvements (Phase 1/2), Muntunte/Yata Water System Improvements (Phase 1/2), Lelu Water System Improvements (Phase 1/2) Rehabilitate the water supply system and introduce water treatment and fluoridation.</li> <li>● Walung Water System Storage Tank &amp; Treatment (Phase 1/2) Water storage tank will be incorporated into the Walung Wate system, and water treatment and fluoride application will be introduced.</li> <li>● Lelu/Tofol Wastewater System Improvements (Phase 1/2) Rehabilitate the Lelu/Tofol wastewater system and introduce wastewater treatment prior to discharge into the sea.</li> </ul>

Source: Infrastructure Development Plan for each state FY2016-2025

### (3) Issues and Measures

No response was received from the Infrastructure Division, Department of Transportation, Communications & Infrastructure regarding challenges in the water and wastewater sector.

From the desk study, the challenges include contamination and abuse of freshwater resources traditionally used by island communities, loss of knowledge of freshwater systems to provide safe and clean water, dissemination of modern management based on traditional knowledge, and establishment and maintenance of public health standards in various industries such as food, fishing, and tourism.

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

##### • ADB

The ADB has set seven priorities for the Asia and Pacific region in its Strategy 2030, which sets guidelines for the ADB's efforts, and mentions water safety and tariffs in several priorities, including “addressing lingering poverty and reducing inequality” and “creating more livable cities.

FSM has implemented projects in every state so far. In the Omnibus Infrastructure Development project, FSM is improving water supply infrastructure in Kosrae and Yap, and wastewater infrastructure in Pohnpei (construction completed in 2016, consulting services are ongoing). Remediation Project, which included a willingness-to-pay study, design and implementation of a water quality monitoring program, and reactivation of 29 wells in Weno.

In addition, the Chuuk Water Supply and Sanitation Project aims to improve the CPUC's utility operations and customer management, expand and rehabilitate sewer systems and water services, reduce non-revenue water, and increase revenue from water and sewer services, as well as raise awareness in the Chuuk community about proper sanitation and hygiene practices to prevent disease, and promote water conservation.



Currently, “Implementing the Pacific Approach through Strengthening Urban Services Operations,” which also focuses on maintenance issues of water management facilities, is in the process of being discussed.

Table 177 List of ADB Projects in the Water Supply and Sewerage Sector

Period	Project name
2002-2005	Omnibus Infrastructure Development
2004-active	Omnibus Infrastructure Development
2008-2015	Weno Water Supply Well Remediation Project
2019-2023	Preparing the Chuuk Water Supply and Sanitation Project
2020-2025	Pacific Urban Development Investment Project Enhancement and Capacity Development Facility
2020-2028	Chuuk Water Supply and Sanitation Project
Pending (decision, etc.)	Implementing the Pacific Approach through Strengthening Urban Services Operations

Source: ADB website

## ② Japan

In the Country Assistance Policy (April 2019), Development Issue 2-2 “Climate Change Countermeasures” points out the vulnerability of the FSM to the effects of climate change, coastal erosion, water shortage in remote islands, and storm surges. The FSM is also planning to support the strengthening of its capacity to cope with climate change and natural disasters by providing equipment and training, while considering the trends of other donors and international organizations.

No response was received from the Infrastructure Division, Department of Transportation, Communications & Infrastructure. Considering the situation of water shortage in remote islands, cooperation such as engineering training and dispatch of experts in the field of O&M that contributes to the reduction of non-revenue water could be considered.

#### 2.5.1.4. IT & Telecommunications

##### (1) Overview

The IT and telecommunications sector of the FSM is under the jurisdiction of the Communications Division of the Department of Transportation, Communication, and Infrastructure (DoTCI), which is responsible for the management and licensing of radio and telecommunications within the FSM.

As for the telecommunication users in the FSM, in 2020, 25,000 people (22% of the population) owned cell phones (all prepaid). The number of Internet users is 40,000, with a penetration rate of 35%, and 15,000 people are connected using wireless and fixed-line services<sup>303</sup>.

All telecommunication providers, both mobile and fixed-line, are operated by the state-owned FSM Telecom, which provides telephone, Internet (fixed-line, WiFi, etc.), and television services in the states of Pohnpei, Kosrae, Chuuk, and Yap<sup>304</sup>. Access to high-speed Internet is expensive for most households<sup>305</sup>, which is one of the reasons for the low Internet penetration.

As for the submarine communication cables, they are connected to the United States, RMI, Indonesia, and the Philippines by the following.

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<sup>303</sup> Pacific Islands Forum, Pacific E-commerce Initiative National E-commerce Assessment 2020, p.16

<sup>304</sup> Pacific Islands Forum, Pacific E-commerce Initiative National E-commerce Assessment 2020, p.21

<sup>305</sup> For example, in Chuuk State, a package that provides high-speed Internet up to 8Mbps is offered at USD 226 per month, and in Kosrae State, VDSL, mainly for business users, is offered at USD 1,274 (1Mbps) and USD 10,912 (8Mbps) per month, but the average monthly GNI is USD 303, making it out of reach for most households. Also, according to Cable UK's global mobile data price rankings in 2020, FSM was one of the most expensive countries in the Pacific region, with an average price of USD 7.2 per 1GB (ranked 184th out of 228 countries). Fiji is the cheapest country in the region, with 1GB of data costing only USD 0.59, from the Pacific E-commerce Initiative National E-commerce Assessment 2020.

Table 178 Submarine Communication Cables Connected to the FSM (as of January 2022)

Name	Connected countries	Total length (km)	Owner	Installer	Year of installation
Chuuk-Pohnpei Cable	FSM (Chuuk-Pohnpei)	1,200	Federated States of Micronesia Telecommunications Company	NEC	2019
HANTRU1 Cable System	FSM (Pohnpei), RMI (Kwajalein, Majuro), US (GU)	2,917	Federated States of Micronesia Telecommunications Company Hannon Armstrong, Marshall Islands Telecommunications Authority	Subcom	2010
SEA-US	FSM (Yap), Indonesia (Kauditan), Palau (Ngeremlengui), Philippines (Davao), US (CA, HI, GU)	14,500	GTA TeleGuam Globe Telecom Hawaiian Telcom RTI Telin.	NEC	2017

Source: TeleGeography, Submarine Cable Map<sup>306</sup>

As for the e-government services of the FSM, although it is possible to obtain information on forms, guidelines, fee requirements, etc., most administrative services such as obtaining birth, marriage and death certificates, business registration, tax payment, etc. are done manually and on paper, and only some services are provided on the e-government platform<sup>307</sup>.

## (2) Development Project

According to the FSM's Infrastructure Development Plan FY2016-FY2025, the following are the directions for infrastructure development in the IT and telecommunications sectors<sup>308</sup>.

1. Make communications accessible and affordable to all.
2. Strengthen ICT human resources and expand opportunities for human resource development through ICT.
3. Improve economic growth and sustainable development through the use of ICT.

<sup>306</sup> <https://www.submarinecablemap.com/>

<sup>307</sup> Pacific Islands Forum, Pacific E-commerce Initiative National E-commerce Assessment 2020, p.21-22

<sup>308</sup> Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume 2 National Infrastructure Development Plan FY2016-FY2025, p.7

4. Promote the use of ICT for good governance.
5. Improve the environment for the use of ICT through policy reform and improvement of the legal framework.

In order to achieve the above, the following list of priority projects has been developed (as of October 2015)

Table 179 FSM's Priority Project List for the IT and Telecommunications Sector

Project name	Required amount (USD)
Terrestrial Fiber Optic Extensions in Pohnpei	4,000,000
Terrestrial Fiber Optic in Yap	2,500,000
Mobile Telecommunications Networks Improvements	2,800,000
Solar Power for Telecommunications Facilities	2,500,000
Emergency/Disaster Alert System	800,000
Video Conferencing Facilities for all 3 Branches	750,000
Total amount required	13,350,000

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume 2 National Infrastructure Development Plan FY2016-FY2025, p.8

### (3) Issues and Measures

The following issues were identified based on the information obtained from the desk survey.

Table 180 Details and Measures to Address Issues Related to the IT and Telecommunications Sectors in the FSM

Subject name	Details of the issue and countermeasures
Vulnerability of communication infrastructure	✓ The existing infrastructure is weak and many rural areas lack network coverage.
Lack of private telecommunication providers	<ul style="list-style-type: none"> <li>✓ The price of cell phone services is high, partly due to the lack of competition among private telecommunication providers.</li> <li>✓ This is also the reason for the low penetration of Internet and cell phones in the FSM.</li> </ul>

Source: Pacific Islands Forum, Pacific E-commerce Initiative National E-commerce Assessment 2020

According to the information provided by the Communications Division of DoTCI, more than 40% of the population of the FSM, including remote islands, has a significantly weak connectivity environment, making the spread of communication infrastructure a challenge. In addition, cyber security measures and securing ICT human resources are also recognized as challenges.

(4) Direction of Cooperation

① Non-Japanese Partners

- World Bank

In addition to the table below, under the Pacific Regional Connectivity Program 1, a pillar is being constructed between Yap State and SEA-US with the support of the World Bank<sup>309</sup>.

As for the Digital Federated States of Micronesia Project, it aims to (1) develop a nationwide digital connectivity infrastructure, (2) develop an e-government platform, and (3) create an environment for promoting e-government and the digital economy, and includes support for the installation of fiber-optic cables in the four main islands of the FSM and Chuuk Province and the introduction of LTE-based Internet services in remote islands<sup>310</sup>.

Table 181 List of World Bank's IT and Telecommunications Sector Projects in the FSM

Period	Project name
2020-	Digital Federated States of Micronesia Project
2017-	P2: Palau-FSM Connectivity Project: AF Kosrae Connectivity
2015-2022 scheduled	Pacific Regional Connectivity Program 2: FSM Connectivity Project

Source: World Bank website

- ADB

The ADB is providing assistance as shown in the table below.

Table 182 List of ADB's IT and Telecommunications Sector Projects in the FSM

Period	Project name
2018-2022 scheduled	Improving Internet Connectivity for Micronesia Project (formerly Improving Internet Connectivity for FSM, Kiribati, and Nauru)
2013-2018	Pacific Information and Communication Technology Investment Planning and Capacity Development Facility

Source: ADB website

② Japan

Although there is no direct reference to the IT/telecommunications sector in the Country Assistance Policy (April 2019), the government will support the development of various infrastructures and facilities in accordance with development issue 1-1, "Strengthening the foundation for economic growth.

<sup>309</sup> Pacific Islands Forum, Pacific E-commerce Initiative National E-commerce Assessment 2020, p.19

<sup>310</sup> Pacific Islands Forum, Pacific E-commerce Initiative National E-commerce Assessment 2020, p.21

In the past, community telecenter projects in remote islands and rural areas have been implemented with off-budget contributions from Asia-Pacific Telecommunity (APT) (USD 60,000-70,000). In addition, as part of SLIP, Japan provided funds jointly with UNDP to the Congress of Micronesia as a grant of IT equipment for holding videoconferences<sup>311</sup>.

As for cooperation needs from Japan, there are expectations for the development and spread of communication infrastructure to remote islands and rural areas.

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<sup>311</sup> [https://www.micronesia.emb-japan.go.jp/itpr\\_ja/11\\_000001\\_00230.html](https://www.micronesia.emb-japan.go.jp/itpr_ja/11_000001_00230.html)

## 2.5.2. Energy

### (1) Overview

FSM's power supply is provided by Chuuk Public Utilities Corporation (CPUC), Kosrae Utility Authority (KUA), Pohnpei Utilities Corporation (PUC), and Yap State Public Service Corporation (YSPSC). The access rate to electricity is 75.4% of the total population (91.9% in urban areas and 70.7% in rural areas). The electricity access rate by province is shown in the table below. Renewable energy accounts for 3% of total electricity generation, while 97% is dependent on fossil fuels (diesel)<sup>312</sup>.

Table 183 Electricity Access Rates by State

State	Access rate
Chuuk State	27%.
Kosrae State	96%.
Pohnpei State	95%.
Yap State	70%.

Source: Eney Transitions Initiative, Micronesia Energy Snapshot

### (2) Development Project

#### Strategic Development Plan 2004-2023 (SDP)

The SDP 2004-2023 sets the following targets for the energy sector.

Table 184 Goals of SDP 2004-2023

- Reduce petroleum fuel imports and use by 50% by 2010.
- 10% of electricity in urban centers and 50% in rural areas to be from renewable energy sources by 2010
- Percent of new public buildings and 50percent of new private buildings meeting US energy efficiency standards by 2010
- Private car ownership will decrease by 10% by 2010.

Source: SDP 2004-2023, p.300

#### Infrastructure Development Plan FY2016-2025

The FSM has prepared an infrastructure development plan 2016-2025 for each state, with projects prioritized in three periods: Phase 1 (FY2016-2019), Phase 2 (FY2020-2022), and Phase 3 (FY2023-2025). In the energy sector, the four goals listed in the table below are common to all states. In order to achieve these goals, priority projects are being planned in each state.

<sup>312</sup> Eney Transitions Initiative, Micronesia Energy Snapshot  
[https://www.energy.gov/sites/prod/files/2020/09/f79/ETI-Energy-Snapshot-Micronesia\\_FY20.pdf](https://www.energy.gov/sites/prod/files/2020/09/f79/ETI-Energy-Snapshot-Micronesia_FY20.pdf)

Table 185 Targets Set in Infrastructure Development Plan FY2016-FY2025

<ol style="list-style-type: none"> <li>1. Households will be supplied with electricity for basic living purposes.</li> <li>2. Local talent can realize production opportunities and potential.</li> <li>3. Electricity will be provided for basic services such as schools, hospitals, water and sewerage systems.</li> <li>4. Achieve national renewable energy goals.</li> </ol>
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Source: Infrastructure Development Plan FY2016-FY2025, Volume 1 p.16

Table 186 Priority Projects in the Energy Sector in Each State

State	Priority projects
Chuuk State	<ul style="list-style-type: none"> <li>• Weno Electric Power Distribution Improvements (Phase I) (USD 800,000) Increase the reliability and safety of power distribution by extending the network about 20,000feet and improving network connectivity and fault tolerance.</li> <li>• Tonoas Electric Power Distribution Improvements (Phase I) (USD 1,000,000) To improve the network on Tonoas Island to supply electricity generated by Petrocorp's copra facility to the island's consumers.</li> <li>• Renewable Energy Expansion - Phase 1 (USD 4,000,000) Develop 1MW of solar PV to increase the contribution of renewable energy to Chuuk's electricity needs.</li> <li>• Renewable Energy Expansion - Phase 2 (USD 2,000,000) To improve the contribution of renewable energy to Chuuk's electricity demand.</li> </ul>
Kosrae State	<ul style="list-style-type: none"> <li>• Electric Power Improvements (Phase I) (USD 3,700,000) To improve the reliability, safety and efficiency of Kosrae's electricity by providing new fuel generators and upgrading underground cables at Leru and the airport.</li> <li>• Electric Power Generation Improvements (Phase I) (USD 140,000) Increase fuel storage to 100,000 gallons (approximately 60% increase) and upgrade the fuel centrifuge system to improve the reliability, safety and efficiency of Kosrae's power generation.</li> <li>• Electric Power Distribution Improvements (Phase I) (USD 685,000) To improve the distribution of electricity in Kosrae by upgrading the circuits from Tofor to Triangle and Tahunsak Town to Okat.</li> <li>• Electric Power Capital Equipment (Phase1/2) (USD 870,000) To provide modern and capable capital equipment to improve the availability, reliability, safety and cost-effectiveness of Kosrae's power.</li> <li>• Renewable Energy Capacity and Flexibility Improvements (Phase1/2) (USD 8,000,000)</li> <li>• Increase the contribution of renewable energy to Kosrae's electricity demand through solar street lighting on major roads, renewable energy storage systems, and feasibility studies to identify renewable energy</li> </ul>



State	Priority projects
	<p>sources and projects to supply the maximum 50% of Kosrae's electricity demand.</p> <ul style="list-style-type: none"> <li>• Increase Renewable Electric Power Generation (Phase 1/2) (USD 4,250,000) Based on a feasibility study, 1.25MW renewable energy project will be implemented to increase the contribution of renewable energy to Kosrae's electricity demand.</li> </ul>
Pohnpei State	<ul style="list-style-type: none"> <li>• Improve Electric Power Distribution System (Phase I) (USD 5,577,000) Improve the reliability, safety, and efficiency of electric power distribution by providing O&amp;M vehicles, replacing poles and pole-related parts, and improving meter reading.</li> <li>• Renewable Energy Development - Solar Power Phase 1 (USD 1,000,000) Develop 2MW of solar power and associated storage at the Pohnpei solar power facility to increase the contribution of renewable energy to Pohnpei's electricity needs.</li> <li>• Renewable Energy Development - Solar Power Phase 2 (USD 3,000,000) Develop an additional 6MW of solar power and associated storage at the Pohnpei solar power facility to increase the contribution of renewable energy to Pohnpei's electricity needs.</li> <li>• Renewable Energy Development - Hydro Power Phase 1 (Phase 2/3) (USD 1,600,000) Develop an additional 2MW of hydro power to increase the contribution of renewable energy to Pohnpei's electricity needs.</li> <li>• Expand Micro Grids on Outer Islands - Phase 1 (USD 500,000), Expand Micro Grids on Outer Islands - Phase 2 (USD 500,000) A microgrid centered on solar power generation will be constructed to supply electricity to additional communities on remote islands.</li> </ul>
Yap State	<ul style="list-style-type: none"> <li>• Renewable Energy Extension - Phase 2 (USD 1,980,000) To develop additional wind turbine generators to increase the contribution of renewable energy to Yap's electricity demand.</li> <li>• Renewable Energy Extension - Phase 3 (USD 3,780,000) Develop solar power generation and associated energy storage to increase the contribution of renewable energy to Yap's electricity demand.</li> <li>• Electric Power Network Improvements (Phase I) (USD 160,000) To improve the condition and efficiency of substations and increase the reliability, safety and efficiency of Yap's electricity network.</li> <li>• Electric Power Distribution Improvements (Phase I) (USD 675,000) To improve the reliability, safety and efficiency of Yap's electric power distribution by replacing transformers, poles, pole related parts and street lights.</li> <li>• Outer Island Micro Grid Expansion (Phase III) (USD 500,000) A microgrid combining solar and fuel power generation will be constructed to supply electricity to communities on the outer islands.</li> </ul>

Source: Infrastructure Development Plan for each state FY2016-2025

(3) Issues and Measures

The World Bank's Sustainable Energy Development and Access Project's "Project Information Document / Integrated Safeguards Data Sheet (2018)" summarizes the issues. The Data Sheet points out the challenges of the energy sector in the FSM as shown in the table below.

Table 187 Challenges in the Energy Sector

Subject name	Issue Details
Aging and lack of maintenance of power infrastructure assets	✓ Pohnpei State, which has the highest electricity demand among the provinces, has particularly old generation facilities that have not been properly maintained. In addition, the PUC's generation capacity is insufficient to cover peak demand and unscheduled generator outages; the PUC's electricity service performance is far below the levels achieved by the YSPSC, KUA, and CPUC.
Variation in electricity access rates across states	✓ Electricity access rates vary significantly from state to state. Although the readiness to expand electricity access is fairly well developed, the current situation lacks the necessary funds for implementation.
Excessive dependence on imported fuels	✓ Because of its heavy dependence on imported petroleum fuels, the country is highly vulnerable to fluctuations in oil prices. This results in higher electricity prices and more uncertainties (including those related to planning). The development and use of renewable energy sources and improvements in energy efficiency will contribute to reducing these risks.
Electricity prices unable to cover maintenance and management costs and investment in new infrastructure	✓ Even though electricity prices are high compared to international standards in the 4 states, they are unable to recover maintenance costs or finance new investments in electricity infrastructure.
Financing constraints on investment in renewable energy	✓ Each corporation is expanding its renewable energy generation capacity with support from its development partners.
Small power utilities unable to benefit from economies of scale	✓ Electricity is supplied by 4 small power utilities, which is a major constraint in benefiting from economies of scale.
Lack of specialized technical personnel	✓ There is a lack of specialized technical personnel, with sufficient experience and training to maintain the facilities and plan new investments.

Source: World Bank (2018), Sustainable Energy Development and Access Project - Project Information Document / Integrated Safeguards Data Sheet, p. 9-10

(4) Direction of Cooperation

① Non-Japanese Partners

• ADB

In its Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific, which guides the ADB's efforts, the ADB has identified 7 priorities for the Asia and Pacific region. One of these is “Addressing Climate Change, Building Climate and Disaster Resilience, and Improving Environmental Sustainability.” The strategy prioritizes investment in low greenhouse energy, selective use of concessional loans, broad private sector cooperation, and support for innovative PPPs. From the perspective of water security, it also promotes energy sources that use less water, such as solar and wind power<sup>313</sup>. Recent project achievements are shown in the table below. Many renewable energy-related projects have been implemented.

Table 188 Recent Projects by ADB

Approval date	Project name
Dec 2021	Renewable Energy Development Project (additional financing)
Nov 2021	Preparing Clean and Renewable Energy Investments in the Pacific
Oct 2021	Development of the Pacific Energy Regulators Alliance
Mar 2021	Preparing the Pacific Regional Financing Facility
Dec 2020	Preparing Floating Solar Plus Projects under the Pacific Renewable Energy Investment Facility
Nov 2019	Renewable Energy Development Project
Jul 2019	Preparing the Pacific Renewable Energy Investment Facility (Phase 2)
Apr 2019	Pacific Renewable Energy Program
Nov 2017	Capacity Building and Sector Reform for Renewable Energy Investments in the Pacific
Jun 2013	Yap Renewable Energy Development Project
Dec 2012	Supporting Participation in the Pacific Energy Summit
Dec 2012	Strengthening the Energy Sector Regulatory Framework

Source: ADB website<sup>314</sup>

• World Bank

World Bank's recent project achievements are shown in the table below. The Sustainable Energy Development and Access Project currently being implemented has the following components: (1) improving the reliability of electricity supply in Pohnpei State, (2) expanding access to electricity in Chuuk State, (3) expanding renewable energy generation in Chuuk, Yap, and Kosrae, (4) institutional

<sup>313</sup> ADB, Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific

<sup>314</sup> <https://www.adb.org/projects/country/fsm/sector/energy-1059>

strengthening and capacity building in the energy sector, and (5) technical cooperation and project management<sup>315</sup>.

Table 189 Recent Projects by World Bank

Approval date	Project name
Dec 2018	Sustainable Energy Development and Access Project
Mar 2014	Energy Sector Development Project

Source: World Bank website<sup>316</sup>

• Pacific Environment Community Fund<sup>317</sup>

In 2012, USD 41 million was granted through the Pacific Environmental Community Fund to install solar systems in the 4 provinces of Chuuk, Kosrae, Pohnpei, and Yap (project completed in 2014)<sup>318</sup>.

② Japan

Japan's Country Assistance Policy (April 2019) addresses development issue 2-2, "Climate Change Response," and states that Japan will support the enhancement of climate change response and natural disaster response capacity by providing equipment and training, while considering the trends of other donors and international organizations. Japan's major cooperation achievements to date are shown in the table below.

Table 190 Major Japanese Cooperation in the FSM's Energy Sector

Start date	Project name
Official Development Assistance Grants	
2018	Economic and Social Development Plan (funding for purchase of generators, etc.)
Mar 2017	Pacific Region Hybrid Power System Installation Project
Apr 2016	Kosrae State Power Sector Improvement Plan
Feb 2010	Clean energy introduction plan using solar energy
Grassroots Technical Cooperation	
Oct 2019	Project to support the use of solar systems on Phonoton Island, Chuuk State

Source: JICA website, Ministry of Foreign Affairs website

The biggest challenge for the FSM is its dependence on fossil fuels. Other donors are implementing many projects to introduce renewable energy, and it would be beneficial for Japan to follow the same

<sup>315</sup> <https://projects.worldbank.org/en/projects-operations/project-detail/P165183>

<sup>316</sup> [https://projects.worldbank.org/en/projects-operations/projects-list?countrycode\\_exact=FM&sector\\_exact=Energy%20Transmission%20and%20Distribution^Renewable%20Energy%20Solar^Public%20Administration%20-%20Energy%20and%20Extractives^Renewable%20Energy%20Solar&os=0](https://projects.worldbank.org/en/projects-operations/projects-list?countrycode_exact=FM&sector_exact=Energy%20Transmission%20and%20Distribution^Renewable%20Energy%20Solar^Public%20Administration%20-%20Energy%20and%20Extractives^Renewable%20Energy%20Solar&os=0)

<sup>317</sup> USD 66 million fund created at the suggestion of Japan to help Pacific nations deal with climate change issues.

<sup>318</sup> <https://pacificdata.org/data/publications/pacific-environment-community-pec-fund-profiles2/resource/4aea7569-0dd1-4db7-8fa0-05e3bd56551e>

policy. In this case, it would be effective to check the progress of priority projects listed in the Infrastructure Development Plan FY2016-FY2025, and consider the details of cooperation in collaboration with the ADB, which is implementing many renewable energy-related projects.

### 2.5.3. Industry (Including Agriculture, Forestry, Fisheries, Tourism, and Mining)

#### 2.5.3.1. Agriculture

##### (1) Overview

The agricultural sector of the FSM is under the jurisdiction of the Department of Resources and Development (DoRD).

According to the first FSM agricultural census<sup>319</sup> in 2016, the number of households owning agricultural land was 14,031 (90.3% of all households)<sup>320</sup>.

The FSM has a tropical climate and is hot and humid with little seasonal variation in maximum and minimum temperatures. El Niño and La Niña events may also occur, and the region is exposed to disaster risks such as hurricanes<sup>321</sup>.

The contribution of agriculture (mainly self-consumption) to GDP has been estimated to hover between 13% and 15%<sup>322</sup>.

The FSM has a complex system of traditional ownership that goes back centuries. Much of the land is owned by families and clans, with different factions all claiming rights to the land. This complicates both the use of the land and the recording of ownership and use of the land<sup>323</sup>.

##### Major Agricultural Products

Much of the agriculture in the FSM is grown for its own consumption. According to the Agricultural Census, the following crops are grown in the FSM. Coconut, Breadfruit and Banana are cultivated by more than 90% of the households in all the states, followed by Lime/Lemon. Root crops such as yams and taro are grown by many households, while vegetables such as chili, pumpkin and cabbage are grown by only a few households.

Crops for which more than half of the harvest is sold include Kava, Cabbage, Cucumber, Beans, Pandanus, Betelnut, Piper Leaf, Green Onion, and Pumpkin<sup>324</sup>.

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<sup>319</sup> DoRD, Main Report Federated States of Micronesia Integrated Agriculture Census 2016

<sup>320</sup> DoRD, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, Key Facts Table 1

<sup>321</sup> DoRD, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p.2

<sup>322</sup> DoRD, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p.2

<sup>323</sup> DoRD, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p.14

<sup>324</sup> DoRD, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p. 22

Table 191 Major Crops in the FSM and Percentage of Households Growing

Category	Main crops	Percentage of households growing
Food crop	Coconut	90% or more
	Breadfruit	90% or more
	Banana	90% or more
	Lime/Lemon	59%
	Swamp Taro	54%
	Land Taro	48%
	Yam	36%
	Tapioca	36%
	Chilli	17%
	Sweet Potato	13%
Luxury grocery item	Betelnut	49%
	Kava	24%
Other	Ornamental Plants (Biper Leaf, etc.)	20%

Source: DoRD, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p.20

In the FSM as a whole, the percentage of agricultural land area is around 40%. Among the four states, Chuuk has the highest percentage of farmland, while Kosrae has the lowest.

Table 192 Land Area and Agricultural Land Area in FSM

	Yap.	Chuuk	Pohnpei	Kosrae	FSM Total
Land area (ac)	25,432	23,256	94,200	30,085	172,974
Agricultural land area (ac)	11,828	16,277	37,954	2,979	690,380
Percentage of agricultural land area (%)	47	70	40	10	40

Source: DoRD, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p.14

As shown in the table below, the most common form of land ownership in the FSM is the ownership of freehold land, including both common and non-common land, followed by customary land ownership.

Table 193 Land Ownership in the FSM

		Common		Non-common property	
		Number of lots	(%)	Number of lots	(%)
Freehold land	Ownership	5,626	47	7,293	61
	Lease	453	4	419	3
Customary land	Ownership	5,416	45	3,818	32
	Lease	235	2	223	2
Government land	Lease	129	1	192	2
Other		69	1	74	1
Total number of lots		11,928	100	12,019	100

Source: DoRD, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p.14

### Stockraising

Livestock production (pigs and poultry) is important for subsistence and cultural use in the FSM as a whole, with 9,434 households (61%) raising livestock in the FSM as a whole<sup>325</sup>.

Traditionally, pigs were raised in most households for ceremonial and cultural purposes such as weddings, funerals, and feasts, but in 2016 agricultural census, less than 50% of households reported raising pigs. The number of households that reported keeping dogs was 42%, and the number of households that reported keeping chickens was 32%.

#### (2) Development Project

In the agricultural sector, the Federated States of Micronesia Agriculture Policy 2012-2016 has been prepared in line with the SDP 2004-2023<sup>326</sup>.

The plan states that the FSM Agricultural Policy 2012-2016 has the following policy objectives: (1) Achieve national food security, safety, and nutritional integrity; (2) Improve farm incomes and livelihoods with a focus on gender and vulnerable groups; (3) Strengthen socio-cultural safety nets; (4) Protect culture, traditional knowledge, and customs; and (5) Support sustainable economic growth and improve trade. The policy goals are to support sustainable economic growth and improve trade balance<sup>327</sup>.

<sup>325</sup> DoRD, 2016, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p.27

<sup>326</sup> DoRD, 2016, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p.2

<sup>327</sup> Federated States of Micronesia Agriculture Policy 2012-2016, p.19



### (3) Issues and Measures

The following issues were identified based on the information obtained from the desk survey.

Table 194 Details of FSM's Agricultural Sector Issues and Measures

Subject name	Details of the issue and countermeasures
Impacts of Climate Change	✓ Many agricultural households reportedly suffered damage due to problems such as drought, seawater intrusion, invasion by alien species, flooding, and landslides <sup>328</sup> .

Source: DoRD, 2016, Main Report Federated States of Micronesia Integrated Agriculture Census 2016

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

- ADB

ADB is providing assistance as shown in the table below.

Table 195 List of ADB's Fisheries Sector Projects in the FSM

Period	Project name
1995	Strengthening of Agricultural Support Services
1991	Agriculture Sector Development

Source: ADB website

- FAO

FAO has provided capacity building support for agricultural census building from 2016 to 2017<sup>329</sup>.

#### ② Japan

In the Country Assistance Policy (April 2019), it is stated that JICA will support the development of agricultural and fishery product processing technology for effective use of local resources by dispatching Japan Overseas Cooperation Volunteers and accepting trainees under the development issue 1-1 “Strengthening the foundation for economic growth”.

In the past, Japan has provided agricultural machinery such as agricultural tractors to the Department of Agriculture of the Pohnpei State Bureau of Natural Resources Development as part of the Pohnpei State Agricultural Tractor Development Plan (Grassroots Grant Aid, USD 84,990, June 2018)<sup>330</sup> and a project to disseminate pig feed by processing fishery residues in Micronesia (Grassroots Technical Cooperation).

<sup>328</sup> DoRD, 2016, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p15

<sup>329</sup> <http://www.fao.org/3/ca5029en/CA5029EN.pdf>

<sup>330</sup> [https://www.micronesia.emb-japan.go.jp/itpr\\_ja/00\\_000519.html](https://www.micronesia.emb-japan.go.jp/itpr_ja/00_000519.html)

No response was received from DoRD regarding the cooperation needs for Japan. Most of the domestic agriculture is for self-consumption, and the needs for large-scale and advanced agriculture seem to be limited. Support for sustainable and recycling-oriented agriculture through the introduction of new technologies such as Aquaponics will contribute to the spread of fresh vegetable cultivation and aquaculture, reduction of chemical fertilizer use, and avoidance of salt damage.

### 2.5.3.2. Forestry

#### (1) Overview

The forestry sector of the FSM is under the jurisdiction of the Department of Resources and Development (DoRD).

The forest is used extensively for livelihoods throughout the FSM, most commonly for firewood and construction timber. It is also used for carving, handicrafts, and canoeing<sup>331</sup>. According to the Census of Agriculture, in the FSM as a whole, 29% of males and 13% of females over the age of 20 are reported to be engaged in forestry activities, and only 10% of all households are engaged in wood-based handicrafts<sup>332</sup>. The types and uses of trees used also vary from state to state. In Yap State, *Calophyllum Inophyllum* is the most used tree, which is used for building, furniture and firewood. Breadfruit is also used for firewood and canoes, and coconut is used for handicrafts, construction and furniture. In Chuuk Province, breadfruit is most commonly used for firewood and canoe-making. Mangroves are also used for firewood as well as for building and furniture. Coconuts are also used for handicrafts, buildings and furniture, as in Yap. In Pohnpei State, mangroves are used for building, furniture and firewood. Ivory is also used mainly for buildings and furniture. In Kosrae State, mangroves are used for firewood, buildings and furniture, although forest use is considered to be the lowest.

The total forest area of the FSM is 59,454ha (2016), of which 5,999ha are protected forest area, 43,295ha are unprotected area, and 10,160ha are mangrove area<sup>333</sup>.

#### (2) Development Project

In the forestry sector of the FSM, the DoRD has prepared the FSM Forest Action Plan 2020-2030, which sets out the following priorities for action. The following priority issues have been identified.

Table 196 FSM's Priority Actions in the Forestry Sector

Priority Action Items
Food security (agroforestry)
Coastal stabilization (coastal forests, mangroves)
Biodiversity conservation (related to Forest Legacy, protected area management, gap analysis, etc.)
Protection of upland waters
Forest resource production and sustainable harvesting
Capacity building (work coordination, technology, various training, recruitment of natural resource managers)

Source: DoRD, FSM Forest Action Plan 2020-2030, p.13

<sup>331</sup> DoRD, 2016, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p41

<sup>332</sup> DoRD, 2016, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p42-p43

<sup>333</sup> <https://www.fs.usda.gov/pnw/projects/pnw-fia-pacific-islands-inventory>

### (3) Issues and Measures

The following issues were identified based on the information obtained from the desk survey.

Table 197 Details of Issues Related to the Forestry Sector in the FSM and Measures to Address

Subject name	Details of the issue and countermeasures
Mangrove Restoration	<ul style="list-style-type: none"> <li>✓ Giant taro is one of the staple foods for the people of Chuuk State, and sea level rise is one of the biggest challenges for the residents.</li> <li>✓ The Chuuk State Department of Agriculture worked closely with local partners to provide and plant more than 200 mangrove trees (propagation species) in the Faichuk area to protect the coastline and minimize flooding.</li> </ul>
Fire risk reduction	<ul style="list-style-type: none"> <li>✓ Fire prevention and education programs, such as reducing the continuous area of flammable vegetation, are being implemented in Yap State to limit the area burned by wildfires.</li> </ul>
Invasive species and pest control	<ul style="list-style-type: none"> <li>✓ In each state, invasive species and pests are surveyed and mapped for extermination and weeding out.</li> </ul>
Maintaining forest diversity	<ul style="list-style-type: none"> <li>✓ The Forest Legacy Assessment of Need (AON) is being developed and updated to identify forest areas of environmental importance that are threatened by forest conversion.</li> </ul>

Source: USDA Forest Service, State and Private Forestry Fact Sheet Federated States of Micronesia 2021<sup>334</sup>

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

- US

The US Forest Service (USFS) of the US Department of Agriculture has been providing technical and financial support for many years, and has implemented programs in the areas of Forest Stewardship, Community Forestry, and Forest Health<sup>335</sup>.

- Micronesia Challenge

The FSM and the five countries of Guam, Palau, the Northern Mariana Islands, and the RMI launched this program in 2006 with the goal of conserving 30% of marine resources and 20% of onshore resources by 2020, and are working to achieve this goal through long-term onshore monitoring programs supported by the USFS<sup>336</sup>.

- Global Environmental Fund (GEF)

In GEF 5, the Ridge to Reef program was launched across the Pacific in 2016. GEF 5 launched the Ridge to Reef Program across the Pacific in 2016, which aims to ensure that biodiversity protection and conservation is integrated with sustainable land use and management, and supports the growing conservation of designated protected areas in the FSM. GEF 6 supports strengthening of biosecurity

<sup>334</sup> [https://apps.fs.usda.gov/nicportal/temp/pdf/sfs/naweb/FM\\_std.pdf](https://apps.fs.usda.gov/nicportal/temp/pdf/sfs/naweb/FM_std.pdf)

<sup>335</sup> FSM Department of Resources and Development, FSM Forest Action Plan 2020-2030, p.20

<sup>336</sup> FSM Department of Resources and Development, FSM Forest Action Plan 2020-2030, p.21

management frameworks to mitigate and protect impacts from Invasive Alien Species, enhancing IAS inspection and enforcement, and capacity building and information system development on IAS management; GEF 7 supports “Securing global environmental benefits in the FSM through climate-smart sustainable management” to improve information management capacity and rehabilitation projects. GEF 7 will work on “Securing global environmental benefits in FSM through climateresilient sustainable land management and progress towards land degradation neutrality” (tentative title as of December 2020)<sup>337</sup>.

② Japan

There is no direct reference to forestry in the Country Assistance Policy (April 2019).

As for the cooperation needs for Japan, no response was received from the DoRD. The U.S. Forest Service has been providing support to the forestry sector for many years, and it seems that the support that Japan can provide is limited.

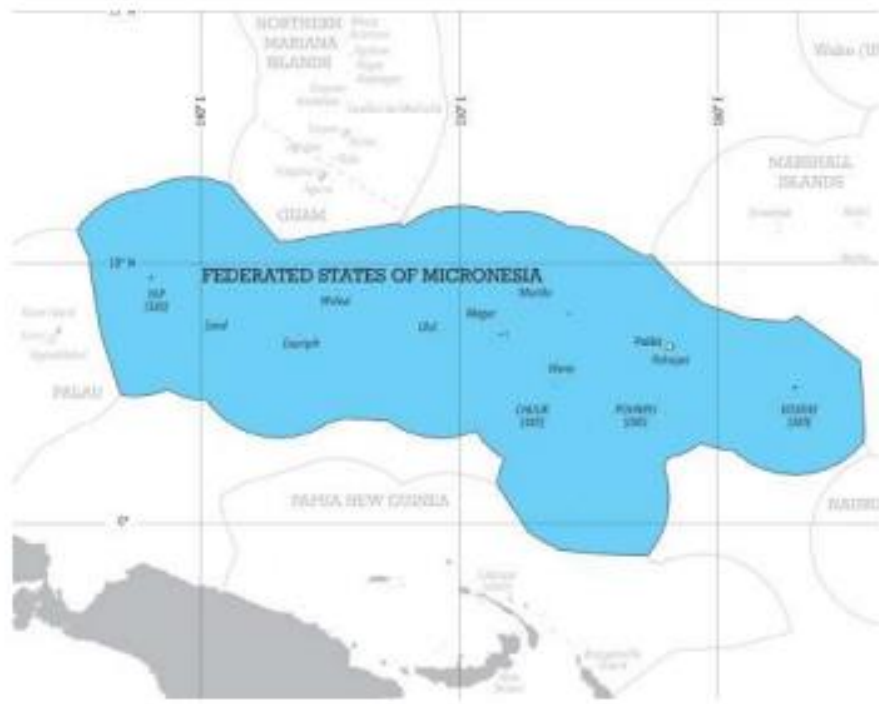
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<sup>337</sup> FSM Department of Resources and Development, FSM Forest Action Plan 2020-2030, p. 21-22

### 2.5.3.3. Fisheries

#### (1) Overview

The fisheries sector of the FSM is under the jurisdiction of the Department of Resources and Development (DoRD), which has a water area of 2,978,000km<sup>2</sup> and a fisheries contribution to 10% of GDP (2014).



Source: FAO, Fisheries of the Pacific Islands regional and national information, p.73

Figure 32 Water Area of FSM

The fishery production volume and production value of FSM are shown in the table below. The export value of FSM fisheries is USD 54,721 thousand (2014) and the import value is USD 9,185 thousand (2014)<sup>338</sup>.

Table 198 FSM Fishery Production Volume and Value (2014)

	Aquaculture	Fresh water (i.e. Not salt water)	Commercial Coastal fishing	Self-sufficient Coastal fishing	Offshore fishing <sup>339</sup> (FSM vessel registry)
Production volume (t)	8	1	1,725	3,555	40,838
Production value (USD)	164,800	8,000	5,000,000	8,800,000	-

Source: FAO, 2018, Fisheries of the Pacific Islands regional and national information, p74

As for offshore fisheries, tuna (yellowfin, bigeye, albacore) and skipjack are the main species. Other species such as blue marlin, striped marlin, swordfish, and sharks are also caught.

Offshore fishing vessels operating in the EEZ within the FSM mainly use longline, single line and purse seine. For longline vessels, fishing patterns are less clear, but vessels tend to be grouped by company. Guam-based small Taiwanese and Japanese longline vessels tend to fish north of the FSM, while Pohnpei-based longline vessels (both domestic and foreign) tend to fish closer to Pohnpei. Longline fishing activity is at its highest in June-August. A small number of Japanese vessels operate in the area of single line fishing. The table below shows the number of licensed vessels of each country by fishing method in the EEZ of the FSM.

<sup>338</sup> FAO, Fisheries of the Pacific Islands regional and national information, p.74

<sup>339</sup> Production may be indicated by vessel registry or by fishing region. Each of these different ways of identifying production has its own purpose, with the classification by vessel registry being important for consistency with international conventions, and the classification by region being important for managing the contribution of the fishery to GDP and the income from license fees for foreign-flagged fisheries in that country's area.

Table 199 Number of Licensed Fishing Vessels of Each Country in the EEZ of the FSM (2015)

Ship's country of registration	Longline fishing	Fishing with a pole	Purse seine
Taiwan	12	-	33
Korea	-	-	26
America	-	-	37
Japan	37	21	30
China	24	-	14
Vanuatu	-	-	-
PNG	-	-	-
Tuvalu	-	-	-
Kiribati	-	-	-
FSM	19	-	12
RMI	-	-	-
Philippines	-	-	3
New Zealand	-	-	1
Total	92	21	156

Source: FAO, 2018, Fisheries of the Pacific Islands regional and national information, p79

In terms of coastal fishing, it is often done for subsistence or for sale in local markets; 55% of FSM households were fishing in the most recent year of the survey period, with fishing activity occurring 8.5 a month<sup>340</sup>. The main catches include reef fish, octopus, and tuna<sup>341</sup>. The most common method of fishing is harpoon and spear fishing, which is practiced by 68% of the FSM households. Trawling, bottom fishing and net fishing are also observed. Some households use methods such as poisoning and dynamiting<sup>342</sup>.

As for aquaculture, it is operated on a community basis or by local companies, and as shown in the table below, corals, oyster shells, pearls, and sea cucumbers are cultivated.

<sup>340</sup> DoRD, 2016, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p33

<sup>341</sup> DoRD, 2016, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p34

<sup>342</sup> DoRD, 2016, Main Report Federated States of Micronesia Integrated Agriculture Census 2016, p34



Table 200 FSM Aquaculture Volume (2014)

Type	Production output (piece)	Amount of production (USD)
Coral	22,000	66,000
Giant clam (any clam of subfamily Tridacnidae)	12,000	60,000
Pearl oyster (esp. Marten's pearl oyster, pinctada fucata martensii)	1,600	34,000
Sea cucumber (Holothuroidea spp.)	1,800	4,800
Total	37,400	164,800

Source: FAO, 2018, Fisheries of the Pacific Islands regional and national information, p86

(2) Development Project

The fisheries sector of the FSM has been identified in the SDP 2004-2023 with 5 strategic objectives and associated policies as shown in the table below.

Table 201 FSM's Development Policy for the Fisheries Sector

Policy content
1. Stakeholders and personnel contributing to the management and development of fisheries and marine resources are appropriately trained and skilled to participate effectively in sector activities
<ul style="list-style-type: none"> <li>✓ Recognize and support the need for sector-specific human resource development plans</li> <li>✓ Introduction of fisheries and marine resources curriculum into school education</li> <li>✓ Identify opportunities for fisheries and marine resource program support and scholarships abroad</li> <li>✓ Support for programs and courses at the Micronesian Maritime Academy</li> <li>✓ Incorporating public awareness and education activities into the work programs of national and state agencies</li> <li>✓ Provide capacity building opportunities for state employees.</li> </ul>
2. Coastal and inshore marine resources are monitored and managed in a consultative and participatory manner that respects traditional practices, utilizes established scientific methods, and maintains biodiversity and resource richness
<ul style="list-style-type: none"> <li>✓ Formulate a work plan for the responsible organization and secure resources to implement activities</li> <li>✓ Clear definition of the relationship and activities of national and state agencies</li> <li>✓ Enact a regulatory system for well-considered resource management practices.</li> <li>✓ Monitoring of resource conditions and identification of potential over-exploitation opportunities</li> <li>✓ Consultations from a broader resource management perspective on the topics of coastal zone management, economic planning, land use, watershed management, tourism development, atoll management, and biodiversity</li> </ul>

<ul style="list-style-type: none"> <li>✓ Respect for traditional practices and incorporation of traditional knowledge into management and regulatory processes</li> <li>✓ Implementing community-based management systems in marine protected areas</li> <li>✓ Proper monitoring of commercial activities and maximization of national interests</li> <li>✓ Identifying and assessing development opportunities in aquaculture</li> </ul>
<p>3. Coastal and inshore marine resources are effectively utilized to meet subsistence needs/microfishing needs and optimized for the social and economic benefit of stakeholders within sustainable parameters</p>
<ul style="list-style-type: none"> <li>✓ Proper monitoring of commercial activities and maximization of national interests</li> <li>✓ Limit commercial activities to the fishing sector</li> <li>✓ Identify and promote opportunities to reduce commercial fishing pressure on coastal resources</li> <li>✓ Formation of an association or community of fishermen as a means of clearer communication with government agencies.</li> <li>✓ Ensuring safety of fishing activities by small vessels and appropriate installation of vessel equipment</li> <li>✓ Commercial operation of infrastructure to support fishermen's fishing activities</li> <li>✓ Identifying commercial opportunities for aquaculture development</li> </ul>
<p>Marine resources are monitored and managed in the best possible manner to ensure that yields remain within sustainable parameters.</p>
<ul style="list-style-type: none"> <li>✓ Use of resource management planning as a basis for resource development</li> <li>✓ Using the FSM Tuna Management Plan as a guide for resource management</li> <li>✓ Stakeholder participation in the formulation and review of marine fisheries management and development strategies</li> <li>✓ Support the activities of the National Oceanic Resource Management Authority (NORMA) as the national agency responsible for marine resource management and development.</li> <li>✓ Support the activities of the National Police Maritime Division as an operational agency for maritime surveillance.</li> <li>✓ Negotiate sea access arrangements that are most advantageous to the FSM</li> <li>✓ Secure resources and support for fisheries monitoring, management and surveillance activities</li> </ul>
<p>Marine resources are used in a manner that ensures the best possible economic benefit to the FSM</p>
<ul style="list-style-type: none"> <li>✓ Actively encourage investment in fisheries</li> <li>✓ Improving efficiency in public fishery projects</li> <li>✓ Public participation in fishing activities</li> <li>✓ Identification and review of regulatory constraints on effective commercial activities</li> <li>✓ Prioritizing economic and social benefits in the consideration of marine resource development strategies</li> <li>✓ Encourage and promote value-added opportunities</li> <li>✓ Promote the use of domestic bases and transshipment of foreign-flagged vessels</li> </ul>

Source: SDP 2004-2023 vol 2: Strategic Planning Matrices and Appendices, p39-.56

### (3) Issues and Measures

According to the information provided by DoRD's Division of Marine Resources, there is a lack of human resource development and various facilities for the management of the fishery industry, and there is a delay in the development of the aquaculture industry.

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

- World Bank

The World Bank has been providing assistance as shown in the table below.

Table 202 List of World Bank's Fisheries Sector Projects in the FSM

Period	Project name
2015-2021	Pacific Islands Regional Oceanscape Program - Federated States of Micronesia

Source: World Bank website

- ADB

ADB is providing assistance as shown in the table below.

Table 203 List of ADB's Fisheries Sector Projects in the FSM

Period	Project name
2018-2022 Scheduled	Improving Internet Connectivity for Micronesia Project (formerly Improving Internet Connectivity for FSM, Kiribati, and Nauru)
2017- Continued	Pacific Information and Communication Technology Investment Planning and Capacity Development Facility- Phase 2
1996	National Fisheries Policy
1990	Fisheries Development

Source: ADB website

- EU and Sweden

The Pacific-European Union Marine Partnership Programme (PEUMP)<sup>343</sup>, which aims to protect biodiversity and sustainably use marine resources, was launched in October 2017 with a total co-financing of EUR 45 million by the EU and Sweden (EUR 35 million by the EU and EUR 10 million by Sweden), and is scheduled to end in 2023, with a possible extension of one or two years. It aims to support the sustainable development and management of fisheries, which are the basis for food security and economic growth, while considering climate resilience and marine biodiversity in 15 countries in the Pacific region. The implementing organizations of this program include the regional organizations: SPC, FFA, SPREP, and USP, as well as the NGOs IUCN, LMMA, PITIA, and WWF.

<sup>343</sup> <https://peump.dev/>

- Australia

Regional programs implemented by Australia include fisheries management support through the Forum Fisheries Agency and mitigation of impacts from climate, tidal and oceanographic phenomena through the Climate and Oceans Support Program in the Pacific<sup>344</sup>. In addition, a total of three patrol boats were provided in 1990, 1991 and 1997<sup>345</sup>.

- China

China has provided support for the construction of the Yap State Inter-Island Liaison Ship (4.36 million USD) in 2007, and for the construction of the headquarters office of The Western and Central Pacific Fisheries Commission (WCPFC) in 2008<sup>346</sup>.

② Japan

In the Country Assistance Policy (April 2019), development issue 1-1, “Strengthening the Foundations for Economic Growth,” states that JICA will support the development of agricultural and marine product processing technology to effectively utilize local resources by dispatching Japan Overseas Cooperation Volunteers and accepting trainees. In Development Issue 1-5, “Capacity building in the field of coast guard,” the government considers the maintenance of maritime order to be essential for stable maritime trade and sustainable fishery, and considers capacity building in the field of coast guard, including measures against illegal fishing vessels, which have been increasing in recent years, to be an important issue.

It considers capacity building in the field of maritime security, including countermeasures against illegal fishing vessels, which have been increasing in recent years, as an important issue. In the past, it has implemented the International Cooperation Project for Fisheries Promotion and the Project for Maritime Education and Training Capacity Enhancement on Fisheries and Maritime Institute. Other cooperation achievements are shown in the table below.

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<sup>344</sup> <https://www.dfat.gov.au/geo/federated-states-of-micronesia/development-assistance/Pages/development-assistance-in-federated-states-of-micronesia>

<sup>345</sup> [https://www.maff.go.jp/j/budget/yosan\\_kansi/sikkou/tokutei\\_keihi/seika\\_h22/suisan\\_ippan/pdf/60100139\\_10.pdf](https://www.maff.go.jp/j/budget/yosan_kansi/sikkou/tokutei_keihi/seika_h22/suisan_ippan/pdf/60100139_10.pdf), p.15

<sup>346</sup> [https://www.maff.go.jp/j/budget/yosan\\_kansi/sikkou/tokutei\\_keihi/seika\\_h22/suisan\\_ippan/pdf/60100139\\_10.pdf](https://www.maff.go.jp/j/budget/yosan_kansi/sikkou/tokutei_keihi/seika_h22/suisan_ippan/pdf/60100139_10.pdf), p.15

Table 204 Major Japanese Cooperation in the Fisheries Sector in the FSM

Period	Project name
Dec 2008	Fishery development plan for small-scale fishermen in Pohnpei State
2006	Weno Port Development Plan
Aug 2004	Yap State Fishing Village Reconstruction Project
Aug 2000- Dec 2005	Micronesia Fishery Training Plan
2000	Takatik Fishing Port Development Project in Pohnpei State
1999	Takatik Fishing Port Development Project in Pohnpei State
1998	Kosrae State Small-scale Fishing Village Support Facility Construction Project
1995	Yap State Small-scale Fisheries Promotion Plan
1994	Chuuk State Small-scale Fisheries Promotion Plan
1993	Second Small-scale Longline Fishery Development Plan

Source: Ministry of Agriculture, Forestry and Fisheries report<sup>347</sup>

As for the cooperation needs of Japan, according to the information provided by the DoRD's Division of Marine Resources, there are expectations for human resource development training (including on-the-job training in the field of fisheries engineering at vocational training schools) to improve the capacity of fisheries management. In addition, there is a need for the introduction of an IT monitoring system (E-monitoring) to monitor fish catches.

<sup>347</sup> [https://www.maff.go.jp/j/budget/yosan\\_kansi/sikkou/tokutei\\_keihi/seika\\_h22/suisan\\_ippan/pdf/60100139\\_10.pdf](https://www.maff.go.jp/j/budget/yosan_kansi/sikkou/tokutei_keihi/seika_h22/suisan_ippan/pdf/60100139_10.pdf), p.16-17

#### 2.5.3.4. Mining

##### (1) Overview

The Department of Resources and Development (DoRD) is in charge of Deep Sea Minerals (DSM) matters, but there is no internal expertise or knowledge base. The DoRD is in charge of matters related to Deep Sea Minerals (DSM), but there is no internal accumulation of expertise<sup>348</sup>.

With regard to seabed minerals, there may be abundant deposits of Cobalt-rich crusts (CRC) and Seafloor massive sulphides (SMS) within the EEZ of the FSM.

In terms of seabed mineral laws, the National Seabed Resources Act of 2014, which came into effect in 2018, provides a comprehensive legal framework for the management and development of seabed minerals<sup>349</sup>.

##### (2) Development Project

There is no mention of the mining sector, including DSM, in the SDP 2004-2023.

##### (3) Issues and Measures

According to the World Bank report<sup>350</sup>, the challenges for the DSM sector include capacity building within the government, development of regulatory authorities (human resource and infrastructure capacity building), development of a national DSM policy, development of DSM environmental permitting guidance, and integration of DSM resource use into fiscal policy.

##### (4) Direction of Cooperation

###### ① Non-Japanese Partners

The FSM is a member of the International Seabed Authority. The EU and SPC launched a public consultation on deep-sea minerals as a deep-sea minerals project in 2015<sup>351</sup>.

###### ② Japan

There is no direct reference to mining in the Country Assistance Policy (April 2019).

No response was received from the DoRD regarding cooperation needs for Japan. As for the DSA, it is expected that attention will increase not only in the FSM but also in the Pacific as a whole, but at this point, the specific areas that can be supported are limited.

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<sup>348</sup> World Bank, 2017, Precautionary Management of Deep Sea Minerals, p. 70

<sup>349</sup> Blue Prosperity Coalition, 2021, Federated States of Micronesia Legal & Policy Framework Assessment Report, p.83

<sup>350</sup> World Bank, 2017, Precautionary Management of Deep Sea Minerals, p.70

<sup>351</sup> <https://www.spc.int/updates/news/2015/04/marshall-islands-consults-on-deep-sea-minerals>

### 2.5.3.5. Tourism

#### (1) Overview

The FSM has a tourism policy and tourism development planning body and a tourism marketing and promotion body for the federal government and each state, respectively.

Table 205 FSM's Tourism Policy and Development Planning Organizations and Tourism Marketing and Promotion Agencies

Tourism Policy and Development Planning	Tourism Marketing and Promotion
Federal: Department of Resource & Development Yap State: to be clarified Chuuk State: to be clarified Pohnpei State: Department of Resources and Development <a href="https://pohnpeistate.gov.fm/resources-anddevelopment/">https://pohnpeistate.gov.fm/resources-anddevelopment/</a> Kosrae State: Dept. of Resources & Economic Affairs	Federal: FSM Visitors Board <a href="http://www.visit-micronesia.fm/index.html">http://www.visit-micronesia.fm/index.html</a> Yap State: YAP Visitors Bureau <a href="https://www.visityap.com">https://www.visityap.com</a> Chuuk State: CHUUK Visitors Bureau <a href="https://www.visit-chuuk.com">https://www.visit-chuuk.com</a> Pohnpei State: POHNPEI Visitors Bureau <a href="http://www.visit-micronesia.fm/state/p_top.html">http://www.visit-micronesia.fm/state/p_top.html</a> Kosrae State: KOSRAE Visitors Bureau <a href="https://www.visitkosrae.com/index.php/en/">https://www.visitkosrae.com/index.php/en/</a>

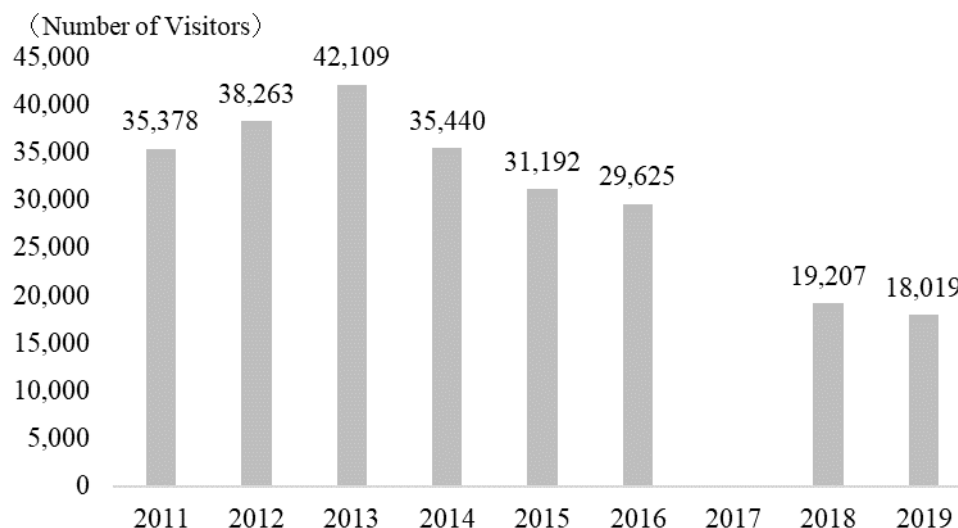
Source: JICA, January 2021, Progress Report on Information Collection and Verification of Tourism Development Sector in Oceania Region

The FSM is blessed with beautiful seas and atolls, and offers a variety of marine sports such as surfing and fishing tours. In the province of Pohnpei, the huge Nan Madol site, which is made up of 95 populated islands of various sizes, is registered as a World Cultural Heritage (and a World Heritage in Danger) site.

In addition, the area around Pohnpei Island in the provinces of Yap and Pohnpei has a strong traditional culture, including village meeting places, use of stone coins, and traditional dances of each village, which may have potential for development as a tourism resource, but on the other hand, the traditional society has two sides that are not positive towards visitors from outside. Most of the land is privately owned, and in some places it is not desirable for visitors to act without a guide. Currently, a Japanese NPO, Ecoplus, is trying to introduce ecotourism on Yap Island with local residents<sup>352</sup>.

<sup>352</sup> JICA, January 2021, Progress report on information collection and validation study on tourism development in the Pacific region

The number of visitors to the FSM has been on a downward trend since 2013. According to the Tourism Arrivals Report 2019 by the Pacific Tourism Organization (SPTO), tourism revenue in 2015 was 44.4 million USD, accounting for 17.7% of GDP<sup>353</sup>.



Source: FSM Statistics Office public data and Quarter 1, 2021 Visitor Arrivals Report (SPTO). Where figures differ between the two, the figures from the Statistics Office are used (in the SPTO report, 2015 and 2016 are 30,240 person and 29,485 person, respectively).

Figure 33 Number of Visitors to the FSM

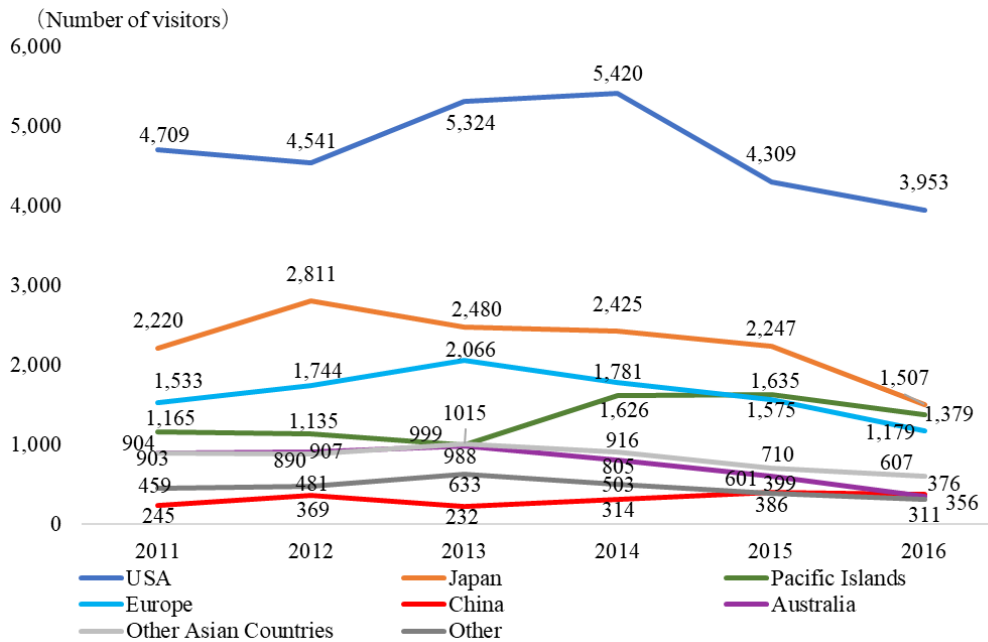
Looking at the percentage of visitors by purpose of visit in 2018, Leisure (29.0%), visiting friends and relatives (7.7%), business (about 36.2%), and other (about 27.0%), with business visitors being the most frequent<sup>354</sup>. The average length of stay for visitors by air in 2019 was 9.0 days<sup>355</sup>. In terms of the nationality of visitors for tourism and visitation, the top 2 countries, the US and Japan, accounted for more than 50% of the total number of visitors from 2011 to 2016.

<sup>353</sup> JICA, January 2021, Progress report on information collection and validation study on tourism development in the Pacific region

<sup>354</sup> SPTO, 2018, Annual Visitor Arrivals Report

<sup>355</sup> SPTO, 2018, Annual Visitor Arrivals Report





Source: FSM Statistics Office public data

Figure 34 Number of Visitors for Tourism and Visitation Purposes by Nationality

The number of accommodations in the FSM was 29 in 2015<sup>356</sup>. According to the flight information as of January 2019, the main access to FSM by air was from Guam, and all of the 4 states were connected to Guam. It was also connected to Hawaii as a stopover on the Island Hopper route between Guam and Hawaii. The only other direct flights were to Nauru, Papua New Guinea, and Palau, and in each case the number of flights was limited to a 1 to 2 times a week, so access by air was limited<sup>357</sup>.

## (2) Development Project

Among the 8 sectors listed in the SDP 2004-2023, the tourism sector has the highest number of strategic objectives as shown in the Table 140.

In addition, the National Tourism Policy was prepared with the support of the Asian Development Bank with the aim of developing a sustainable tourism industry by halting the decline in visitor numbers, taking into consideration the impact on society and the environment, and fairly distributing the benefits. As an implementation framework, the Tourism Action Plan 2015-2020 has been prepared, and the following six policies have been set forth.

<sup>356</sup> SPTO, 2020, Annual Visitor Arrivals Snapshot

<sup>357</sup> JICA, January 2021, Progress report on information collection and validation study on tourism development in the Pacific region

1. Improving governance and strengthening institutions
2. Increase investment in the tourism sector
3. Increased human resource development for tourism
4. Expansion and diversification of product development
5. Coordinated Destination Marketing
6. Strengthen international competitiveness

### (3) Issues and Measures

The following issues were identified through the interviews.

Table 206 Details of Issues Related to the Tourism Sector in the FSM and Measures to Address

Subject name	Details of the issue and countermeasures
Decline in tourist numbers due to COVID-19	✓ The impact of COVID-19 has taken a toll, including a decline in the number of tourists.

Source: Information provided by FSMDB

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

##### • Pacific Tourism Organization (SPTO)

The SPTO is headquartered in Suva, Fiji. As of October 2021, the SPTO has private sector members from the governments of the following 21 countries: American Samoa, Cook Islands, FSM, Fiji, French Polynesia, Kiribati, Nauru, RMI, New Caledonia, Papua New Guinea, Samoa, Solomon Islands, East Timor, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis & Futuna, Rapa Nui (Easter, etc.), China and 200 private sector members. It consists of marketing, research, sustainable tourism development, and finance/corporate services divisions, and works to improve access by air and sea, strengthen the Pacific brand, and develop government and private sector capacity for sustainable tourism.

In its Strategic Plan 2020-2024, the SPTO has identified 3 core priority areas: (1) regional marketing, (2) sustainable tourism planning and development, and (3) research and statistics. The innovative partnership priority areas are (1) cruise and yacht sector development, (2) supporting and promoting investment and product development, (3) improving air access and route development, and (4) capacity building and empowerment of the people of the Pacific.

The SPTO has also developed the “Pacific Tourism Statistics Strategy 2021-2030” with the support of PARIS 21, OECD and the New Zealand government, in response to the challenges of data quality,

consistency and comprehensiveness, as well as gaps in the statistical capacity of various agencies in one of the priority areas of tourism statistics. Statistics Strategy 2021-2030.

- UNWTO

Although the FSM is not a member of the UNWTO, the UNWTO Office in Japan and the Asia-Pacific Tourism Exchange Center (APTEC) have conducted a research project, “Sustainable Tourism Product Development in the Pacific Islands,” targeting the 11 Pacific countries including the FSM. In order to disseminate the results of the project, a workshop was held for high-level policymakers in each country in March 2021.

- ADB

ADB implemented the project “National Tourism Sector Development Framework and State Government Tourism Investment Plans” from 2013 to 2015 to support the preparation of the National Tourism Sector Development Framework and State Tourism Action Plans. The ADB has been supporting the preparation of the National Tourism Sector Development Framework and the National Tourism Action Plan. In addition, the “Tourism Sector Assessment for the North Pacific” project has been underway in the FSM, RMI, and Palau since 2020, with the objective of increasing awareness of potential opportunities and challenges for governments to build tourism industries in their countries. The project is currently underway.

- World Bank

Since 2017, the World Bank has been running the Pacific Possible campaign to examine the real transformational opportunities that exist for Pacific countries over the next 25 years and to identify the region's biggest challenges that require urgent action. One of the seven major themes is tourism, and in its 2016 publication “Tourism: Pacific Possible Background Paper No. 4”, the World Bank states that increasing demand from Chinese tourists, retirees, high-income earners, and cruise ships will accelerate growth in tourism numbers. The World Bank also issued "How Could the Pacific Restore International Travel?" on January 19, 2021, which outlined three possible phases of border crossing policies in Papua New Guinea and the Pacific countries.

- New Zealand

Ministry of Foreign Affairs and Trade (MFAT) is cooperating with SPC in the development of the Pacific Data Hub, and aims to collect and publish tourism data through SPC as well as SPTO in the future. In addition, the New Zealand Tourism Research Institute is planning to conduct an International Visitor Survey in the state of Yap from January 2020<sup>358</sup>.

- ② Japan

Although there is no specific development agenda for tourism in the Country Assistance Policy (April 2019), JICA has set up an “Industrial Development Program” under Development Agenda 1-1 “Strengthening the Foundations for Economic Growth” to support the development of human

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<sup>358</sup> JICA, Jan 2021, Progress report on information collection and validation study on tourism development in the Pacific region

resources in the private sector, including tourism, and to build an industrial base through issue-specific training and the dispatch of cooperative teams. As for tourism-related projects so far, JICA has been conducting the “Information Collection Survey on Tourism Development in the Pacific Region” since March 2020.

Regarding the cooperation needs for Japan, the DoRD did not provide any response. Support for human resource development, such as tourism promotion utilizing tourism resources unique to the FSM and dispatch of experts and cooperative teams in the field of tourism statistics and research, is considered.

## 2.5.4. Climate Change and Disaster Prevention

### (1) Overview

The Department of Environment, Climate Change and Emergency Management (DECCEM)<sup>359</sup>, the federal government's environmental management agency, is in charge of formulating policies related to climate change. It also serves as a contact point for various projects related to climate change by international organizations, and disseminates information on disasters as a disaster management center. The Environmental Protection Agency (EPA) and the Kosrae Island Resources Management Authority (KIRMA) are in charge of climate change, seawater and water quality management<sup>360</sup>. The National Weather Service Office, a meteorological observatory established by the US Oceanic and Atmospheric Administration, serves as a base for implementing climate change-related projects. In the FSM, there are stations in Chuuk, Yap, and Pohnpei States that monitor wind direction, wind power, rainfall, and precipitation. The data is sent to the office in Guam, where it is analyzed and information on weather forecasts and warnings is delivered to the offices in each state.

The agencies responsible for disaster preparedness management in each state are as follows:

Table 207 FSM State Disaster Management Agencies

State name	Name of Institution
Yap State	Yap Department of R&D Division of Climate Change Adaptation and Disaster Risk Management
Chuuk State	Chuuk Disaster Emergency Office
Pohnpei State	State Disaster Committee, Department of Public Safety
Kosrae State	Kosrae Disaster Coordination Office

Source: JICA data, Apr 2020, Basic Information on Environment, Climate Change and Disaster Management in Micronesia Region, Version 4, p.10

The major natural hazards in the FSM are floods, cyclones, storm surges, droughts, and heat waves<sup>361</sup>. Geographically, the FSM is located on the western side of the Pacific Ocean and has a tropical climate as it is usually strongly influenced by the northeast trade winds from December to April; the volcanic islands of Kosrae, Pohnpei, and Chuuk experience increased rainfall from from May to November, with a total annual rainfall of more than 1,016cm and a maximum 559mm per day. The westernmost province of Yap tends to experience frequent droughts as it is located in a monsoon-affected area<sup>362</sup>.

<sup>359</sup> The organization was changed from Office of Environment & Emergency Management (OEEM) in 2017.

<sup>360</sup> JICA materials, Apr 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.8-9

<sup>361</sup> World Bank and ADB, 2021, Climate Risk Country Profile Micronesia, p. 12-14

<sup>362</sup> World Bank and ADB, 2021 Climate Risk Country Profile Micronesia, p.2-3

As for trends in international cooperation on climate change, the Climate Change Act was adopted in 2013, indicating the importance of integrating climate change into all development activities. It also submitted the Second National Communication of the UNFCCC in 2015, the Nationally Determined Contribution (NDC) in 2016, and ratified the Paris Agreement in 2016<sup>363</sup>.

The FSM's goal for CO<sub>2</sub> emission reduction is to reduce emissions from the energy sector (including electricity and transport) by 28% by 2025 compared to 2000 levels<sup>364</sup>.

#### Climate Trends and Future Projections for the FSM

As for the climate trend in the FSM, the annual maximum temperature at Pohnpei, Yap, and Chuuk has increased by 0.10°C to 0.14°C per decade since the 1950s, indicating a general warming trend. In particular, the warming of the FSM has been accelerating since around 1980. As for precipitation, annual precipitation has been decreasing in Yap, Pohnpei, and Chuuk since the 1950s<sup>365</sup>.

As for future climate projections, the annual average precipitation projection is highly uncertain, but the temperature projection is likely to be warmer. In the FSM, under the highest CO<sub>2</sub> emission scenario, the average temperature is expected to increase by 1.3°C by the 2050s and 2.7°C by 2090 (the world as a whole is projected to increase by 3.7°C)<sup>366</sup>.

#### Impact on Natural Resources

In terms of water resources, one of the challenges of the FSM is the limited rainwater storage due to varying rainfall in the 4 provinces, which tends to be exacerbated by droughts and cyclones. In addition, useful traditional cultural and indigenous knowledge on effective water management is not being fully utilized, and the need for such knowledge is increasing for sustainable water resources as more and more sectors require fresh water, such as population growth, urbanization, and industrial development. As in other island countries, sea level rise also poses a threat to water resources<sup>367</sup>.

In terms of sea level rise, the FSM is in the region of the planet “experiencing the highest rate of sea level rise”: since 1993, the tropical western Pacific has seen an average annual sea level rise of 5-10 mm, while in the FSM it is estimated to exceed 10 mm per year, which is higher than the global average of 3 mm per year. There is a very high likelihood that sea level will continue to rise, with an estimated rise of 7-18 cm by 2030 and a potential rise of 41-90 cm by 2090 under the highest CO<sub>2</sub> emission scenario. Although the risk of tsunamis is considered moderate and the probability of a potentially damaging tsunami occurring within the next 50 years is estimated to be more than 10%, the need for countermeasures is emphasized because sea level rise is expected to increase the height of tsunamis and the potential for damage. Such changes in sea level cause coastal flooding and damage to groundwater resources, especially in low-lying atolls. It can also severely affect drinking

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<sup>363</sup> World Bank and ADB, 2021, Climate Risk Country Profile Micronesia, p.3

<sup>364</sup> JICA data, Apr 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.13

<sup>365</sup> World Bank and ADB, 2021, Climate Risk Country Profile Micronesia, p.7

<sup>366</sup> World Bank and ADB, 2021, Climate Risk Country Profile Micronesia, p.7-11

<sup>367</sup> World Bank and ADB, 2021, Climate Risk Country Profile Micronesia, p.16

water and food supplies by damaging crops and soils, and threaten not only physical resources and infrastructure, but also cultural norms, traditions, languages, and ancestral lands<sup>368</sup>.

As for coral reefs, carbonate mineral saturation, a measure of growth rate, has declined in the FSM from 4.5 to 3.9 between the late 18th century and 2000. It is expected to fall below the threshold required to maintain healthy coral reefs as early as 2030<sup>369</sup>.

Rising sea levels not only threaten humans living on Pacific islands, but also threaten the unique ecosystems of these islands. Indeed, the potential for species loss and extinction is increasing as climate change narrows the range of suitable habitat for species, such as inundation of low-lying islands that may deprive seabirds of refuge, and endemic species that live in limited areas on islands<sup>370</sup>.

#### Impact on Economic Sectors

With regard to agriculture, although commercial farming only accounts for about 1% of the local economy, small-scale agriculture is the main source of food and labor, and domestic agricultural activities are responsible for more than 60% of the region's food and about 50% of its labor force. In terms of land resource management, the nature of ownership of land and coastal areas is likely to affect landless people in the face of population growth and urbanization. In fact, illegal occupation is already a major problem in the state of Pohnpei. Considering the impacts and effects of climate change, it is important to note if and how such tenure patterns will affect future changes in land use, including land available for agricultural purposes<sup>371</sup>.

Tourism is an important economic sector, accounting for about 2% of the local economy in the FSM, and has the potential for long-term growth and comparative advantage. On the other hand, the twin threats of sea level rise and coastal erosion have the potential to degrade the quantity and quality of sandy beaches and, without appropriate action, reduce their attractiveness as a tourist destination. Currently, the rate of coastal erosion is not measured, and it is not clear what measures can be taken to address the loss of beaches; in terms of CO2 emissions reduction, efforts to reduce them in the tourism sector may increase the cost of tourism (e.g., international flights) and reduce the attractiveness of the destination<sup>372</sup>.

#### Impact on the Community

The effects of climate change, such as rising temperatures and sea levels, extreme weather events, and changes in precipitation, can disrupt freshwater supplies and agriculture, and affect food security and cultural traditions, further exacerbating vulnerability, especially in areas with limited arable land (especially on atoll islands) and those dependent on imported food. Global warming and heat waves are likely to affect the poorest segments of society. For example, manual laborers are most at risk of

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<sup>368</sup> World Bank and ADB, 2021 Climate Risk Country Profile Micronesia, p.16-19

<sup>369</sup> World Bank and ADB, 2021 Climate Risk Country Profile Micronesia, p.19-21

<sup>370</sup> World Bank and ADB, 2021, Climate Risk Country Profile Micronesia, p.21

<sup>371</sup> World Bank and ADB, 2021, Climate Risk Country Profile Micronesia, p.21

<sup>372</sup> World Bank and ADB, 2021, Climate Risk Country Profile Micronesia, p.22

productivity loss due to heat stress, and cash-strapped businesses cannot afford to buy air conditioning. Poor farmers and communities are likely to have less access to knowledge and skills about local reservoirs and irrigation infrastructure. The number of people suffering from heat-related medical conditions is likely to increase, especially affecting the elderly, children, the chronically ill, the socially isolated, and high-risk occupational groups<sup>373</sup>.

## (2) Development Project

In 2013, the FSM prepared the Nation Wide Integrated Disaster Risk Management and Climate Change Policy, which aims to promote development that actively integrates the management of climate-related disasters, including the pursuit of a secure, resilient and sustainable future, disaster risk management, climate change adaptation and investment in greenhouse gas emission reduction<sup>374</sup>. According to information provided by the Emergency Division of DECCEM, a Disaster Response Plan was also approved in 2016, which includes provisions for national and inter-state disaster response management and access to international assistance. At the state level, Joint State Action Plans for Disaster Risk Management and Climate Change (JSAPs) have been prepared.

According to information provided by CCD, a climate change strategic action plan was supposed to be developed, but was not completed due to COVID-19 and they expect to make progress after the travel ban is lifted.

## (3) Issues and Measures

According to the information provided by CCD, there is a shortage of human resources in the government sector, as talented people with knowledge, expertise, and enthusiasm for climate change tend to work for NGOs and international projects that offer better salaries and benefits. In addition, many of those working in the field of climate change do not have a degree in climate change, although they hold related degrees in environmental studies or oceanography. There is also a need to review the JSAPs.

In addition, according to the information provided by the Emergency Division of DECCEM, there is a lack of capacity building opportunities and DRR skills to secure human resources for disaster management. It is also necessary to provide educational opportunities for FSM citizens on disaster preparedness.

## (4) Direction of Cooperation

### ① Non-Japanese Partners

- World Bank

In collaboration with the Government of Japan, and with funding from the Global Facility for Disaster Reduction and Recovery (GFDRR), the World Bank conducted a vulnerability assessment of natural disaster and climate change risks, design of climate resilient power generation systems,

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<sup>373</sup> World Bank and ADB, 2021 Climate Risk Country Profile Micronesia, p.22-24

<sup>374</sup> Nation Wide Integrated Disaster Risk Management and Climate Change Policy, 2013, p.2



assessment of power generation companies' disaster prevention systems and identification of issues, and knowledge sharing within the Pacific island region<sup>375</sup>.

- UNDP

Under the Disaster Resilience for Pacific Small Island Developing States project, which aims to enhance disaster preparedness and climate resilience by strengthening disaster prevention facilities and infrastructure, cooperation on disaster prevention and climate change countermeasures is being implemented in the FSM, RMI, and Palau under a scheme funded by the Government of Japan and implemented by UNDP. In the FSM, the project “Enhancing Disaster and Climate Resilience in the Federated States of Micronesia through Improvement Disaster Preparedness and Infrastructure” was launched in March 2019. The project includes the provision of rescue and disaster waste management equipment to Kosrae, portable water tanks to Chuuk, and construction of the National Emergency Operation Center (NEOC) and Pohnpei State Emergency Operation Center (PSEOC)<sup>376</sup>.

- Green Climate Fund

An Enhancing Direct Access project aimed at strengthening resilience to climate change by strengthening the capacity of Local Authorities was implemented for USD 15 million. It also implemented the National Adaption Plan aimed at strengthening domestic resilience for access to international climate change finance at USD 300 million<sup>377</sup>.

- ADB

ADB is providing assistance as shown in the table below.

Table 208 List of ADB's Projects in the Field of Climate Change and Disaster Risk Reduction in the FSM

Period	Project name
2020-2025 Planned	Support to Climate Resilient Investment Pathways in the Pacific
2020-2024 planned	Pacific Disaster Resilience Program, Phase 3
2013-2017	Implementation of the Strategic Program for Climate Resilience: Pacific Region
1993	Watershed Management and Environment
1993	Marine Resources Management and Conservation

Source: ADB website

<sup>375</sup> JICA, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p. 23-24.

<sup>376</sup> JICA, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.20.

<sup>377</sup> JICA, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.22

- USAID

With partners such as DECCEM of the FSM and the Micronesia Conservation Trust (MCT), which supports conservation-related activities in the Micronesian region, it provides human resource development and assistance in obtaining funding for the UN Adaptation Fund and the Green Climate Fund. It is also supporting the preparation of proposals for the Green Climate Fund using the Simplified Approval Process (SAP). In April 2021, the project secured 9.4 million USD in Green Climate Fund funding by supporting the development of strategies to improve climate change resilience and enhance farmers' food security<sup>378</sup>.

- Australia

From 2012 to 2016, through the Climate Adaptation, Disaster Reduction and Education Program (CADRE), USD 3.6 million program was implemented for 50 communities in Micronesia and the Marshall Islands, including the implementation of climate change and disaster risk reduction education programs in schools, support for the development of climate and disaster risk management plans in schools, and public information campaigns<sup>379</sup>.

- China

According to the information provided by CCD, FSM has not currently receiving any grants or concessional loans from China, but it has been considering obtaining grants from China to fund our climate change adaptation and activities.

- ② Japan

In the Country Assistance Policy (April 2019), it is stated in the development issue 2-2 “Climate Change Measures” that the government will support the strengthening of the capacity to cope with climate change and natural disasters by providing equipment and training, while taking into account the trends of other donors and international organizations.

In the past, in addition to the achievements listed in the table below, Japan has also implemented a disaster response and disaster prevention support project through UNDP (USD 7.4 million) and training in the field of climate change countermeasures.

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<sup>378</sup> <https://reliefweb.int/report/micronesia-federated-states/usaids-assists-federated-states-micronesia-and-palau-secure-104>

<sup>379</sup> <https://www.dfat.gov.au/about-us/publications/Pages/australias-commitment-to-climate-change-action-in-north-pacific>

Table 209 Major Japanese Cooperation in the Climate Change and Disaster Reduction Sector in the FSM

Start date	Project name
Official Development Assistance Grants	
Sep 2015	Strengthening of Multi-Hazard Risk Assessment and Early Warning Systems in Pacific Island Countries (UN Partnership/ESCAP Implementation)
Technical Cooperation	
Mar 2017	Pacific Region Hybrid Power System Installation Project
Grassroots Technical Cooperation	
Oct 2019	Solar System Utilization Support Project on Fonoton Island, Chuuk State, Federated States of Micronesia

Source: Ministry of Foreign Affairs website IICA website

In addition to the above, the government has provided grant aid such as the provision of equipment and products related to disaster prevention (up to JPY 300 million in 2015) for the purpose of reconstruction from the damage caused by Typhoon Maysak at the end of March 2015, and funding for the purchase of materials and equipment necessary for adaptation to climate change (up to JPY 100 million in 2015)<sup>380</sup>.

As for the cooperation needs from Japan, according to the information provided by the CCD, the dispatch of experts with rich expertise and experience in climate change adaptation and mitigation is expected. There is also a need for training on climate change adaptation and mitigation for young staff.

According to the information provided by the Emergency Division of DECCEM, there is an expectation for assistance in the provision of Early Warning System, Disaster Triage and Disaster Education to the public.

<sup>380</sup> [https://www.mofa.go.jp/mofaj/gaiko/oda/data/gaiyou/odaproject/pacific/micronesia/index\\_01.html](https://www.mofa.go.jp/mofaj/gaiko/oda/data/gaiyou/odaproject/pacific/micronesia/index_01.html)

## 2.5.5. Environmental Conservation

### (1) Overview

The FSM government's environmental management agencies, such as the Department of Environment, Climate Change and Emergency Management (DECCEM)<sup>381</sup>, Environmental Protection Agency (EPA), Kosrae Island Resources Management Authority (KIRMA), etc., formulate policies and regulations for environmental management in each state, conduct environmental pollution monitoring, and carry out EIA procedures<sup>382</sup>. In addition, the Department of Transportation, Communication & Infrastructure (DoTCI) is in charge of public works in each state and also manages waste disposal sites.

The Micronesian Challenge (MC), a part of the environmental conservation efforts, is an initiative by the Micronesian region (Palau, FSM, RMI, Guam, and the Northern Mariana Islands) to conserve biodiversity and sustainably use natural resources. The initiative was agreed upon in 2006 with the aim of placing 30% of their coastal waters and 20% of their terrestrial areas under effective environmental protection by 2020. Funding for the initiative is provided by the Micronesian National Trust for Nature Conservation, which has set a target amount for each country to support by 2020 (USD 55 million for the region as a whole)<sup>383</sup>.

### (2) Development Project

According to the FSM's Infrastructure Development Plan FY2016-FY2025, the following are the infrastructure development directions for the environmental protection sector<sup>384</sup>.

1. Meet the demand for solid waste infrastructure in an effective and efficient manner.
2. Evaluate and implement technically appropriate solid waste management systems.
3. Reduce the amount of solid waste disposal by maximizing recycling and sorting opportunities and minimizing the land area required.
4. Prevent solid wastes from adversely affecting the terrestrial and marine environments.

Each state has also set a direction for infrastructure development in line with the National Infrastructure Development Plan described above, and has prepared the following list of priority projects.

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<sup>381</sup> The organization was changed from the Office of Environment & Emergency Management (OEEM) in 2017

<sup>382</sup> JICA materials, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.8-9.

<sup>383</sup> JICA materials, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.13-14.

<sup>384</sup> Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume 1 Plan Outline, p.16

Table 210 List of Priority Projects in The Environmental Conservation Sector in Chuuk State

Project name	Required amount (USD)
Weno Solid Waste Management Facility	3,500,000
Total amount required	3,500,000

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume 3 Chuuk State Infrastructure Development Plan FY2016-FY2025, p.11

Table 211 List of Priority Projects in the Environmental Conservation Sector in Kosrae State

Project name	Required amount (USD)
Solid Waste Management Expansion & Consolidation	250,000.
Total amount required	250,000.

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume Kosrae4 State Infrastructure Development Plan FY2016-FY2025, p.113

Table 212 List of Priority Project in the Environmental Conservation Sector in Pohnpei State

Project name	Required amount (USD)
Improve Management/Operation of Dekehtik Site - Phase 1	2,500,000
Improve Management/Operation of Dekehtik Site - Phase 2	1,500,000
Improve Solid Waste Collection and Transport	500,000
Total amount required	4,500,000

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume Pohnpei5 State Infrastructure Development Plan FY2016-FY2025, p.115

Table 213 List of Priority Projects in The Environmental Conservation Sector in Yap State

Project name	Required amount (USD)
Solid Waste Management Improvements - Short Term	700,000
Solid Waste Management Improvements - Long Term	3,000,000
Total amount required	3,700,000

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume Yap6 State Infrastructure Development Plan FY2016-FY2025, p.13

### (3) Issues and Measures

According to the information provided by Division of Environment & Sustainable Development in the DECCEM, the government recognizes the importance of establishing an effective environmental management system, and that a clear division of roles within the government and between the public

and private sectors, an appropriate and well-defined organizational structure, adequate and skilled human resources, a long-term operating budget, effective environmental laws, and relevant facilities and equipment are essential. Particularly in terms of human resources, there is a challenge in improving policy development capacity for waste management planning, landfill management, collection and disposal, and recycling. In addition, competent personnel in the FSM tend to migrate to the US. As a result, there is a shortage of experts, especially in environmental impact assessment, environmental engineers and environmental lawyers, which makes it difficult to enact laws and regulations and prosecute environmental damage and violations of marine and terrestrial protected areas in a timely manner.

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

- SPREP (Secretary of Pacific Regional Environmental Programme)

Building National and Regional Capacity to Implement Multilateral Environment Agreements (MEA) by Strengthening Planning and State of Environment Assessment and Reporting in the Pacific was implemented from September 2016 to January 2021 to support 15 countries in the Pacific region, including three in Micronesia, in building national and regional capacity to implement Multilateral Environment Agreements (MEA) by Strengthening Planning and State of Environment Assessment and Reporting in the Pacific. (Budget: USD 4.32 million). In addition, as part of the Biodiversity and Protected Areas Management Project (BIOPAMA) Phase 2, from February 2018 to September 2023, support will be provided for the development and analysis of information on biodiversity, natural resource management, and protected area management that can be accessed by stakeholders in 14 countries in the Pacific region, including three countries in Micronesia (budget: USD 1.62 million)<sup>385</sup>.

In Pohnpei State, the Pohnpei Waste Management Service (PWMS) takes waste oil (collected from ships, not from power plants) for 1 USD per drum. The first export to New Zealand was conducted in July 2019. However, SPREP's support was only for the first transport; thereafter, Pohnpei State would need to secure its own budget, but after the transport around July 2019, the second transport was not conducted until March 2020<sup>386</sup>.

##### ② Japan

In the Country Assistance Policy (April 2019), it is stated in the development issue 2-1 “Environmental Conservation” that JICA will support efforts for waste management and other issues through J-PRISM2, NGO activities, dispatch of Japan Overseas Cooperation Volunteers, acceptance of trainees, and provision of facilities and equipment.

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<sup>385</sup> JICA data, 2020 year and year, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, 4Version 1, p.36

<sup>386</sup> JICA data, 2020 year and year, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, 4Version 1, p.25

As for the wide-area support for the three Micronesian countries (FSM, RMI, Palau), the “Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)” was implemented from February 2011 to February 2016. The successor project, “Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries Phase 2 (J-PRISM II)” is scheduled to be implemented from February 2017 to February 2022<sup>387</sup>.

In addition to the projects listed in the table below, the following projects have been implemented in the past: a project to counter oil leaks from warships in Track Atoll, Micronesia; training in the field of supporting the formation of a recycling-based society; and grassroots human security grant aid in the environmental field (provision of dust trucks, etc.; 44 million yen).

Table 214 Japan's Major Projects in the Environmental Protection Sector in the FSM

Start date	Project name
Technical Cooperation	
2017	Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries Phase II (J-PRISM 2)
Grassroots Technical Cooperation	
2017	Improvement of Garbage Problem in Pacific Island Areas -Collaborative 2R Promotion Project in Chuuk State, Micronesia-
2016	Sustainable Tamil, Yap, FSM: Waste water and solid waste

Source: JICA website

As for the cooperation needs from Japan, according to the information provided by Division of Environment & Sustainable Development in the DECCEM, there is an expectation that Japan will continue to provide support for training for environmental protection officers, various technical assistance related to the environment (environmental policy, 3R promotion, landfill management, recycling, etc.), and training for government officials on waste management programs.

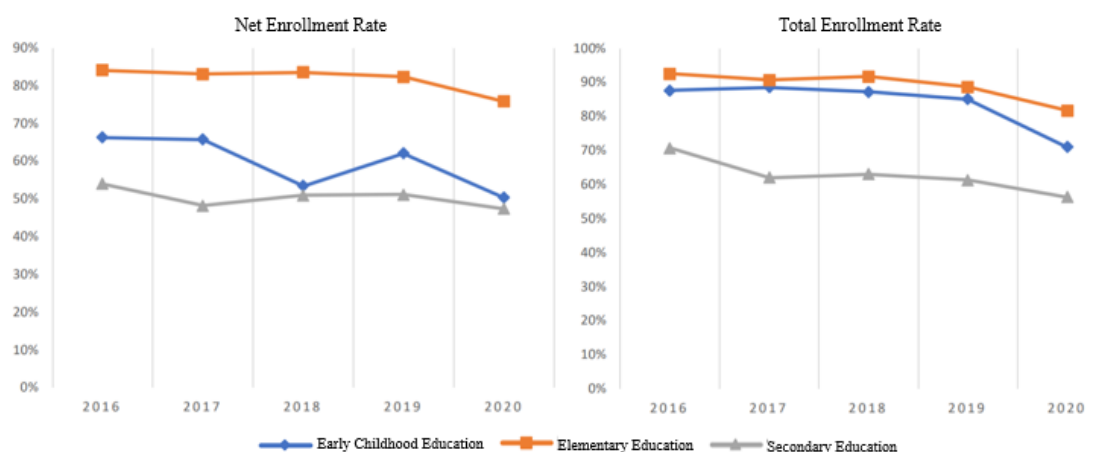
<sup>387</sup> JICA data, 20204year and year, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, 4Version 1, p..31

## 2.5.6. Education and Health

### 2.5.6.1. Education

#### (1) Overview

The education sector of the FSM is under the jurisdiction of the Department of Education. The FSM education system is based on the U.S. model and has four levels: early childhood education (3-5 years old), primary education (6-13 years old) (grades 1-8), secondary education (14-18 years old) (grades 9-12), and higher education. The higher education provider is The College of the Federated States of Micronesia (COM-FSM), which has campuses in each state and admits students who pass a test after completing grade 12. COM-FSM offers bachelor's degrees, junior college degrees, and short-term technical and vocational programs for career education. The Bachelor of Education program began in 2019. Prior to this, students had to attend a university outside the country to obtain a bachelor's degree<sup>388</sup>. The average literacy rate in FSM is 90%<sup>389</sup>. Enrollment rate in 2020 is lower than 2019 due to COVID-19. The net enrollment rate is 50% for early childhood education (50% for males and 51% for females), 76% for primary education (75% for males and 77% for females), and 47% for secondary education (42% for males and 53% for females). Gross enrolment rates are 71% for early childhood education (71% for boys and 71% for girls), 82% for primary education (81% for boys and 83% for girls), and 56% for secondary education (51% for boys and 62% for girls). Boys tend to drop out earlier than girls, and the Ministry of Education has begun collecting data related to the reasons for dropout.



Source: Department of Education, FSM Education Indicators November 2020, Version 3, p.1.4 • 1.7

Figure 35 Trends in Enrollment Rates for Early Childhood, Primary, and Secondary Education<sup>390</sup>

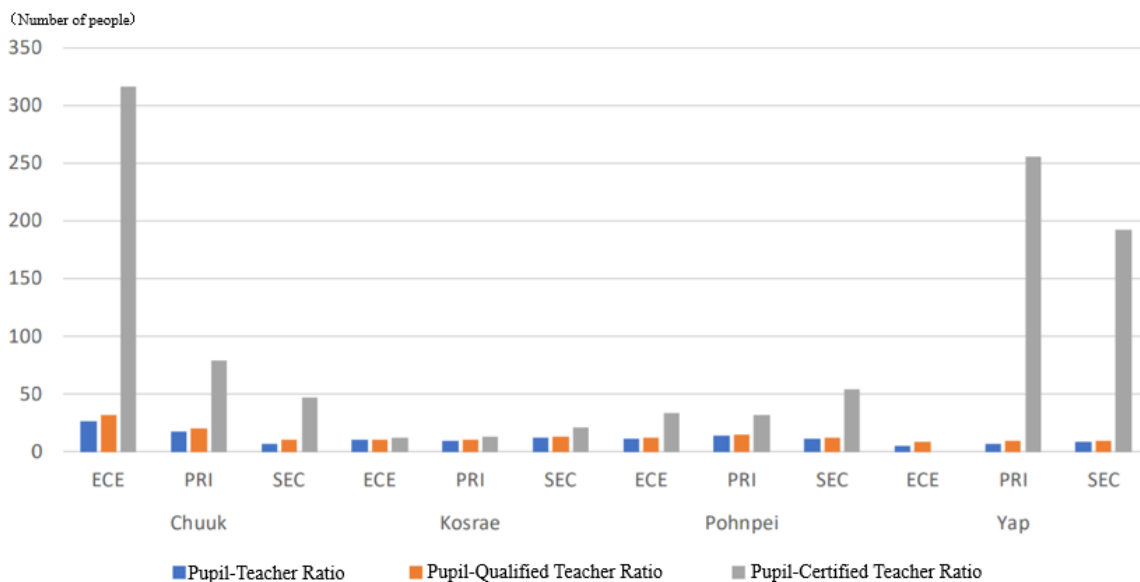
<sup>388</sup> Department of Education, Education Sector Strategic Development Plan 2020-2024

<sup>389</sup> Department of Education, Education Sector Strategic Development Plan 2020-2024

<sup>390</sup> The net enrolment ratio is the ratio of the number of students enrolled in school divided by the population of the relevant school age group, and never exceed 100%. The gross enrolment ratio is the number of students enrolled in school divided by the corresponding school-age population, and may exceed 100% if there are students outside the official school age group due to reasons such as school retention.



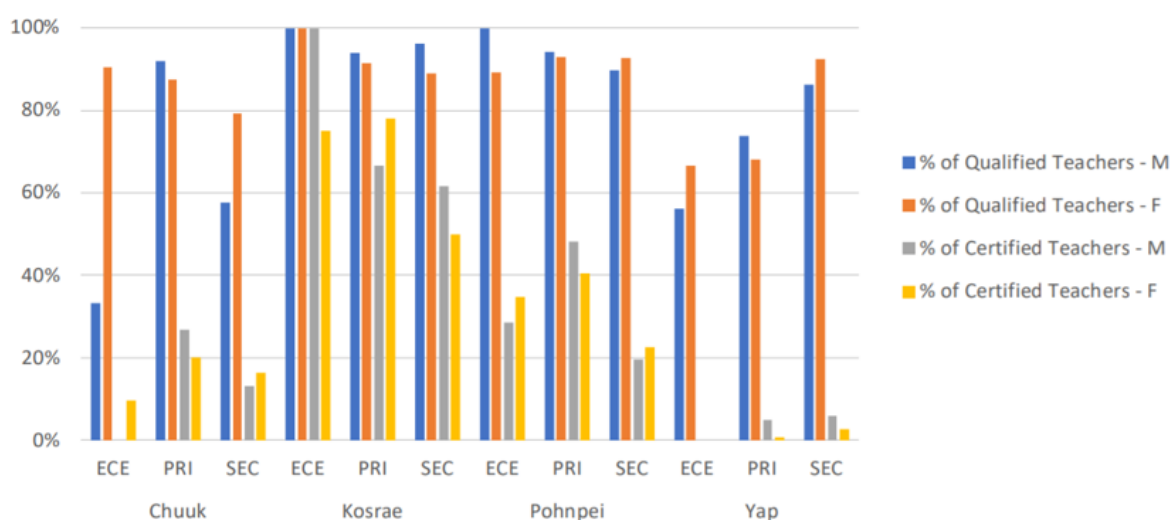
Graduation rates are 96% for males and 97% for females in primary education, and 97% for males and 96% for females in secondary education. In terms of the student-teacher ratio (the higher the ratio, the more students a teacher is responsible for), the ratio of certified teachers who have taken and passed the national standardized student-teacher examination is the highest in all states and at all levels of education, and the shortage of certified teachers is particularly pronounced in Chuuk and Yap states. According to the Education Law, in order to teach in FSM schools, one must have passed the national standardized test, but only 35% of FSM teachers have passed the test, and the remaining 65% remain employed because the demand for teachers exceeds the number who have passed the test. Of this 65% of teachers who have not passed, many have not yet taken the test, as the test was just introduced in 2019 and is being rolled out in phases in each state. In addition, of the 113 teachers with a final education of high school (secondary school) completion who are not considered to meet the qualifications standard for education, 85 are from Yap State.



Source: Department of Education, FSM Education Indicators November 2020, Version 3, p.4.1

Figure 36 Student-Teacher Ratio, by Level of Education and State

The percentage of qualified and certified teachers varies among the provinces, with Chuuk and Yap States having lower percentages of both qualified and certified teachers than Kosrae and Pohnpei States.



Source: Department of Education, FSM Education Indicators November 2020, Version 3, p.4.4

Figure 37 Percentage of Teachers Who Are Qualified and Certified, by Level of Education and by State

With regard to public funding of education, both the share of spending in national expenditures and the share of spending in GDP are on a downward trend, but the FSM is high compared to the global average.

Table 215 Information on State Spending on Education

Item	2016	2017	2018
Spending on education (USD)	45,126,490	45,668,979	39,375,455
Share of education spending in total state spending (FSM)	21.7	19.2	17.3
Education spending as a percentage of national spending (worldwide)	13.971%.	14.5%.	13.828%.
Education spending in percentage of GDP (FSM)	13.7	13.0	10.7%.
Education spending in percentage of GDP (world)	4.165%.	4.328%.	4.256%.

Source: Department of Education, Education Sector Strategic Development Plan 2020-2024, p84-85 and World Bank website

## (2) Development Project

The Department of Education has developed the Education Sector Strategic Development Plan 2020-2024 and adopted as the overall goal of the plan “to improve the quality of learning at all levels of education, particularly in literacy (reading and computational skills), in safe and climate-smart learning environments. Improve the quality of learning, especially in literacy (reading) and

computational skills, in safe and climate-smart learning environments”. In order to achieve this goal, the following 5 sub-goals have been defined:

1. Providing quality, relevant programs for learners at all levels of education.
2. Improving the quality of teachers and education at all levels
3. Maintain a consistent performance monitoring and data-driven decision-making system
4. Strengthen community participation in school management
5. Ensuring that education is relevant to the lives and aspirations of FSM people

In addition, according to the Infrastructure Development Plan FY2016-FY2025, the following are the infrastructure development directions for the education sector.

1. Ensure the enrichment and diversity of learning experiences.
2. It can improve the interest and morale of students and teachers, thereby increasing the effectiveness of education and significantly increasing the retention rate of students until they graduate from elementary or middle school.
3. Removing constraints on access to high school education for all elementary school graduates and providing a range of post-secondary opportunities for all high school graduates who wish to further their education.
4. Continue to support and strengthen private educational institutions nationwide.
5. It is supported by a facility improvement program that addresses the need to maintain, renovate, and build new facilities to support quality student instruction.
6. Supported by equipment maintenance guidelines.
7. Resilience to the effects of potential natural disasters and climate change.

In order to achieve the above, the following list of priority projects has been developed (as of October 2015)

Table 216 List of Priority Projects in the Education Sector of the FSM

Project name	Required amount (USD)
COM-FIT	1,283,000
All Solar projects	2,000,000
National Campus Student Center and New Health clinic	5,430,000
National Campus Marine and Applied Science Building	2,100,000
National Campus Track and Field & Baseball Field	3,871,000
National Campus Upgrade to Gymnasium	400,000
Chuuk Nantaku Campus Design (Buildings 1&2)	2,169,000
Chuuk - Nantaku Campus Buildings 1&2	14,500,000
Kosrae Campus Multi-Purpose Building Stage-1	5,340,000
Kosrae Campus Multi-Purpose Building Stage-2	2,900,000
Kosrae Campus Learning Resource Center	3,100,000
Pohnpei Campus VOCED Center	5,850,000
Pohnpei Campus VOCED Center-2	1,000,000
Pohnpei Campus Administration and Faculty Offices	5,600,000
Yap Campus VOCED Center-1	3,492,000
Yap FSM-FMI Campus Infrastructure Upgrade	1,133,000
Yap Campus New Learning Resource Center	4,400,000
Yap FSM-FMI Campus Classroom	800,000
Yap Campus New Classroom Block	2,700,000
Yap FSM-FMI Campus Road and Utility Improvements	1,200,000
<b>Total amount required</b>	<b>69,268,000</b>

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume 2 National Infrastructure Development Plan FY2016-FY2025, p.10

The FSM's Infrastructure Development Plan FY2016-FY2025 also sets the direction for infrastructure development in each state in line with the National Infrastructure Development Plan mentioned above, and the following list of priority projects has been prepared.

Table 217 List of Priority Projects in the Education Sector in Chuuk State

Project name	Required amount (USD)
Chuuk Lagoon Elementary & High Schools - Phase 1	5,852,000
Northwest Elementary & High Schools - Phase 1	6,454,000
Mortlocks Elementary & High Schools - Phase 1	240,000
Chuuk Schools Land Definition and Acquisition	3,000,000
Chuuk Lagoon Elementary & High Schools - Phase 2	19,976,000
Northwest Elementary & High Schools - Phase 2	2,364,000
Mortlocks Elementary & High Schools - Phase 2	6,848,000
Total amount required	44,734,000

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume 3 Chuuk State Infrastructure Development Plan FY2016-FY2025, p.14

Table 218 List of Priority Projects in the Education Sector in Kosrae State

Project name	Required amount (USD)
Malem Elementary School	2,000,000
School Facilities Improvements	1,000,000
Total amount required	3,000,000

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume Kosrae4 State Infrastructure Development Plan FY2016-FY2025, p.16

Table 219 List of Priority Projects in the Education Sector in Pohnpei State

Project name	Required amount (USD)
Elementary Schools Phase 1a	24,159,000
Elementary Schools Phase 1b	10,703,000
Elementary Schools Phase 2	4,205,000
High Schools Phase 1	10,059,000
High Schools Phase 2	19,800,000
School Sanitary Facilities	900,000
Covered Gymnasium Facilities in all Municipalities	3,300,000
Total amount required	73,126,000

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume Pohnpei5 State Infrastructure Development Plan FY2016-FY2025, p.19

Table 220 List of Priority Projects in the Education Sector in Yap State

Project name	Required amount (USD)
Woleai High School - New buildings and Renovations	1,800,000
Yap High School - Phase 2 Improvements	4,320,000
Colonia Middle School Improvements - Phase 1	2,400,000
Colonia Middle School Improvements - Phase 2	1,300,000
Yap School Improvements	1,950,000
Outer Island Early Childhood Education Improvements	2,174,000
DOE Curriculum Building	1,430,000
Outer Island School Toilet Facilities	180,000
Euripik Community School Reconstruction	100,000
<b>Total amount required</b>	<b>15,654,000</b>

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume Yap6 State Infrastructure Development Plan FY2016-FY2025, p.16

### (3) Issues and Measures

The following issues were identified based on the information obtained from the desk survey.

Table 221 Details of Issues and Measures related to the education sector

Subject name	Details of the issue and countermeasures
Lack of teaching materials and facilities	✓ There is a lack of appropriate learning and teaching materials (textbooks, reading materials, worksheets, supplies). There is an extreme shortage of materials commercially available in the local language. There is also a lack of purpose-built facilities (science labs, kitchen, etc.).

Source: Education Sector Strategic Development Plan 2020-2024, p.27 (FSM Ministry of Education)

According to the information provided by the Ministry of Education, the need for a research department for up-to-date education and the lack of connectivity between the education system and each school were also identified as challenges. In addition, all schools, including those in remote areas, need to be connected to the internet.

(4) Direction of Cooperation

① Non-Japanese Partners

• Pacific Community (SPC)

The Educational Quality and Assessment Programme (EQAP) is working to focus on ICT for education and educational data, quality and systems management.

• The Pacific Regional Education Framework (PacREF)

PacREF is a regional policy guide endorsed by 15 members of the Pacific island countries at the Forum Education Ministers' Meeting in 2018, and PacREF 2018-2030 was adopted at this meeting. PacREF is a regional initiative designed to help Pacific developing member countries address the ongoing challenge of improving education quality, and has 17 Pacific countries, including the FSM, as members. It has four policy areas: quality and relevance, learning pathways, student outcomes and wellbeing, and teaching.

• ADB

In ADB's Strategy 2030, which defines the guiding principles of the ADB's efforts, the ADB has identified 7 priority issues in the Asia and Pacific region, one of which is "addressing persistent poverty and reducing inequality," and the other is "improving education and training.

Ongoing projects include Strengthening Education in the Pacific Region, which will fund the first phase of PacREF (2019-2022) and support the establishment of a regional repository and learning management platform for open, distance, and flexible learning. The "Improving the Quality of Basic Education in the North Pacific" project will provide support for teachers, learning assessment, literacy and numeracy, and strengthening school governance and management.

Table 222 List of ADB Projects in the Education Sector

Period	Project name
2012-2015	Quality Primary Education in the North Pacific
2014-2020	National Education Planning and Management
2016-2017	Improving the Quality of Basic Education in the North Pacific
2017-2024	Improving the Quality of Basic Education in the North Pacific
2018-2025	Strengthening Education in the Pacific Region

Source: ADB website

• Global Partnership for Education (GPE)

Since November 2020, it has been funding the FSM's "Covid-19 Education Sector Response" program. It is also providing financial support to the ADB's Strengthening Education in the Pacific Region program mentioned above.

• Australia

One of the strategic objectives of Australia's bilateral assistance to the FSM is to improve the quality of basic education, and together with the ADB, Australia is funding “The Improving Quality Basic Education Project” and deploying education experts to support the Ministry of Education.

② Japan

In the Country Assistance Policy (April 2019), development issue 1-4 is to strengthen educational functions, and the policy is to provide support focusing on improving the quality of teachers and educational facilities, with a focus on primary math education.

As for the needs for cooperation from Japan, there are expectations for cooperation in improving Internet connectivity for schools in remote areas and support for improving the skills of teachers (especially in IT literacy).



## 2.5.6.2. Health

### (1) Overview

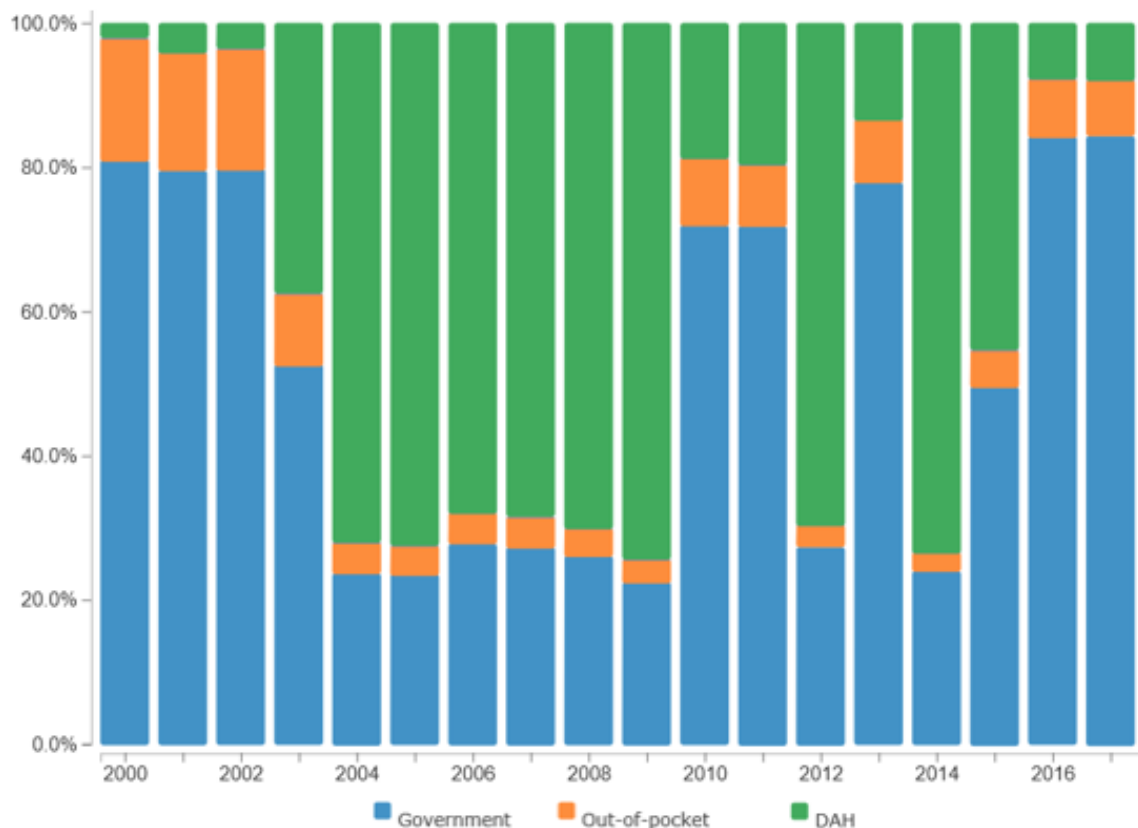
The following is an overview of the roles and status of health service provider organizations in the FSM and the service delivery system and decentralization.

Table 223 Overview of the Roles and Status of Health Care Service Delivery Institutions, Delivery Systems, and Decentralization

Item	Overview
Role and status of service provider organizations	The Department of Health and Social Affairs (DoHSA) oversees the health program and is responsible for enforcement and compliance with all laws. The department's Health Division is also responsible for health planning, donor coordination, technical and training assistance, and public health programs funded by the US Department of Health and Human Services. Access to and delivery of quality health services is largely dependent on the governance and management of the Health Division. The State Health Department will provide medical and public health services through hospitals, community health centers and clinics.
Service delivery system and decentralization	Health systems operate independently in each province. With the exception of private clinics, health services receive a very large share of funding from the state government. There are 6 private clinics and 1 private hospitals in the country.

Source: JICA, June 2021, Final Report of the Information Collection and Confirmation Study on Strengthening Maternal and Child Health and Community Health in the Pacific Region

The share of health expenditure is government (84.34%), self-financing (7.78%), and development assistance (7.87%) as of 2017. The ratio of government to development assistance varies from year to year, but the self-financing ratio has been kept low with no significant change.



Source: Global Data Health Exchange (GDHx), Institute for Health Metrics and Evaluation

Figure 38 Share of Health Care Expenditure

Although healthcare expenditure as a percentage of GDP is relatively high, per capita healthcare expenditure is low, and the SDG targets for both neonatal mortality and under-five mortality have not been achieved. The number of doctors per capita in 2010 is extremely low, although the data is somewhat outdated. The obesity rate is extremely high, and NCDs are the leading cause of death.

Table 224 Basic Information on Health Care

Item	FSM	Whole world
Health care spending as % of GDP (2018) WHO recommendation is at least 5%	12.591%	9.857%
Medical Expenditure per person (2018)	USD 415.817	USD 1,111.082
Average life expectancy (2019)	67.883 years old	72.742 years old
Neonatal mortality rate per 1,000 population (2019) SDG target: Less than 12	15.9	17.5
Under-five mortality rate per 1,000 live births (2019)	29.4	37.7

Item	FSM	Whole world
SDG target: Less than 25		
Number of physicians per 1,000 population	0.177 (2010)	1.566 (2017)
Number of nurses + midwives per 1,000 population (2018) WHO recommended number of doctors + nurses + midwives in 4.45	2.043	3.816
Adult obesity rate (BMI $\geq$ 30) (2016)	45.8% Male:40.1% Female:51.5%	N/A
Hypertension ratio (SBP $\geq$ 140 or DBP $\geq$ , 90, over 18 years old) (2015)	25% Male:26.6% Female:23.2%	N/A
Diabetes ratio (% of population in 20-79 years old (2019)	11.9%	8.812%

Source: World Bank, WHO website

Table 225 Ranking of Diseases That Cause Death

Rank	2000	2019
1	Ischemic heart disease (14.70%)	Ischemic heart disease (18.43%)
2	Stroke (10.93%)	Diabetes (11.61%)
3	Diabetes (8.06%)	Stroke (11.35%)
4	Lower respiratory tract infection (5.51%)	Chronic kidney disease (5.18%)
5	Diarrheal disease (4.35%)	HIV (4.83%)

Cancer does not rank in the top 5 when aggregated by individual disease, but the total of all cancer-related deaths is approximately 11.893% (2019) .

Source: Global Data Health Exchange (GDHx), Institute for Health Metrics and Evaluation

## (2) Development Project

In 2014, the Health Summit was held to improve and sustain health care development and unify policies, laws, initiatives, commitments, and programs at the national and state levels, and its recommendations were translated into the Framework for Sustainable Development in the Federated States of Micronesia: 2014-2024. The vision is to ensure that the people and communities are healthy and enjoy universal access to quality health services, and the strategic framework sets out the following 6 goals<sup>391</sup>.

1. Ensure accountability, sustainability, and quality of health service delivery
2. Achieve universal access to an essential package of health care services
3. Increase financial sustainability and ensure universal access to essential health services.

<sup>391</sup> JICA, June 2021, Final Report of the Information Collection and Verification Study on Strengthening Maternal and Child Health and Community Health in the Pacific Region

4. Improve the availability, accessibility, quality, and use of health information for evidence-based decision-making across the health sector
5. Reduce morbidity and mortality
6. Ensure a supportive and sustainable social and physical environment to improve health.

According to the FSM's Infrastructure Development Plan FY2016-FY2025, the following are the infrastructure development directions for the health sector<sup>392</sup>.

1. To provide modern and efficient hospital facilities to meet the health needs of the people.
2. Promote improvements in the health care system to minimize the need for referrals to overseas health care facilities.
3. Provide health care facilities that are reasonably accessible to all citizens.
4. It has a facility improvement program that addresses the need for maintenance, renovation, and new facility construction.
5. Adequate maintenance funds are available to prevent rapid deterioration of facilities.
6. Resilience to potential natural disasters and climate change impacts.

Each state has also set a direction for infrastructure development in line with the National Infrastructure Development Plan described above, and has prepared the following list of priority projects.

Table 226 List of Priority Projects in the Health Sector in Chuuk State

Project name	Required amount (USD)
Chuuk State Hospital - Renovate Existing Facilities	5,800,000
Chuuk State Hospital - New Facility	40,000,000
Chuuk Lagoon Dispensaries - Phase 1	1,600,000
Chuuk Lagoon Dispensaries - Phase 2	4,000,000
Chuuk Lagoon Dispensaries - Phase 3	9,600,000
Outer Island Dispensaries - Phase 1	4,800,000
Outer Island Dispensaries - Phase 2	6,720,000
Chuuk Health Facilities Land Definition and Acquisition	500,000
Total amount required	73,020,000

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume 3 Chuuk State Infrastructure Development Plan FY2016-FY2025, p.15

<sup>392</sup> Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume 1 Plan Outline, p.17

Table 227 List of Priority Projects in the Health Sector in Kosrae State

Project name	Required amount (USD)
Kosrae State Hospital	18,520,000
<b>Total amount required</b>	<b>18,520,000</b>

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume Kosrae4 State Infrastructure Development Plan FY2016-FY2025, p.17

Table 228 List of Priority Projects in the Health Sector in Pohnpei State

Project name	Required amount (USD)
Pohnpei Primary Healthcare Facility	5,500,000
State Diagnostic Center	3,700,000
State Critical Care Unit	1,500,000
Improve Electric Power Efficiency and Reliability	1,800,000
Renovate State Hospital Air Conditioning System	100,000
Improve Ambulance Services	200,000
Convert Dispensaries into Health Centers	1,000,000
Improve Outer Island Dispensaries	1,000,000
Upgrade State Hospital ICT Infrastructure & Services	500,000
<b>Total amount required</b>	<b>15,300,000</b>

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume Pohnpei5 State Infrastructure Development Plan FY2016-FY2025, p.19-20

Table 229 List of Priority Projects in the Health Sector in Yap

Project name	Required amount (USD)
Yap State Hospital - Rehabilitation & Nurses Facilities	800,000
Yap State Hospital - General Improvements	855,000
<b>Total amount required</b>	<b>1,655,000</b>

Source: Federated States of Micronesia Infrastructure Development Plan FY2016-FY2025 Volume 6 Yap State Infrastructure Development Plan FY2016-FY2025, p.16

### (3) Issues and Measures

The issues of NCDs and child obesity are common in the Pacific region. The Pacific Monitoring Alliance for NCD Action (MANA) has set up a MANA dashboard to monitor progress towards the NCDs goals, and has compiled a list of countries' current strengths and areas that require action. In addition, the Pacific ECHO (Childhood Obesity Elimination Network) has been established to combat childhood obesity.

Table 230 Details of Issues and Measures Related to the Health Care Sector

Subject name	Details of the issue and countermeasures
NCDs	<ul style="list-style-type: none"> <li>✓ Excessive consumption of packaged imported foods, lack of exercise, and use of tobacco products are contributing to NCDs and obesity.</li> <li>✓ In a study conducted in 2015, approximately 20-30% of children aged 2-8 years were obese.</li> </ul>
Violence and suicide	<ul style="list-style-type: none"> <li>✓ Violence and suicide are especially common among young men.</li> </ul>

Source: WHO, Country Cooperation Strategies 2018-2022 and SPC website.

According to the information provided by DoHSA, they recognize the shortage of doctors in fields such as obstetricians and gynecologists, surgeons, ophthalmologists, and cardiologists as a challenge, and believe that the burden on medical students due to tuition burden and limited scholarships is the cause. In response to this challenge, DoHSA, in cooperation with the College of Micronesia, created the “Doctors and Dentist for Tomorrow” program, which recruits talented students from four states and provides them with programs in medical fields.

In the area of maternal and child health, there are also issues of inadequate facilities for obstetric emergencies, lack of facilities and equipment for high-risk deliveries, and lack of emergency supplies for infants in ambulances. Inefficient funding and inappropriate allocation of funds are cited as causes, so DoHSA is working closely with hospital administrators in each state to secure necessary equipment and improve health facilities.

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

- SPC

SPC's public health department has provided various support to the FSM, including conducting advocacy meetings on NCDs and child obesity, technical cooperation on taxing unhealthy foods in the FSM, and funding nurse training.

- WHO

WHO has identified the following 4 strategic priorities in its Country Collaboration Strategy 2018-2022.

1. To achieve universal health coverage a microbial resistance by building resilient and sustainable health systems to enhance the availability of needs based health services in the country
2. Build core competencies of the International Health Regulations (2005) for proactive preparedness for health emergencies and natural disasters.
3. Build capacity for prevention and control of NCDs
4. Controlling Infections

- ADB

In ADB’s Strategy 2030, which defines the guiding principles of the ADB's efforts, the ADB has identified 7 priority issues in the Asia and Pacific region, one of which is “addressing persistent poverty and reducing inequality” and the other is “improving health for all”.

The FSM has implemented projects on health program review and analysis, government capacity and preparedness strengthening, and vaccination against cervical cancer and other infectious diseases. The only other project implemented in the FSM so far is the “COVID-19 Emergency Response, which has been ongoing since 2020”.

Table 231 ADB's Pacific Regional Project

Period	Project name
2019-2022	Supporting Improved Health Outcomes in Asia and the Pacific
2018-2020	Accelerating Universal Health Coverage in Asia and the Pacific for Strategy 2030
2018-2023	Developing the Health Sector in the Pacific
2017-2019	Systems Strengthening for Effective Coverage of New Vaccines in the Pacific

Source: ADB website

- Australia

Australia, with its “The Pacific Step-up” policy, is the largest development assistance partner in the Pacific region. The 3 pillars of development assistance to the Pacific region are (1) health security, (2) stability, and (3) economic recovery, but for the North Pacific (FSM, RMI, Palau), the health sector accounts for less than 1% of the total planned ODA investment in 2021-2022.

- New Zealand

New Zealand has developed a Strategic Action Plan on the Well-being of Children and Youth 2021-2025” in Pacific State. In the area of health care, the plan includes early childhood interventions in multiple areas such as health, nutrition, care and protection, and prevention of NCDs through adolescent health programs.

② Japan

Japan has set “COVID-19 Response and Recovery” as one of the priority areas for the next three years, which was announced at PALM9 held on July 2, 2021. In addition to the provision of equipment and technical cooperation for the development of the cold chain necessary for vaccination, the government announced that it would provide vaccines to countries in the Pacific region through COVAX and other organizations from mid-July onward, with the aim of providing a total of 3 million doses within this year. In addition, JICA will provide a wide range of assistance to address the health vulnerabilities of the countries in the Pacific region, including capacity building support for health systems and JICA technical assistance to reduce NCDs, which are a major risk factor for COVID-19. It also states that it will provide a wide range of support, including the development of

medical facilities, provision of high-quality medical equipment, and human resource development for health and medical personnel.

In the Country Assistance Policy (April 2019), Japan has set the improvement of health and medical services as one of the development issues 1-3, and its policy is to support disease prevention and technical improvement of local medical staff through the dispatch of volunteers to health and medical related organizations and nutritional guidance through training, and to provide medical equipment. Japan's major cooperation achievements to date are as follows.

Table 232 Major Japanese Cooperation in the Medical and Health Sector of the FSM

Start date	End Date	Project name
<b>Technical Cooperation</b>		
Feb 2005	Feb 2010	Strengthening of Regional Immunization Programs in the Pacific Region Project (13 countries including FSM)
Oct 2018	Feb 2023	Oceanic Region Wide Filaria Control Project (6 countries including FSM)
<b>Grassroots Technical Cooperation</b>		
Oct 2017	Aug 2021	Project to introduce the Weight Loss and Obesity Prevention Program in Pohnpei State

Source: JICA website

As for the needs for cooperation from Japan, there are expectations for training in Cytology services such as pap smear, specialized skills training for nurses, and continued dispatch of pharmacists as volunteers. In the area of maternal and child health, there are expectations for the provision of incubators for premature babies, emergency obstetric medical equipment and various supplies, ultrasound equipment, and mammogram equipment for breast cancer screening. In the area of NCDs and obesity, it is expected that volunteer nutritionists will be dispatched to assist in the formulation and actual implementation of locally tailored nutrition plans. There is also a need for the development of a national referral hospital, a floating medical ship/clinic, and a containerized mobile laboratory unit.



## 2.6. Economic and Financial Impact and Response to the Spread of Covid-19 Infection

### 2.6.1. Economic impact and response to COVID-19

#### Economic Growth

According to the IMF, when the COVID-19 pandemic broke out, the authorities quickly declared a state of emergency and implemented travel restrictions, and according to the IMF, the measures worked and the FSM is one of the least affected countries by COVID-19 identified so far<sup>393</sup>. According to the ADB, the impact of COVID-19 resulted in a negative GDP growth rate of -5.4% in 2020, but both the IMF and the ADB expect the economy to gradually recover from 2022 onwards, following the easing of travel restrictions.

Table 233 FSM GDP Growth Projections by Agencies

Organization (Figures in parentheses indicate the time of publication or interview)	2021	2022	2023
IMF (Oct 2021)	-3.2%	0.6%	3.2%
ADB (Sep 2021)	-1.1%	2.0%	-

Source: ADB website, IMF website

The FSM's current account balance has been in surplus in recent years, underpinned by aid from the US Compact. Particularly in 2018, the FSM has a large current account surplus due to an increase in the income balance, including corporate tax revenues and fishery license fees, as well as the financial balance, mainly due to investments in the FSM trust fund.

According to the IMF, even with a sharp increase in COVID-19 related expenditures, the financial balance is expected to be sufficiently covered by funds from the US and other foreign countries and fishery licenses.

#### Impact on Each Sector

According to the information provided by the sectoral authorities in the FSM, the tourism sector has been hit and the education sector has also been affected. In some cases, some donors' budgets have been redirected to COVID-19 measures.

Table 234 Impacts of COVID-19 and Countermeasures in Each Sector

Sector	Impacts and countermeasures
Tourism industry	• The tourism industry was particularly hard hit by COVID-19 <sup>394</sup> .

<sup>393</sup> <https://www.elibrary.imf.org/view/journals/002/2021/237/article-A001-en.xml>

<sup>394</sup> Information provided by FSMDB

	<ul style="list-style-type: none"> <li>The FSMDB provides measures such as deferment and reduction of debt and interest payments to borrowers engaged in the tourism industry, using government subsidies as the source of funds.</li> </ul>
Financing	<ul style="list-style-type: none"> <li>According to the information provided by FSMDB, COVID-19 has prevented the provision of direct technical assistance from international organizations, and the technical assistance has been limited to online seminars and workshops.</li> <li>At FSMDB, the loan amount was only half of the initial budgeted amount, which affected customer response and performance<sup>395</sup>.</li> </ul>
Education	<ul style="list-style-type: none"> <li>The net enrollment rate in 2020 for early childhood education was 50% (male 50%, female 51%), for primary education was 76% (male 75%, female 77%), for secondary education was 47% (male 42%, female 53%).</li> <li>The gross enrollment rate in 2020 for early childhood education was 71% (male 71%, female 71%), for primary education was 82% (male 81%, female 83%), for secondary education was 56% (male 51%, female 62%).</li> </ul>

Source: Information provided by ministries and agencies in each sector.

## 2.6.2. Response of Each Donor

### • ADB

In 2020, COVID-19 is supporting 16 million USD from COVID-19 Pandemic Response Option, 6 million USD from Pacific Disaster Resilience Program, and 1.5 million USD from COVID-19 Emergency Response<sup>396</sup>.

### • Global Partnership for Education

The Global Partnership for Education has been funding the FSM's Covid-19 Education Sector Response program since November 2020.

### • America

The U.S. has provided various technical support to the FSM government, including preparation of emergency response plans and inspection support, in cooperation with the U.S. Centers for Disease Control and Prevention (CDC), the U.S. Department of Health and Human Services (HHS), and USAID. In addition, HHS provides supplementary technical support. The US Department of Labor is also providing the Pandemic Unemployment Assistance (PUA) program<sup>397</sup> in the FSM as a compensation support program for those who have fallen into unemployment due to COVID-19. For the education sector, the US Department of Education has provided USD 3.65 million to the College of Micronesia<sup>398</sup>.

<sup>395</sup> FSMDB Annual Report 2020

<sup>396</sup> Asian Development Bank Member Fact Sheet, 2021

<sup>397</sup> <https://fm.usembassy.gov/u-s-assistance-to-federated-states-of-micronesia-on-covid-19/>

<sup>398</sup> <https://dofa.gov.fm/pandemic-unemployment-assistance-program/>

- World Bank

The World Bank has provided more than USD 157 billion in support of COVID-19 in East Asia and the Pacific Islands. In the FSM, the Maritime Investment Project has been allocated as a COVID-19 project.

## 2.7. Recommendations on Priority Sectors and Cooperation from JICA

### (1) Japan's Policy for Cooperation in the Pacific and FSM

In the second part of the study, although there was insufficient information from the field, a survey was conducted for the FSM on the following issues.

- Understand the current status and policies of development and the current status and policies of the investment environment
- Collection and analysis of detailed information on macroeconomic and key sectoral status and issues
- Identify sectors and issues to focus on and measures to address to achieve sustainable development and economic growth.

Since 1997, the PALM has been held every three years between Japan and the Pacific nations, bringing together the heads of state and government to seek solutions to various issues. PALM9 was held in July 2021, and five priority areas of cooperation were identified: “COVID-19 Response and Recovery”, “Sustainable Oceans based on the Rule of Law”, “Climate Change and Disaster Resilience”, “Strengthening Foundation for Sustainable and Resilient Economic Development”, and “People-to-People Exchanges and Human Resource Development”.

The priority areas of cooperation expressed in PALM8, namely, “Maritime Order based on the Rule of Law, and Sustainability of Ocean Resources”, “Strengthening the Basis for Resilient and Sustainable Development”, “Connecting Pacific Citizens”, and “Cooperation in the International Arena”, have much in common with the priority areas of PALM9. The policy and business development plan for development cooperation with Micronesia, formulated in April 2019, sets out the direction of development cooperation as follows, which is fully consistent with PALM's priority areas.

Table 235 Japan's Development Cooperation Policy with Micronesia

GOALS	Medium Target	Subtarget	Cooperative Program Name
Self-reliant and sustainable economic growth and improvement of people's living standards in consideration of the environment	1 Vulnerabilities conquest	1-1 Strengthening the foundation for economic growth	Strengthen capacity for economic and social infrastructure development and maintenance Industrial Promotion
		1-2 Strengthen governance	Strengthen governance
		1-3 Improvement of health care services	Island-based health care improvement
		1-4 Strengthen educational functions	Support for education in islands and remote areas
		1-5 Capacity building in the field of coast guard	Capacity building in coast guard and maritime security, including maritime law enforcement
	2 Environment climate change	2-1 environmental conservation	Support for the formation of a recycling-oriented society on islands
		2-2 Climate change measures	Promotion of climate change measures

Source: Business Development Plan for Micronesia

In this section, while considering these directions of Japan's cooperation, the survey team examined the future direction of JICA's cooperation with regard to the FSM, especially in line with the priority areas set forth in the PALM9 held in 2021, based on the current situation and issues identified through the above-mentioned information collection and analysis. However, due to the fact that the survey team was not able to visit to the FSM, as well as the difficulties encountered in collecting the questionnaires and conducting the online interviews, it was not able to conduct sufficient analysis (Transportation, Water and Sewerage, Energy, Agriculture, Forestry, Mining, Tourism sectors).

## (2) COVID-19 Response and Recovery (PALM9 Priority Area 1)

In COVID-19 Response and Recovery, JICA is expected to cooperate in the areas of medical care, such as the development of medical facilities, provision of medical equipment, support for human resource development of health and medical personnel, and technical cooperation for countermeasures against lifestyle-related diseases. In addition, other examples include support for tourism promotion for the recovery of the tourism industry once the situation in COVID-19 improves.

In the FSM, in addition to the aging of medical facilities and equipment and shortage of medical supplies, there is a shortage of human resources with appropriate maintenance and management

skills. The maintenance of equipment and materials and the training of human resources are also issues that need to be addressed. Excessive consumption of packaged imported foods, lack of physical activity, and use of tobacco products are contributing to obesity, and a survey has shown that about 20-30% of children aged 2-8 are obese. The Infrastructure Development Plan 2016-2025 states that a number of healthcare facilities in the country need to be improved. The plan calls for the improvement of many medical facilities in the country, especially grant aid for the improvement of facilities and equipment of high-priority medical institutions, and technical cooperation for non-infectious disease control and maintenance of medicines. In terms of facilities, the improvement of state hospitals is a top priority, especially in the three provinces of Chuuk, Kosrae, and Yap, and the improvement of primary health care facilities is also a major project in Pohnpei. In terms of equipment and human resource development, there is potential for support in a number of areas. In the area of maternal and child health, there is room for the provision of emergency obstetric equipment, ultrasound equipment, breast cancer screening equipment, etc. In the area of NCDs, there are expectations for the dispatch of volunteer nutritionists for the formulation and implementation of nutrition plans, as well as the continued dispatch of nurses for specialized technical training, pharmacists, and other volunteers. In addition, there is a need for the development of a national referral hospital, maritime medical vessels and clinics, and the provision of mobile laboratories, and the enhancement of medical services for remote islands is also an important area of support.

As for tourism, the FSM government was unable to identify any direct support needs, but air access is limited to the route between Guam and Hawaii, and there is no sufficient tourism infrastructure in place, so significant growth is not expected in the near future. However, it has many tourist resources such as attractive diving spots and the Nan Madol Ruins, a World Heritage Site. Therefore, there is a possibility of promoting the tourism industry by planning tourism development at the community level through technical cooperation with the provinces, developing systems, and training human resources on a scale that will not be a burden to the local communities. In such a case, a certain amount of electricity, water, and transportation infrastructure should also be provided for this purpose.

### (3) Sustainable Oceans based on the Rule of Law (PALM9 Priority Area 2)

In the area of "Sustainable Oceans based on the Rule of Law," the three pillars are maritime security and safety, marine environment, and marine resources. In the area of security, JICA is expected to be able to provide assistance in some areas such as maritime security, surveillance and control, etc. JICA is also expected to be able to provide further cooperation to the College of Micronesia-FSM Fisheries and Maritime Institute in the area of maritime safety, such as support for the development of facilities and capacity training for charting. The safe movement and transportation of people and cargo on domestic and international shipping routes is of great importance, and it is important to develop human resources who can cope with digitalization. The introduction of a monitoring system to monitor the catch of fishing vessels operating in the exclusive economic zone of the FSM is also

important from the perspective of promoting data management and utilization, and this is an area where support can be considered along with capacity building of those involved.

In the FSM, the Project for Maritime Education and Training Capacity Enhancement on Fisheries and Maritime Institute (2021-2023) has already been implemented to improve the quality of maritime education and training courses and to provide higher level training courses<sup>399</sup>. The project is positioned as a project that will benefit neighboring countries as well, and it is important to steadily implement the project and provide continuous support when new needs are identified during implementation. As in Fiji and the RMI, the impact of terrestrial activities must be taken into account for a sustainable marine environment, and appropriate waste management is also very important. As of the beginning of 2022, the "Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries Phase 2 (J-PRISM2)" is underway in nine Pacific Island countries including the FSM. It is important to continue to support efforts to reduce the amount of waste disposed and plastic waste, and it is desirable to support the participation of the Japanese private sector in waste reduction.

#### (4) Climate Change and Disaster Resilience (PALM9 Priority Area 3)

It is necessary to take measures against climate change and natural disasters from the aspects of mitigation and adaptation, and PALM 9 has set forth various areas of cooperation. The following are the main areas where JICA can provide support.

Mitigation: Introduction of renewable energy and development of power grid

Adaptation: Development of disaster resilient infrastructure, support for capacity building of meteorological agencies, and support for the deployment of Japanese disaster prevention technologies in Pacific island countries.

In the FSM, problems such as coastal erosion, water shortage in remote islands, and storm surges are occurring, as well as occasional damage caused by typhoons. Therefore, it is necessary to improve the resilience of the infrastructure against disasters, and various support measures can be considered, such as improving the disaster forecasting and warning system and providing rainwater tanks to remote islands. In terms of human resource development, it is necessary to dispatch experts with abundant expertise and experience in climate change adaptation and mitigation, as it is difficult to secure officers with specialized knowledge. On the financial side, the government has not yet considered how to incorporate climate change risks into banking regulations and supervisory frameworks, and support for the development of a system is needed.

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<sup>399</sup> In addition, an Exchange of Notes on the grant aid "The Project for Maritime Education and Training Capacity Enhancement on Fisheries and Maritime Institute" was signed in 2021. The school will be provided with construction of facilities (classrooms and dormitories) and maritime training-related equipment (training ships, composite boats, etc.).

In the energy sector, the most important direction is to cooperate with international trends to increase the ratio of power generation from renewable energy sources. While gradually approaching the achievement of the NDC, diesel power generation cannot be drastically reduced either, so for the time being it is necessary to continue to supply electricity using hybrid methods. In addition to supporting the development of power infrastructure and improving its maintenance and management capabilities, another major issue is the elimination of financing bottlenecks for investment in renewable energy. For this reason, examining electricity tariffs, as well as establishing a fund for renewable infrastructure development, and working with the public and private sectors to invest in and finance the fund while managing it, are considered to be areas for consideration. In addition, after analyzing the results and challenges of the ongoing "The Project for Introduction of Hybrid Power Generation System in the Pacific Island Countries," it would be in line with the cooperation policy and local needs to continue cooperation in the areas of infrastructure development and human resource development required in the target countries, including the FSM.

(5) Strengthening Foundation for Sustainable and Resilient Economic Development (PALM9 Priority Area 4)

“The Strengthening Foundation for Sustainable and Resilient Economic Development”, the most relevant priority area of cooperation in this study, focuses on the following areas: quality infrastructure development, fiscal resilience, development of local industries and promotion of trade and investment, and peace and stability as a basis for economic development. The pillars of the Strengthening Foundation for Sustainable and Resilient Economic Development, which is the most relevant area of cooperation in this study, are quality infrastructure development, fiscal strengthening, development of local industries and promotion of trade and investment, and peace and stability as the basis for economic development.

1) Infrastructure Development

The FSM is a federal state consisting of 607 islands in four states. The politics of the FSM as a whole is also based on consideration of the actual situation of each state. Therefore, it is difficult to consider the FSM as one small state, and each state has its own priorities in terms of infrastructure development.

In terms of airports, there is a high need for runway rehabilitation (including lighting) and Aircraft Rescue and Fire Fighting (ARFF) in Chuuk, runway extension and airport terminal construction in Kosrae, apron expansion and terminal development for Caroline Islands Air in Pohnpei, and runway rehabilitation and runway safety zone improvement in Yap (except for Pohnpei International Airport, which was completed in the 2010s with JICA assistance). At present, the runway extension is sufficient to allow 737 Boeing aircrafts in operation to take off and land (if not fully loaded), but except for Pohnpei International Airport, which has undergone extended maintenance, the runway is not long enough. This also leads to a situation where the Kosrae - Pohnpei - Chuuk connectivity cannot be fully realized. Therefore, it is important to reexamine the aviation demand (passenger and



cargo) after the convergence of COVID-19, while extending the runways of other airports as necessary. There is also a need for assistance in improving the safety of runways at airfields on remote islands. In terms of ports, there is a need for improvement of dock facilities in Chuuk State (JICA has provided support for the renovation of Weno Port in the past), improvement of safety in three ports in Kosrae State, removal of wrecks in the vicinity in Pohnpei State (JICA has already provided support for the expansion plan of Pohnpei Port), and general improvement of Colonia Port in Yap State. Renewal of multi-purpose vessels owned and operated by the state government is also necessary for the provision of public services, and it would be desirable to support the maintenance of public service provision, while considering technical assistance for the establishment of a vessel renewal fund.

In the energy sector, the most important direction is to cooperate with the government to increase the ratio of power generation from renewable energy sources, taking into account international trends. While gradually approaching the achievement of the NDC, diesel power generation cannot be drastically reduced either, so for the time being it is necessary to continue to supply electricity using hybrid methods. In addition to supporting the development of power infrastructure and improving its maintenance and management capabilities, another major issue is the elimination of financing bottlenecks for investment in renewable energy. For this reason, examining electricity tariffs, as well as establishing a fund for renewable infrastructure development and implementing public-private partnership efforts to invest and finance while managing the fund, are considered to be areas for consideration.

As for other infrastructure development, no needs for support were identified for waterworks. On the other hand, with regard to water supply, it is important to provide technical guidance on the reduction of non-revenue water, infrastructure development, expansion of water supply service areas, and cooperation in the provision of rainwater tanks in remote islands and rural areas. In the area of sewerage system development, it is also important for the realization of a hygienic environment that various efforts be made not only in urban areas but also in remote islands and rural areas by utilizing the treatment technologies possessed by private companies. In the field of telecommunications, considering that more than 40% of the population of the FSM, including remote islands, is in an environment where the connection environment is extremely weak, it is essential to promote the development of the Internet environment in the FSM from the perspective of improving access, in order to secure opportunities to obtain information and provide related services.

## 2) Economic Activity Infrastructure

Although there are not necessarily many options for industrial development in the FSM, it is necessary to improve the investment environment and establish a system for providing information in order to promote private sector development. Specifically, the FSM is expected to cooperate in the development and maintenance of an online system for the collection and publication of statistical data on foreign investment, and to support the formulation of an action plan for marketing and promotion by dispatching volunteers.

(6) People-to-People Exchanges and Human Resource Development (PALM9 Priority Area 5)

In "People-to-People Exchanges and Human Resource Development," six pillars have been identified, one of which is the continued implementation of JICA's technical cooperation, including the dispatch of volunteers and acceptance of trainees. One of the pillars is the continued implementation of technical cooperation, including the dispatch of JICA volunteers and acceptance of trainees. Other pillars include the promotion of Japanese language education and support for the digitization of education.

In terms of cooperation for the domestic education sector, one of the pillars could be support for capacity building of teachers (technical cooperation for training and capacity building, curriculum improvement, development of teaching materials, etc.), as there are issues with their teaching methods and expertise. In particular, it is necessary to improve education in math and science. In terms of infrastructure, as mentioned in the infrastructure development plan, there is a strong need to improve school facilities in all provinces. As the FSM has a large number of remote islands, cooperation in improving Internet connectivity in remote schools and support for improving IT literacy among teachers are also important areas.

Although we were not able to obtain sufficient information on the dispatch of volunteers from Japan, we believe that in addition to the fields of teachers, nurses, and medical equipment, cooperation in the areas of maintenance and management of various economic infrastructures, disaster education, environmental education, tourism promotion, tourism statistics, and fishery resource management are fields that are essential for the economic and social development of the FSM. In these areas, participation of FSM officials in training programs in Japan and third countries would also be an effective tool. In addition, Japan launched the Pacific-LEADS program in 2016 for Pacific countries, accepting government officials, researchers, and others from Pacific countries as trainees in Japan. The program aims to develop human resources who can contribute to the deepening of relations with Japan as pro-Japanese and pro-intellectuals, and who possess the expertise necessary to solve development issues in Pacific countries through education in master's programs at Japanese universities and opportunities for practical training. The target areas for acceptance include disaster prevention, climate change, environment, sustainable development, oceanic and maritime issues and fisheries, trade, investment and tourism, and economic policy, which are also development issues for the FSM, and it will be important to continue this kind of cooperation from a long-term perspective.

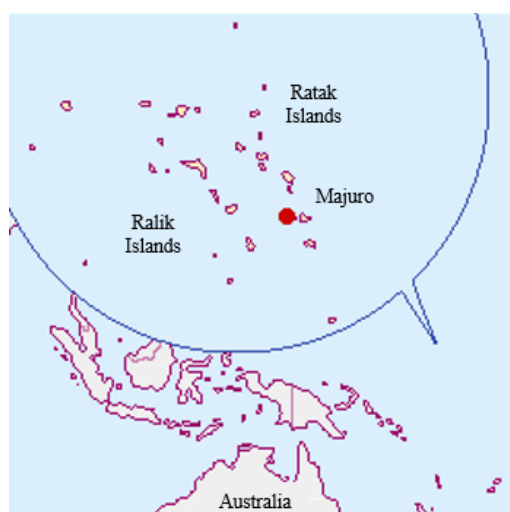
### 3. Republic of the Marshall Islands

#### 3.1. Overview of the Republic of the Marshall Islands (Geography, Population, Domestic Politics, Diplomacy, etc.)

##### 3.1.1. Geography and Population

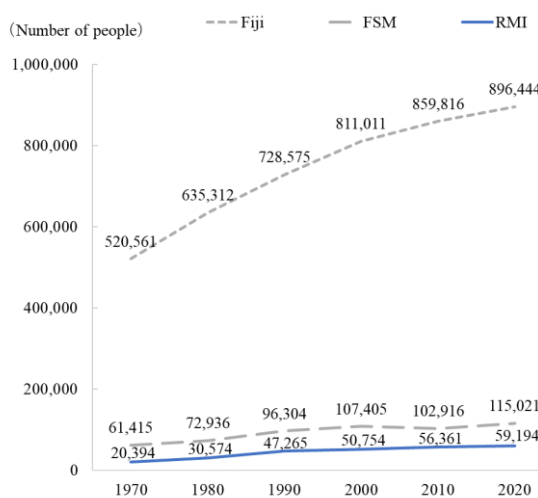
The Republic of the Marshall Islands (hereafter referred to as the RMI) extends from 4 to 14 degrees north latitude and 160 to 173 degrees east longitude, and is located between Australia and Hawaii, north of the equator and west of the date line. The capital is Majuro, and the currency is the U.S. dollar. The official languages are Marshallese and English. The total land area is 180 square kilometers, about the same size as Kasumigaura (the second largest lake in Japan, located in Ibaraki Prefecture). 2 million square kilometers of ocean area contains 5 separate islands and 29 atolls, with about 1,225 coral islands scattered throughout. The atolls are divided into two parallel north-south archipelagos, called the Latak Archipelago in the east and the Rariku Archipelago in the west.

Although the total population is small compared to Fiji and the FSM, the past 50 years have seen 2.9-fold increase in population, from approximately 20,000 in 1970 to 59,000 in 2020, a higher growth rate than in the other two countries. The urban population of Majuro, the capital, and Ebeye Island is also increasing, with an urban population ratio of about 77% (World Bank, 2020).



Source: Ministry of Foreign Affairs of Japan website

Figure 39 Location of the RMI



Source: World Bank Open Data

Figure 40 Population among the 3 Countries Including the RMI

### 3.1.2. Domestic Politics, Diplomacy, etc.

The political and diplomatic situation in the RMI is shown in the table below: As of the end of August 2021, the head of state is President David KABUA, who took office in 2020 and will serve until November 2023.

Table 236 Politics and Diplomacy in the RMI

Form of government	Presidential system
Ruler	Mr. David KABUA, President (Inauguration in January 2020, four-year term. Term of office ends November 2023)
Legislation	Unicameral system 33 councilors (Four-year term of office, with general elections held every four years) In the Marshallese language, parliament is called Nitijela.
Administration	The following ministries are under the Office of the President: Ministry of Environment Ministry of Foreign Affairs, Ministry of Health and Human services, Ministry of Education, Sports and Training, Ministry of Transportation and Communications and Information Technology, Ministry of Natural Resources & Commerce, and Ministry of Foreign Affairs, Ministry of Culture and Internal Affairs, Ministry of Justice, Immigration and Labor, Ministry of Works Infrastructure and Utilities, Ministry of Finance, Banking & Postal Servicest, etc.)
Local system	RMI is divided into regions by 24 islands and atolls, and elects more than one councilor from each constituency and more than 5 from the capital, Majuro.
Justice system	RMI consists of the Supreme Court, High Courts, District Courts, Community Courts, and the traditional adjudication system. The traditional adjudication system is mainly responsible for land issues.
National defense	RMI does not have its own military. Based on the Compacts of Free Association (the Compact Agreement <sup>400</sup> ) with the United States, the United States retains authority and responsibility for security and national defense.
Member international and regional organizations, trade agreements	International organizations: ADB, CTBTO, FAO, IAEA, ICAO, IMF, IOM, ITU, OPCW, UN, UNESCO, World Bank, WHO, etc. Regional organizations: ACP, APCC, APPU, APT, ESCAP, FFA, PICTA, PIDF, PIDP, PIF, PNA, SOPAC, SPC, SPREP, etc.

Sources: Ministry of Foreign Affairs of Japan, US Embassy in Marshall website, Marshallese Parliament website, websites of various organizations and agreements

<sup>400</sup> This refers to the Compact of Free Association between the United States and Palau, the FSM, and the RMI countries.

Although there was a “gentleman's agreement” that the three regions of Polynesia, Melanesia, and Micronesia would take turns serving as Secretary-General of the PIF, in the February 2021 election for Secretary-General, the candidate from the Micronesia region (RMI Ambassador to the United States Gerald Zackios, the RMI's ambassador to the United States) was not elected. In response, the five Micronesian countries (Palau, FSM, Kiribati, Nauru, and the RMI) issued a joint statement on February 9 of the same year, saying that they would begin the formal process of withdrawing from the forum, and planned to do so by February 2022<sup>401</sup>.

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<sup>401</sup> In mid-February 2022, Micronesian nations announced that they would suspend the withdrawal process from the PIF, and no final decision has been made.

## 3.2. Economic Analysis of the Republic of the Marshall Islands

### 3.2.1. Economic Overview, Structure, Employment, Wages and Prices

#### 3.2.1.1. Economic Growth

The RMI's economy has maintained a positive GDP growth rate due to public investment and a strong fisheries sector. The GDP growth rate was 3.2% in FY2017 and 6.5% in FY2019, mainly due to increased revenues from the Vessel Days System (VDS)<sup>402</sup>, fishing license fees and transshipment fees in the fisheries sector. % in FY2017 and 6.5% in FY2019, contributing to the economic growth.

From the beginning of 2020, the spread of COVID-19 infection has led to a decline in fishery production and a deterioration in the profitability of related manufacturing industries due to travel bans and other movement restrictions, etc. According to the ADB, the GDP growth rate in 2020 was -5.5%, but it is expected to be -1.4% in 2021 and 2.5% in 2022. Compared to the 13 Pacific island countries analyzed by the ADB, 2020 will be the fifth-lowest GDP growth rate, and the position is not expected to change significantly in 2021 and 2022. According to the information provided by the Economic Policy Planning and Statistics Office (EPPSO), the sectors that will drive future economic growth include fisheries, construction, and wholesale and trade.

Table 237 RMI Macroeconomic Indicators

	2015	2016	2017	2018	2019
Real GDP growth rate (%)*1	1.5	1.4	3.2	3.0	6.5
Total nominal GDP (million USD)*1	184	201	212	222	239
Nominal GDP per person (USD)*1	3,406	3,720	3,898	4,061	4,363*
Consumer price inflation (annual average, %)*1	-2.2	-1.5	0.0	0.7	-0.4
Unemployment rate (%)*1	No data	No data	No data	No data	No data
Current account balance (USD million)*1	29	27	11	9	-61
Trade balance (million USD)*2	-86	-82	-95	-99	No data
Export value (million USD)*2	82	73	83	89	No data
Exports to Japan (million yen)*3	2,450	1,030	1,450	457	467
Import value (million USD)*2	168	155	178	188	No data
Import value to Japan (million yen)*3	194,908	158,501	148,639	147,967	143,390
Balance of external debt (million USD)*4	94	88	83	77	72

Sources: \*1 World Economic Outlook Database (IMF), \*2 World Bank Open Data, \*3 Statistical Handbook2020 (Pacific Islands Center), \*4 Key Indicators for Asia and the Pacific 2021 (ADB). \* denotes forecast figures.

<sup>402</sup> Under the PNA, the number of fishing days in the territorial waters of the Parties to the Agreement can be purchased. The purpose of the program is to manage fishery resources such as yellowfin tuna, bigeye tuna, and skipjack tuna, and the number of fishing days is allocated among the parties in advance. The countries that have signed the agreement are Solomon Islands, Tuvalu, Kiribati, Marshall Islands, Papua New Guinea, Nauru, Federated States of Micronesia, and Palau.

The RMI was placed under U.S. administration as a U.N. Trust Territory after World War II and became independent in 1986 when the Compact of Free Association with the U.S. was signed in 2003. The Compact Trust Fund, which was established to secure financial resources for education, health care, etc. after 2024, has been funded annually by the United States, Taiwan, and RMI since 2004. The balance at the end of 2020 is 514 million USD. The U.S. has the largest reserve amount, accounting for 74.08% of the total reserve balance at the end of 2020, followed by Taiwan with 14.24% and RMI with 10.96%. The average interest rate since the establishment of the Trust Fund has been 6.3%, with positive results except for fiscal years 2008, 2011, and 2015, when it recorded a significant loss of -19.2% due to the bursting of the bubble caused by subprime loans in the United States. According to the Trust Fund's annual report at the end of 2020, the financial requirement for 2024 is estimated at USD26.4 million, which is equal to the 2023 annual financial assistance plus inflation adjustment, and is equivalent to a 4.5% withdrawal of the reserve fund balance. If the investment rate is assumed to be 2.6% (low scenario), a withdrawal rate of 4.5% is estimated to affect the sustainability of the trust fund in the medium to long term. If the withdrawal rate is lowered, the required amount of funds can be distributed. If the withdrawal rate is lowered, the sustainability of the fund will be enhanced, but there is a possibility that the required financial amount will not be met, and it is concluded that additional contributions to the fund should be considered.

#### 3.2.1.2. Economic Structure

In terms of the economic structure of the RMI by industry, in 2019, the highest percentages are in “Public administration, defense, and social security,” “Agriculture, forestry, and fishing,” and “Wholesale and retail trade, and auto repair,” in that order. Public administration, defense, and social security, which includes the government sector supported by U.S. financial assistance and employment at the Kwajalein U.S. military base, is the industry that will account for the largest share of GDP from 2015 to 2019, while agriculture, forestry, and fisheries, which accounts for about 10% of GDP, is dominated by fishing and the production of desiccated coconuts (copra). As for the economy as a whole, the primary and secondary industries account for a total of about 20%, with the tertiary industry accounting for a large share.

Data from 2015 to 2019 show no significant change in the share of each industry in GDP, but the share of “agriculture, forestry, and fisheries” increased by 3.0% in 2019, mainly due to increased earnings in the fisheries sector.

Table 238 Industry's Share of GDP<sup>403</sup> (%)

	2015	2016	2017	2018	2019
Primary industry					
Agricultural, forestry, and	11.9	11.5	11.3	11.3	14.3
Secondary industry					
Mining and quarrying	No data	No data	No data	No data	No data
Manufacturing industry	3.9	2.8	2.0	3.1	2.3
Construction industry	4.1	4.7	5.2	5.3	5.7
Tertiary industry					
Electricity and gas supply	3.7	3.3	3.4	3.2	3.6
Water, wastewater, and water	0.7	0.6	0.7	0.8	0.9
Wholesale and retail trade, auto	12.5	12.5	12.3	12.6	13.2
Transportation and warehousing	7.6	7.6	8.8	8.9	8.7
Accommodation and food	2.2	2.2	2.2	2.1	2.4
Information and communication	3.5	3.4	3.4	3.0	2.6
Finance and insurance	5.6	6.2	6.5	6.7	6.7
Real estate business	6.0	5.9	6.1	6.0	5.9
Professional and Technical	0.5	0.6	0.6	0.8	0.7
Management support services	0.9	0.6	0.5	0.7	0.5
Public administration, defense,	16.6	17.7	17.6	16.8	16.1
Education	12.2	11.6	11.0	10.7	10.2
Health and Social Welfare	5.0	5.0	5.1	5.3	5.0
Arts & Entertainment	0.2	0.2	0.2	0.2	0.2
Other service industry	0.8	1.0	1.0	1.0	0.7
(minus) Indirectly measured	-2.6	-2.7	-3.0	-3.1	-3.8
Taxes imposed on production	9.8	10.4	10.3	9.7	8.9
(minus) subsidies	-5.1	-5.1	-5.3	-5.0	-4.8

Source: ADB, Key Indicators for Asia and the Pacific 2021

### 3.2.1.3. Employment, Wages and Prices

#### Employment

It is estimated that 45% of the labor force is employed in the public sector, with a large percentage employed by the US Army Garrison. Most of the major industries are controlled by state-owned enterprises, with the exception of MIMRA, which relies primarily on fishing income and requires government subsidies to operate. The unemployment rate is high, at 31% according to the 2011 census. The high unemployment rate, coupled with the fact that the right to move visa-free to the US as a non-immigrant resident is guaranteed under the Compact with the US, has led to a tendency for workers with professional skills to migrate to the US in search of better working conditions.

<sup>403</sup> Real price base in 2015 (USD)



According to information provided by the Ministry of Justice, the total number of employed persons in 2020 is 11,051, down from 11,309 in 2019. The number of people employed in the private sector has also decreased to 3,707 in 2020 and 4,019 in 2019.

Table 239 Employment in the RMI

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total number of employees	10,795	10,921	10,850	10,753	11,075	11,260	11,348	11,309	11,051
Public sector	4,869	4,897	4,914	5,043	5,156	5,273	5,336	5,465	5,505
Private sector	4,288	4,376	4,275	3,993	4,076	4,096	4,083	4,019	3,707
US military base	893	907	881	938	988	1,016	1,069	1,027	1,026

Note: The above breakdown does not reflect data from banks, NGOs/NPOs, and embassies, so the total breakdown does not equal the total number.

Source: Information provided by the Ministry of Justice

Regarding the dynamics of the workforce over the past few years, according to information provided by the Ministry of Justice, the total number of government employees in the Public Administration since 1997 was 2,953, reaching over 5,000 employees since 2015, indicating an increase in the number of jobs in the public sector. Also, due to its membership in the PNA, there has been an improvement in the number of people employed in the fisheries sector, which has contributed significantly to the economy. As for employment at the Kwajalein base of the U.S. military, the above statistics show that it also plays an important role in the labor force.

### Wages

The minimum wage in the RMI is USD 2 per hour for government and private sector employees, and has remained unchanged since it was set in March 1986. The GNI per capita (Atlas method) is USD 5,010 (2019, World Bank), which is classified as a middle- to high-income country by the World Bank according to income level. The nominal average wage continues to rise in both the public and private sectors, with the nominal average wage for the entire RMI at USD 12,621 in 2020.

Table 240 Annual Nominal Average Wages in the RMI (USD)

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Average wage	9,496	9,618	9,794	10,177	10,529	10,815	11,185	12,020	12,621
Public sector	11,993	12,200	12,148	12,367	12,753	12,855	13,137	13,679	13,990
Private sector	4,797	4,845	5,109	5,323	5,531	5,876	6,352	7,051	7,463
US military base	17,647	17,859	18,445	18,315	19,044	19,532	18,810	21,212	22,418

Note: The above breakdown does not reflect data from banks, NGOs/NPOs, and embassies, so the average of the total breakdown does not equal the overall average.

Source: Information provided by the Ministry of Justice

### Cost-of-living

As for prices, they are sensitive to the prices of imported goods, and consumer prices were negative in 2015 against the backdrop of a sharp decline in global oil prices and food prices. After the spread of COVID-19, there was a shortage of goods, but the impact on prices was limited because domestic demand did not soar.

### Immigration

In terms of workforce challenges, information provided by the Ministry of Justice indicates that many Marshallese are planning to migrate to the United States due to lack of adequate job opportunities. In particular, low-income families tend to consider moving elsewhere due to their inability to adequately support their families. The government also recognizes that migrant workers in the RMI play an important role in the labor force, and that certain sectors such as contractors and electricians need to hire workers with specialized knowledge, which are often filled by qualified migrant workers. In the past, there have been several cases concerning migrant workers who have remained in the RMI despite the expiration of their work permits, and such cases tend to happen more frequently with the increase in the number of expatriates.

## 3.2.2. Financial Situation and Public Debt

### 3.2.2.1. Financial Situation

According to the IMF's 2021 Article IV Consultation Paper, the RMI's fiscal situation turned into a budget deficit in 2019, mainly due to higher spending on goods and services and subsidies, although it has been running a budget surplus, supported by economic assistance under the Compact with the U.S. According to the IMF, although COVID-19-related expenditures are expected to increase in 2020, the country is expected to return to a budget surplus due to expected revenues from economic assistance.

The main sources of revenue are economic assistance to various sectors based on the Compact with the United States and economic assistance related to COVID-19, which generally account for half of the total financial resources. Domestic tax revenue includes license fees and vessel registration

fees related to fisheries. In 2019, an increase in goods and services expenditure due to the purchase of fishing vessels temporarily contributed to the budget deficit. On the other hand, the business conditions of state-owned enterprises such as the Tobolar Processing Authority<sup>404</sup>, which operates copra processing facilities, have been poor, and government subsidies to support their operations have been a constant source of fiscal pressure.

Table241 Revenue and Expenditure Breakdown (2016-2020)

	(Unit: million USD)				
	2016	2017	2018	2019	2020*1
Total Revenue	122.4	145.5	138.6	148.4	155.6
Tax yields	28.9	30.4	32.1	34.9	34.1
Grant*2	59.1	65.3	67.3	71.9	80.0
Other	34.4	49.8	39.2	41.6	41.5
Total expenditures	114.6	136.1	133.0	152.6	155.5
Total Expenditures	108.4	123.2	122.9	146.5	141.0
Employer compensation	42.4	45.9	48.2	50.8	49.7
Expenditure on goods and services	32.0	32.2	36.8	50.0	48.9
Interest expense	0.8	0.6	0.6	0.6	0.6
Subsidiary aid	11.9	15.5	13.7	14.9	14.2
Subsidy	15.8	15.6	12.1	11.5	10.9
Other	5.5	13.4	11.5	18.7	16.7
Acquisition of non-financial assets	6.2	12.9	10.1	6.1	14.5
fiscal balance	7.8	9.4	5.6	-4.2	0.1

\*1 2020 is forecast by IMF

\*2 Contribution to the Compact Trust Fund and rent of Kwajalein US military base are not included.

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Republic of the Marshall Islands, p.29

### 3.2.2.2. Public Debt

According to the IMF's 2021 Article IV Consultation Paper, the public debt situation has been on a downward trend since 2012, totaling USD 52 million in 2018. According to the IMF's projections, public debt is expected to increase from 2019 onwards due to the end of the compact in 2023 and fiscal fragility dependent on economic aid, while economic growth is also expected to remain strong. The IMF forecasts that public debt will increase after 2019 due to the end of the Compact in 2023 and fiscal weaknesses dependent on economic aid, while economic growth is expected to remain strong, with the ratio of total public debt to GDP expected to be around 31.6% in 2026.

<sup>404</sup> In order to protect Copra producers, the Marshallese government has raised the producer price above the market price, which has led to an increase in the purchase cost of Tobolar, which processes Copra as raw material, putting pressure on profits.

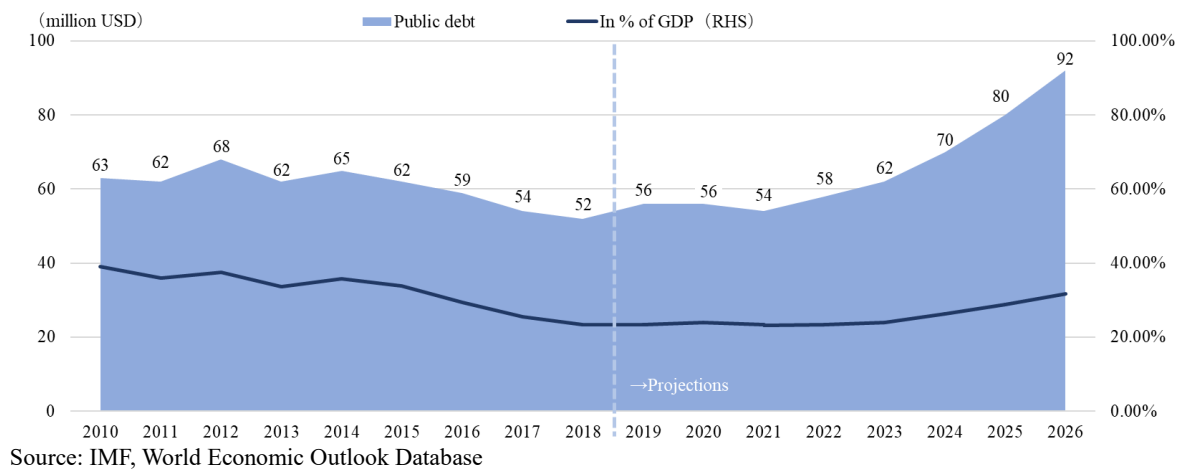


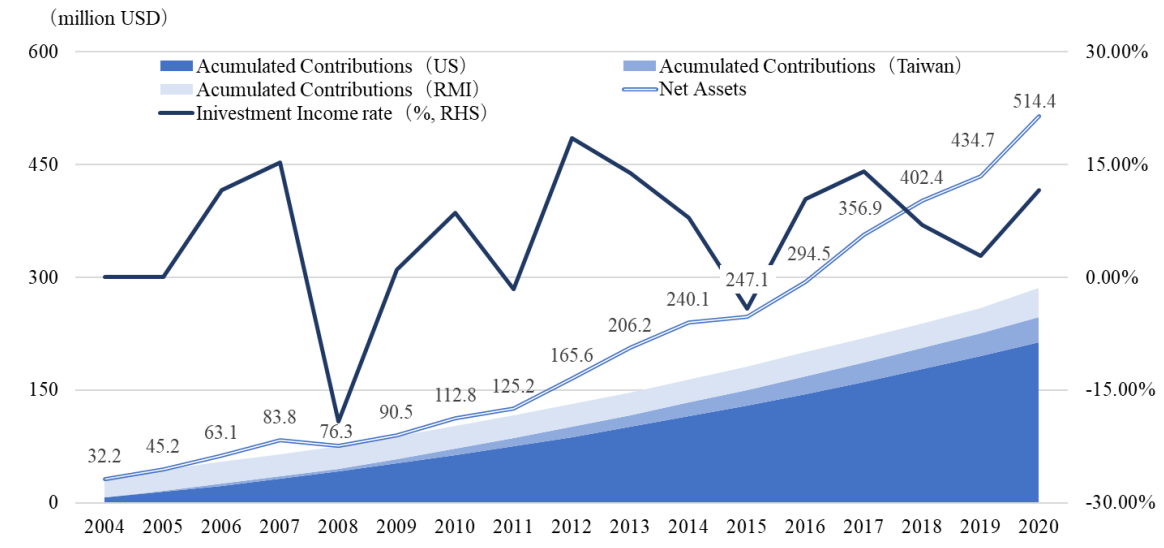
Figure 41 Total Public Debt and its Ratio to GDP in the RMI

According to the IMF, the domestic creditor of the public debt is the Marshall Islands Development Bank (MIDB), which has a USD 2.9 million loan balance taken out in 2019 to subsidize the state-owned Tobolar Processing Authority. (USD 6 million principal, to be paid off at the end of October 2021).

In addition to the aforementioned economic assistance to the various sectors, the Compact with the United States is funded through the Compact Trust Fund, which is managed by a trust fund committee consisting of members from the U.S. Department of the Interior, Taiwan's Ministry of Foreign Affairs, and RMI agencies<sup>405</sup>.

According to the information provided by the EPPSO, the market value of the net assets at the end of 2021 has reached USD 650 million.

<sup>405</sup> Trust Fund for the People of the Republic of the Marshall Islands



Source: Trust Fund for the People of the Republic of the Marshall Islands

Figure 42 Performance of RMI's the Compact Trust Fund

### 3.2.3. Balance of Payments and External Debt

#### 3.2.3.1. Balance of Payments

According to the IMF's 2021 Article IV Consultation Paper, the RMI's current account balance is structured so that the permanent trade deficit is offset by the primary income balance, including fishery license fees, and the secondary income balance, including aid under the Compact with the U.S. The current account deficit in 2019 was temporary, mainly due to the purchase of three fishing vessels (about USD 62 million, or about 26% of GDP). The increase in the financial balance in 2019 is also due to the same reason: the increase in foreign FDI associated with the purchase of fishing vessels.

The RMI does not have a central bank and uses the USD as legal tender, so government USD deposits effectively serve as reserves and are the primary means of absorbing short-term liquidity deterioration. Government deposits have been increasing since 2019, reaching 18.6 million USD in 2020, equivalent to 1.2 months of imports in the same year. Although this is below the average of eight months for Pacific island countries, the liquidity risk is mitigated by the stable inflow of aid funds.

Table 242 RMI's Balance of Payments

					→Projections							(million USD)	
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
Current account balance	27.1	11.1	8.8	-60.8	5.3	6.2	1.0	-0.6	-1.4	-4.8	-7.7		
Goods Balance	-48.4	-53.7	-61.7	-131.0	-71.3	-91.6	-104.0	-103.0	-102.4	-108.2	-113.5		
Exports, f.o.b.	52.5	60.9	63.9	69.5	45.0	55.9	54.0	55.7	58.0	60.2	62.5		
Imports, f.o.b.	-100.9	-114.6	-125.6	-200.5	-116.3	-147.5	-158.0	-158.7	-160.3	-168.4	-176.0		
Services Balance	-36.8	-44.3	-41.6	-43.5	-46.4	-41.7	-44.2	-46.3	-48.2	-50.1	-51.9		
Primary Income Balance	59.3	58.9	57.5	53.2	63.4	65.2	71.7	75.0	103.5	106.0	108.7		
Secondary Income Balance	52.9	50.3	54.5	60.5	59.6	74.3	77.5	73.7	45.7	47.6	49.0		
Capital account balance	18.3	20.1	16.5	14.7	14.5	25.1	38.7	33.2	30.0	20.7	26.7		
Financial account balance	-8.9	-11.4	20.8	46.1	-19.8	-31.3	-39.7	-32.7	-28.6	-16.0	-18.9		
Errors and omissions	-36.6	-19.8	-46.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Republic of the Marshall Islands, p.30

Table 243 RMI's Current Account Balance in percentage of GDP

					→Projections							(In percent of GDP)	
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
Current account balance	13.5	5.2	4.0	-25.4	2.2	2.6	0.4	-0.2	-0.5	-1.7	-2.7		
Goods Balance	-24.0	-25.4	-27.9	-54.7	-30.5	-39.1	-42.1	-39.9	-38.1	-38.8	-39.2		
Exports, f.o.b.	26.1	28.7	28.8	29.0	19.2	23.9	21.9	21.6	21.6	21.6	21.6		
Imports, f.o.b.	-50.1	-54.1	-56.7	-83.7	-49.7	-63.0	-63.9	-61.4	-59.7	-60.3	-60.9		

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Republic of the Marshall Islands, p.30

### 3.2.3.2. External Debt

According to the IMF's 2021 Article IV Consultation Paper, the RMI's external debt and government-guaranteed debt (as a percentage of GDP) is on a downward trend, declining from 74% in 2002 to about 28% in 2019. Concessional loans to the central government by the ADB account for about 71% of the external debt and government-guaranteed debt, while the remainder is government-guaranteed debt granted to Rural Utilities Services by the USDA, which provides loans to state-owned enterprises.

Table 244 Trends in RMI's External Debt

					→Projections							(In percent of GDP)	
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026		
External PPG debt	41.4	36.8	32.7	27.8	27.5	26.2	25.3	25.1	26.7	28.8	31.3		
Outstanding central government debt	29.3	25.6	23.3	21.5	21.9	21.4	21.5	22.1	24.5	27.2	30.1		

Source: IMF, 2021 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for the Republic of the Marshall Islands, p.29 • 31

Table 245 Cumulative Loans, Grants, Equity Investment Technical Assistance, and Trade and Supply Chain Finance and Microfinance Program Commitments

Sector	Total Amount
Public Sector Management	80.87
Water and Other Urban Infrastructure and Services	33.97
Education	22.17
Health	18.62
Energy	17.65
Agriculture, Natural Resources, and Rural Development	9.86
Transport	9.32
Multisector	2.42
Finance	1.47
Industry and Trade	0.99
Information and Communication Technology	0.08
<b>Total</b>	<b>197.42</b>

Source: Asian Development Bank Member Fact Sheet, 2021

As shown in the table on the right, ADB, which accounts for most of the external debt, has been providing assistance since 1990, mainly in public sector management, but also in renewable energy, water and sanitation management, education, private sector development, and disaster management, and has provided USD 93.1 million in loans, USD 72.7 million in grants, USD 20.9 million in technical assistance, and USD 10.7 million in co-financing under ADB management.

In 2020, USD 16.0 million from the Health Expenditure and Livelihoods Support Program, USD 6.0 million from the Pacific Disaster Resilience Program, USD 1.5 million from the Ebeye Solid Waste Management Project, and 1 million USD from COVID-19 Emergency Response, for a total of 24.5 million USD<sup>406</sup>.

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<sup>406</sup> ADB Fact Sheet, 2020



### 3.2.4. Debt Sustainability Analysis

#### 3.2.4.1. Summary

According to the IMF's Debt Sustainability Analysis (DSA)<sup>407408</sup>, the RMI's debt is sustainable, but the likelihood of default remains high, due to the impact of COVID-19 and uncertainty over the continuation of financial assistance under the Compact with the US beyond 2024. In the baseline scenario, these two ratios are expected to exceed the reference thresholds starting in the second half of the projection period. In the baseline scenario, these two ratios are expected to exceed the threshold values from the latter half of the forecast period. Although the RMI does not currently face any debt repayment risk due to fishery license fees and financial assistance under the Compact with the US, the RMI is expected to face a high level of debt vulnerability from 2024 onwards if financial assistance under the Compact is reduced or terminated. The RMI does not currently face any debt repayment risk due to fishery license fees or financial assistance under the Compact with the United States.

#### 3.2.4.2. Assumptions of DSA

Since the RMIs are classified as Low Income Countries (LIC) under the IMF category<sup>409</sup>, the DSA analysis will follow the framework for LICs.

The RMI's DSA covers the total amount of PPG<sup>410</sup> owed by the central government<sup>411</sup>. As mentioned earlier, most of the RMI's public debt is external debt<sup>412</sup>, but since the legal tender is the

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<sup>407</sup> The coverage of debt under the DSA is based on the premise that it will cover almost all public sector debt, including general government (central government, state and local governments, social security funds, etc.), non-financial state-owned enterprises, financial state-owned enterprises (including the central bank), general government long-term debt such as unfunded liabilities of social security funds, contingent liabilities (e.g., restructuring of financial Restructuring of financial institutions, fulfillment of guarantees in PPPs, etc.), and liabilities guaranteed by the public sector to the private sector. In addition, both external and domestic debt will be covered. With regard to the central bank, external debt contracted on behalf of the government, such as loans from the IMF, will constitute public debt, while central bank debt issuance and foreign exchange swaps for the purpose of monetary policy and foreign exchange reserve management will be excluded from external public debt. Government bonds held by the central bank and advances to the government are also included in public debt. For state-owned enterprises, all available information on the debt of non-financial state-owned enterprises must be included. Exceptions may be considered if the entity has low financial risk (e.g., can borrow without a government guarantee, has a positive operating income, etc.) or if there are restrictions on access to information.

<sup>408</sup> See Republic of the Marshall Islands: Staff Report for the 2021 Article IV Consultation - Debt Sustainability Analysis.

<sup>409</sup> When the IMF analyzes DSA, it categorizes the countries into either Market Access Countries (MACs) or Low Income Countries (LICs) and uses different frameworks for each.

<sup>410</sup> This is because there are restrictions on the availability of information such as financial statements of sub-sectors and state-owned enterprises, excluding the central government.

<sup>411</sup> The DSA is based on the total amount of nominal liabilities. This is due to the concept that liquid financial assets are a risk mitigating factor for debt sustainability, but do not completely eliminate the risk. In addition, data on total public sector liabilities are used on a consolidated basis to avoid double-counting (e.g., loans by the central government to state governments do not constitute liabilities because they are merely transferring of funds within the public sector).

<sup>412</sup> In principle, external debt is defined based on the creditor's place of residence. Therefore, external debt can include debts in local currency owed to non-residents, but in practice, due to the difficulty in obtaining information, foreign currency-denominated debt is often used as a substitute for external debt when there is not significant participation of non-residents in the domestic bond market.

USD, matters specific to the analysis of external debt (such as the impact of exchange rates) are not considered. In addition, there are no Public Private Partnerships (PPPs).

### 3.2.4.3. DSA's macroeconomic forecast (Baseline Scenario)

In conducting the DSA, macroeconomic projections and various scenarios are prepared up to 2030, incorporating the economic events expected at the time of the analysis, and the future debt dynamics are projected based on these projections. The key assumptions underlying the baseline scenarios are assumed to be as follows<sup>413</sup>;

- ✓ The impact of COVID-19 will result in negative economic growth in the short term.
- ✓ Restrictions on travel will be gradually eased, and the economy will recover by about 3.5% in 2022.
- ✓ While inflation will stabilize at about 2.0% (converging to about the same level as in the US), real GDP growth will be about 1.5% over the long term, taking into account the outflow of population to the US and the impact of natural disasters<sup>414</sup>.
- ✓ The current account balance will be in deficit by 13.6% of GDP in 2030 due to declining fishing license fees and tax revenues and the end of financial assistance under the Compact Agreement in 2023.
- ✓ While inward FDI will stabilize at 3.5% of GDP, the primary budget deficit will reach 14.0% of GDP by 2030.
- ✓ Since there is no access to international capital markets, financing is provided by loans from MDBs and other sources.

Table 246 RMI's Key Macroeconomic Indicators and Fiscal Projections (Baseline Scenario)

	2020	2021	2022-2025 (Average)	(In % of GDP)	
				2030	2040
Real GDP Growth (%)	-3.3	-1.5	2.5	1.5	1.5
Inflation (%)	1.1	1.5	2.0	2.0	2.0
Current account deficit	-2.9	-3.2	6.5	13.6	15.4
Primary deficit	-1.6	-1.9	7.7	14.0	16.2
Export value	26.7	33.3	30.5	30.2	30.2
Tax revenue & Grant	67.7	86.8	62.2	49.7	46.2

Source: IMF, Staff Report for the 2021 Article IV Consultation - Debt Sustainability Analysis, p.5

<sup>413</sup> The changes from the DSA in 2018 are the lower GDP growth rate due to the impact of COVID-19 and the fiscal deterioration after the end of financial assistance by the Compact.

<sup>414</sup> According to the RMI's Emergency Events Database, the annual likelihood of a serious natural disaster is estimated at 5.4% with 25% of the total population affected by a disaster. In the baseline scenario, the impact of natural disasters and climate change has been incorporated as a negative adjustment to the long-term growth forecast. The potential growth rate is estimated to be 1.6% without taking into account the effects of natural disasters and climate change.

Based on the above assumptions, the movements of external debt and public debt under the baseline scenario are as follows.

Table 247 RMI's External Debt Projections and Drivers of Change (Baseline Scenario)

	2017	2018	2019	→Projections (In percent of GDP, unless otherwise indicated)							2030	2040
				2020	2021	2022	2023	2024	2025			
External debt	38.7	34.7	29.6	29.9	28.1	28.8	30.4	41.5	55.9	123.5	263.9	
of which:PPG	36.8	32.7	27.8	27.5	26.2	26.9	28.6	39.8	54.2	122.1	262.9	
Change in external debt	-5.4	-4.0	-5.1	0.3	-1.8	0.7	1.6	11.1	14.4	13.1	17.5	
Identified external debt-creating flows	-10.7	-9.3	-6.7	-4.7	-5.7	-3.2	-2.0	6.2	10.4	10.3	12.8	
Current account deficit, excluding interest payments	-6.2	-4.8	24.7	-2.9	-3.2	0.7	1.6	9.7	14.0	14.0	16.2	
Deficit in balance of goods and service	46.3	46.6	72.9	50.3	57.0	60.0	57.8	56.0	56.7	57.2	57.2	
Exports	38.5	38.9	38.0	26.7	33.3	31.0	30.5	30.3	30.1	30.2	30.2	
Imports	84.7	85.5	110.9	77.0	90.3	91.0	88.3	86.3	86.9	87.4	87.4	
Net current transfers (negative=inflow)	-23.7	-24.6	-25.3	-25.5	-31.7	-29.7	-26.6	-7.3	-4.2	-5.7	-3.9	
Other current account flows (negative=net inflows)	-28.7	-26.8	-22.9	-27.7	-28.5	-29.5	-29.6	-39.1	-38.6	-37.6	-37.1	
Net FDI (negative=net inflows)	-3.3	-3.7	-29.5	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5	-3.5	
Endogenous debt dynamics※1	-1.2	-1.9	-1.9	1.6	1.0	-0.4	-0.1	0.0	-0.1	-0.2	0.1	
Contribution from nominal interest rate	0.9	0.8	0.7	0.6	0.6	0.5	0.6	0.5	0.6	1.4	3.7	
Contribution from real GDP growth	-1.4	-1.1	-2.1	1.0	0.4	-0.9	-0.7	-0.6	-0.7	-1.6	-3.6	
Contribution from price and exchange rate changes	-0.8	-0.6	-0.5	...	...	...	...	...	...	...	...	
Residual※2	5.2	5.3	1.6	5.0	3.9	3.8	3.6	5.0	3.9	2.8	4.7	

※1 Derived as  $[r - g - \tau(1+g) + ea(1+r)] / (1+g+r+g)$  times previous period debt stock, with  $r$  = nominal effective interest rate on external debt;  $\tau$  = change in domestic GDP deflator in US dollar terms,  $g$  = real GDP growth rate,  $e$  = nominal appreciation (increase in dollar value of domestic currency), and  $a$  = share of domestic-currency denominated debt in total external debt.

※2 Includes exceptional financing (i.e., changes in arrears and debt relief), etc.

Source: IMF, Staff Report for the 2021 Article IV Consultation - Debt Sustainability Analysis, p.13

Table 248 RMI's Public Debt Projections and Drivers of Change (Baseline Scenario)

	2017	2018	2019	→Projections (In percent of GDP, unless otherwise indicated)							2030	2040
				2020	2021	2022	2023	2024	2025			
Public sector debt	36.8	32.8	27.8	27.5	26.2	26.9	28.6	39.8	54.2	122.1	262.9	
of which: external debt	36.8	32.7	27.8	27.5	26.2	26.9	28.6	39.8	54.2	122.1	262.9	
Change in public sector debt	-4.6	-4.0	-5.1	-0.3	-1.3	0.8	1.6	11.2	14.4	13.1	17.5	
Identified debt-creating flows	-5.8	-3.6	-0.2	-0.3	-1.3	0.8	1.6	11.2	14.4	13.1	12.7	
Primary deficit	-4.7	-2.8	1.5	-1.6	-1.9	1.6	2.3	11.8	15.3	15.4	17.4	
Primary (noninterest) revenue	68.7	62.6	62.0	67.7	86.8	70.4	69.2	58.1	51.0	49.7	46.2	
Primary (noninterest) expenditure	63.9	59.7	63.5	66.2	84.9	72.0	71.5	69.9	66.3	65.2	63.6	
Automatic debt dynamics	-1.1	-0.8	-1.7	1.3	0.6	-0.9	-0.6	-0.6	-0.8	-2.3	-4.7	
Real interest rate and real GDP growth	-1.1	-11.0	-1.8	1.2	0.5	-0.8	-0.6	-0.5	-0.8	-2.3	-4.6	
Exchange rate depreciation	0.0	0.3	0.1	...	...	...	...	...	...	...	...	
Other identified debt-creating flows※1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

※1 Includes exceptional financing (i.e., changes in arrears and debt relief), etc.

Source: IMF, Staff Report for the 2021 Article IV Consultation - Debt Sustainability Analysis, p.14

The indicators for assessing debt sustainability in the baseline scenario are (1) the ratio of external PPG (PV) to GDP, (2) the ratio of external PPG (PV) to exports, (3) the ratio of PPG principal and interest payments to exports, (4) the ratio of PPG principal and interest payments to imports, and (5) the ratio of public debt (PV) to GDP. All three indicators are judged on the basis of the thresholds applied to each indicator<sup>415</sup>. All 5 indicators are projected to exceed the threshold in 2040.

Table 249 RMI Debt Sustainability Indicators (Baseline Scenario)

	2017	2018	2019	→Projections							2030	2040	Threshold
				2020	2021	2022	2023	2024	2025				
PV of PPG external debt-to-GDP ratio	...	...	22.9	22.6	21.4	21.0	21.0	25.4	31.9	68.9	166.4	30.0	
PV of PPG external debt-to-exports ratio	...	...	60.2	84.6	64.2	67.6	69.0	83.8	105.8	228.2	551.1	140.0	
PPG debt service-to-exports ratio	9.7	8.2	8.4	10.9	8.6	8.8	8.7	8.6	8.8	7.9	24.3	10.0	
PPG debt service-to-revenue ratio	9.8	9.9	10.0	8.7	9.1	8.5	8.2	6.2	6.4	6.1	19.2	14.0	
PV of public debt-to-GDP ratio	...	...	22.9	22.6	21.4	21.0	21.0	25.4	31.9	68.9	166.4	35.0	

Source: IMF, Staff Report for the 2021 Article IV Consultation - Debt Sustainability Analysis, p.13-14

#### 3.2.4.4. DSA Scenario Comparison (Stress Testing)

In the DSA, in addition to the baseline scenario, various alternative scenarios that incorporate the effects of changes in macroeconomic events and natural disasters are developed and stress tested<sup>416</sup>.

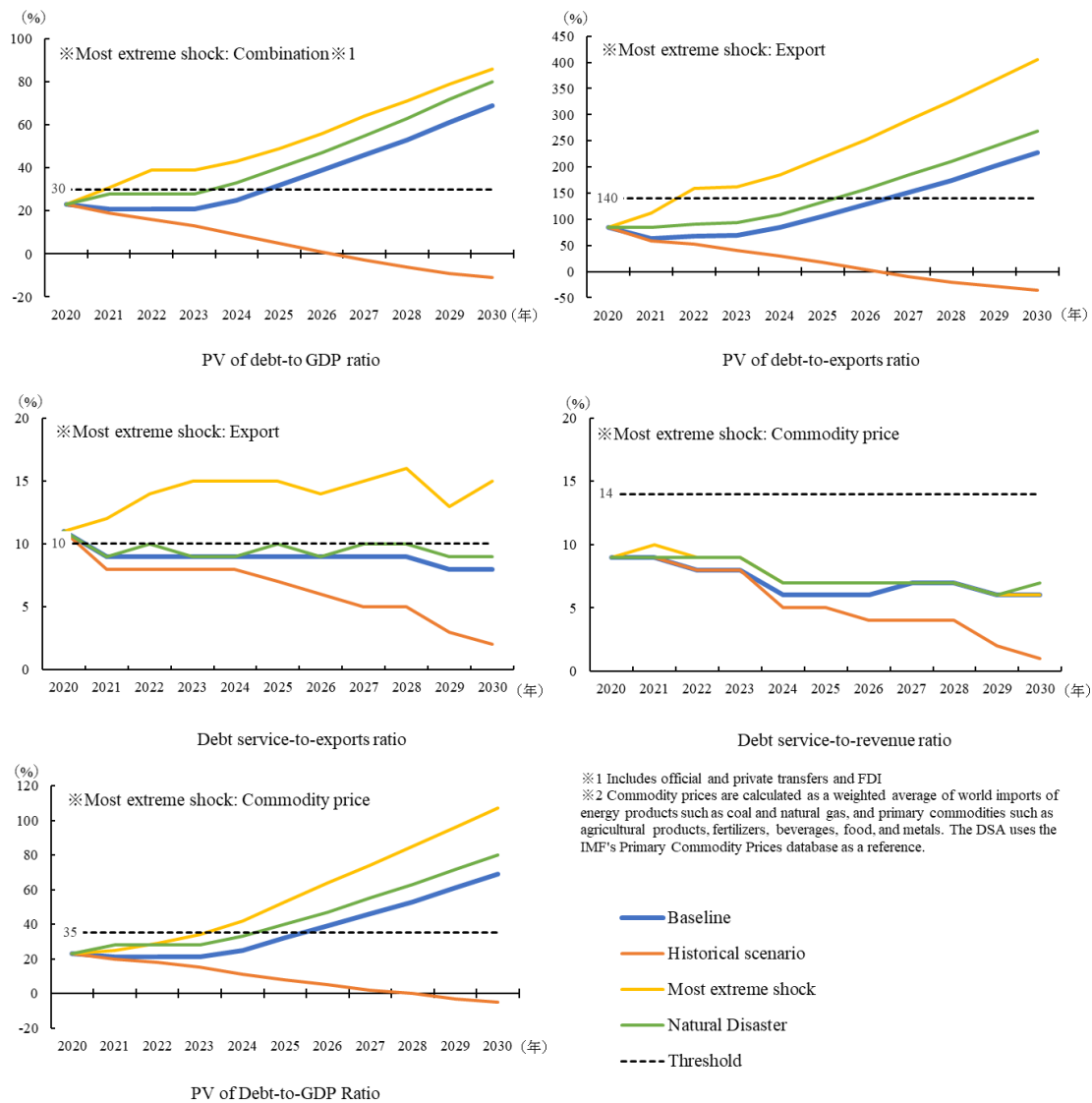
In addition to the baseline scenario, the RMI's DSA compares the historical scenario<sup>417</sup>, the natural disaster scenario<sup>418</sup>, and the most extreme shock scenario, and the IMF's analysis concludes that the country is vulnerable to natural disasters and economic fluctuations.

<sup>415</sup> The thresholds for each indicator are determined according to the country's debt burden capacity classification. The debt burden capacity is based on the Composite Indicator (CI), which is an indicator that takes into account factors such as the Country Policy and Institutional Assessment (CPIA) of the World Bank, the country's real GDP growth rate, overseas remittances, reserves, and the growth rate of the world as a whole. RMIs are classified as "Weak" if their CI is below 2.69, "Medium" if it is between 2.69 and 3.05, and "Strong" if it is above 3.05. The RMI's CI is "Weak" and the applicable thresholds are 30% for the ratio of external PPG to GDP (PV basis), 140% for the ratio of external PPG to exports (PV basis), 10% for the ratio of external PPG principal and interest payments to exports, 14% for the ratio of external PPG principal and interest payments to revenue, and 35% for the ratio of public debt to GDP (PV basis).

<sup>416</sup> Stress tests include standard scenarios common to all countries that reflect changes in various macroeconomic indicators (scenarios are created for real GDP growth, primary balance, exports, exchange rate depreciation, and changes in a combination of these factors). There are 3 types of stress tests: standard scenarios that reflect changes in various macroeconomic indicators, tailored scenarios that reflect the impact of contingent liabilities and natural disasters, and customized scenarios that reflect events specific to the target country.

<sup>417</sup> In order to validate the baseline scenario, the average values of macroeconomic variables for the past 10 years are stretched over the forecast period.

<sup>418</sup> Assuming one-time damage from an extreme natural disaster, real GDP growth and export growth are assumed to decline by 2.0% and 3.5%, respectively, and the trade deficit and public spending are assumed to increase by 5%.



Source: IMF, Staff Report for the 2021 Article IV Consultation - Debt Sustainability Analysis, p.15-16

Figure 43 Comparison of RMI's DSA indicator scenarios

### 3.2.4.5. Conclusion

The current account deficit due to the impact of COVID-19 and the uncertainty of financial assistance under the U.S. Compact are factored into the macroeconomic and fiscal projections<sup>419</sup>.

Under the baseline scenario and the natural disaster scenario, the ratio of external PPG (PV) to GDP and exports, and the ratio of public debt (PV) to GDP exceed the threshold in the long run.

<sup>419</sup> If the financial support from the Compact, which accounts for the majority of the revenue, continues from 2024, the scenario is expected to be revised upward. On the other hand, the Compact Trust Fund is not considered in the debt sustainability assessment because it is not liquid enough to be used for immediate debt repayment.

Also, even in the most extreme scenario, all but the ratio of external PPG principal and interest payments to revenue exceed the threshold. Thus, the IMF analysis concludes that the RMI remains debt sustainable but with a high risk of default, similar to the 2018 DSA results.

The IMF's analysis therefore concludes that the RMI's debt sustainability remains high, but the risk of default remains high, as in the 2018 DSA. However, in each of the above scenarios, the RMI's public debt-to-GDP ratio (in PV terms) is below the threshold and sustainable if the RMI continues to receive financial support from the MDBs on a grant basis, as all future financing is assumed to be provided through loans with repayment obligations<sup>420</sup>.

#### 3.2.4.6. Status on the Compact Agreement

The IMF's analysis points to the need to rationalize spending on goods and services, subsidies to state-owned enterprises, and other expenditures, as well as fiscal consolidation, including tax reform, in preparation for the elimination or reduction of economic assistance under the Compact<sup>421</sup>.

On August 10, 2021, RMI President David Kabua announced a new Compact Negotiation Committee to lead the negotiations. The members of the committee include Foreign Affairs Minister Casten N. Nemra (chair), Assistant to the President and Minister of Environment Christopher J. Loeak (vice chair), as well as the Minister of Finance and Senators. The Compact Negotiation Committee will negotiate economic provisions, assurances of continuation of federal service programs, and defense issues related to the Military Use and Operating Rights Agreement (MUORA).

As for what to do in the event that the Compact becomes unsustainable, according to information provided by the EPPSO, measures such as privatizing state-owned enterprises (strengthening the private sector), maintaining sustainable spending levels (spending as a percentage of GDP has been on the rise in recent years), and building fiscal buffers with support from international organizations will need to be taken to manage available financial resources.

The compact budget for FY2022 has already been approved, and according to the US Department of the Interior, Office of Insular Affairs, USD 33.73 million was bilaterally approved in November 2021 as compact funding for FY2022 for the FSM<sup>422</sup>. The breakdown is as follows The breakdown is as follows.

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<sup>420</sup> Since lenders link the duration and allocation of financial support to the DSA evaluation, the evaluation must exclude the possibility of future financial support in advance.

<sup>421</sup> IMF, Staff Report for the 2021 Article IV Consultation - Debt Sustainability Analysis

<sup>422</sup> <https://www.doi.gov/oia/press/Interior-Announces-%2434-Million-in-Compact-Funding-for-FY-2022-Government-Operations-in-the-Republic-of-the-Marshall-Islands>

Table 250 Breakdown of the Compact Grant in 2022

Sector	Amount (thousand USD)
Education	9,316
Infrastructure	9,145
Health	6,211
Ebeye Special Needs - Education	2,846
Kwajalein Impact Fund	2,391
Ebeye Special Needs - Health	2,370
Ebeye Special Needs - Capital	1,202
Disaster Emergency Fund	252
Total	33,732

Source: US Department of the Interior website<sup>423</sup>

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<sup>423</sup> <https://www.doi.gov/oia/press/Interior-Announces-%2434-Million-in-Compact-Funding-for-FY-2022-Government-Operations-in-the-Republic-of-the-Marshall-Islands>

### 3.3. Development policy and investment policy

#### 3.3.1. Development policy and sectoral development policy

##### 3.3.1.1. National Strategic Plan 2020-2030

The National Strategic Plan 2020-2030 (NSP) is a national strategic plan with five pillars: (1) Society and Culture, (2) Environment, Climate Change and Resilience, (3) Infrastructure, (4) Economic Development, and (5) Good Governance. The national vision of the NSP is based on the concepts of social and economic empowerment, resilience, climate change adaptation, security, and human development, and attempts to chart a course for the development of the country and its people by recognizing the various issues and challenges, including the effects of climate change and sea level rise.

The five pillars of the NSP are composed of 24 strategic areas, and policy objectives are set for each pillar and area. as an evaluation indicator of the NSP, the National Monitoring & Evaluation Framework (M&E) is used. The National Monitoring & Evaluation Framework (M&E) provides key performance indicators and targets for monitoring and evaluating the progress of national policy objectives in each strategic area. In order to report on the progress of the NSP, the NSP Annual Report, which is evaluated using the M&E, is to be prepared.

Table 251 Pillars, Strategic Areas, and Goals of the National Strategic Plan 2020-2030

5 pillars and 24 strategic areas	GOALS
(1) Society and Culture	Healthy, peaceful, and inclusive societies for sustainable development
1. Health	Healthy living and well-being for all ages
2. Education and training	Inclusive and equitable educational and lifelong learning opportunities for all
3. Social justice and inclusion	Equality, justice, and empowerment for all.
4. Cultural and traditional knowledge	Integrate RMI culture, customary laws, and traditional practices into all aspects of development
(2) Environment, climate change, and resilience	Increase the resilience of RMIs and their environmental assets to the impacts of climate change and natural disasters through national, regional, and international efforts.
1. Atoll environment	Protect, manage, and sustainably use the RMI's atoll environmental resources
2. Climate change	Comprehensive response to climate change for a sustainable society, economic growth and well-being of the RMI and its people
3. Disaster risk management	RMIs manage disaster risks for the present and future well-being of RMI people.



5 pillars and 24 strategic areas	GOALS
4. Radioactive contamination	RMI has the capacity to monitor, understand, and respond to the occurrence of radioactive contamination for the present and future well-being of the RMI population.
(3) infrastructure	Provision of efficient, effective, resilient, sustainable, and affordable services and facilities that promote sustainable economic growth.
1. Transportation	A sound and efficient transportation infrastructure that supports social and economic development
2. Energy	Sustainable energy services that are clean, reliable, affordable, accessible, and resilient for economic development.
3. Water and sanitation	Access to safe drinking water and sanitation for the economic and social development and well-being of all RMI populations.
4. Waste disposal	Building a reliable infrastructure for efficient management of waste, chemicals, and pollutants
5. ICT	Modern, efficient, resilient, and affordable communications network services for social and economic prosperity
6. Public facilities	Healthy, resilient, and efficient public facilities for sustainable social and economic development and well-being.
(4) Economic development	Achieve an economy that supports a strong, productive, and self-reliant nation, supported by legislation, policies, and conditions for inclusive and sustained economic growth. Such an economy will help attract domestic and foreign investment to promote the creation of decent jobs, higher productivity, and improved living standards.
1. Land	Strengthen access to land
2. Agriculture	Strengthen agricultural development
3. Marine resources	Sustainable and responsible use of marine resources
4. Trade, investment, and tourism	Local economic and employment growth
5. Financial sector services	Strengthen financial sector stability, improve financial services
(5) good governance	Apply good governance to all areas of government and society, ensure that the rule of law is applied to all citizens, and ensure that effective measures are implemented to eliminate all forms of corruption and illegal activities.
1. Administrative agencies	High quality, accountable, and transparent service delivery
2. Public financial management	Sound and efficient public financial management
3. Law, justice, and public safety	Stronger law enforcement and improved community safety
4. Justice	Effective, impartial, fair, and transparent courts and judicial systems
5. International relations and security	Protect and promote the national interests of RMIs regionally and internationally

Source: National Strategic Plan 2020-2030 (RMI government)

### 3.3.2. Investment Policies and Systems for Attracting Foreign Capital

#### 3.3.2.1. Investment Policy

The RMI has established the Office of Commerce, Investment and Tourism (OCIT) to assist foreign investors. OCIT provides a wide range of services, including promotion of the RMI to potential tourists and investors, assistance in domestic and international business development, and policy recommendations on investment and export to the RMI government. OCIT provides a wide range of services, including promotion of the RMI to potential tourists and investors, support for domestic and international business development, and policy advocacy for investment and export to the RMI government. OCIT also publishes the RMI Investment Policy Statement 2019. Investors, both non-citizens and citizens, can seek assistance from OCIT as shown in the table below.

Table 252 OCIT's Main Support for Investors

<p>Provide information on the following</p> <ul style="list-style-type: none"><li>• Data on investment conditions and business costs in RMI</li><li>• Foreign Investment Business License Application Procedures</li></ul> <p>Facilitation of the following</p> <ul style="list-style-type: none"><li>• Arranging meetings with government officials and local businesses</li><li>• Referrals to local firms that provide consultation, accounting, and legal services</li><li>• Follow-up with government agencies to ensure that investment-related applications are processed efficiently</li></ul>
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Source: RMI Investment Policy Statement 2019

#### 3.3.2.2. System

##### (1) Investment incentives and regulations

Foreign investment in the RMI is governed by the Foreign Investment Business License (Amendment) Act, which provides that the activities listed in the table below are limited to RMI nationals. The Foreign Investment Business License (Amendment) Act provides that the following activities are limited to RMI citizens.

Table 253 Activities Limited to RMI Citizens

<ul style="list-style-type: none"><li>• Small-scale farming for local markets</li><li>• Small-scale aquaculture business for local markets</li><li>• Bakeries and confectionery shops</li><li>• Auto repair shop, fuel station</li><li>• Land cab business, excluding airport cabs used by hotels</li><li>• Rental of all types of vehicles</li><li>• Small retailers with quarterly sales of less than USD 10,000 (including mobile retailers, street vendors, and take-out)</li><li>• Coin-operated laundry and dry cleaning (except for services provided by hotels/motels)</li><li>• Sewing stores and seamstresses</li></ul>
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- Video Rental
- Prepared food stores, take-out food stores

Source: RMI Investment Policy Statement 2019

## (2) Methods and Procedures for Companies to Enter the Market

### Foreign Investment Business License

Non-RMI citizens who wish to invest are required to obtain a Foreign Investment Business License (FIBL), which can be obtained through the FIBL Unit of the Ministry of Finance, Banking and Postal Services or through OCIT.

### Company Registration

For investments by non-RMI citizens, they are required to incorporate as a domestic limited company or register as a foreign company. Investors who do not wish to incorporate in the RMI should apply for registration as a foreign company using the prescribed form available from the FIBL unit.

### Work Permit

Non-resident workers are required to obtain a work permit, regardless of the duration of their employment contract. In order to obtain a work permit, the steps shown in the table below (attempting to hire a local resident) must be taken.

Table 254 Steps in Applying for a Work Permit

Step1	Notify the Chief of Labor of the Ministry of Foreign Affairs in writing that you wish to hire a non-resident for a specific position.
Step2	Make an effort to hire local residents by placing job ads in local newspapers and radio stations.
Step3	If efforts to hire local residents are unsuccessful, apply to the Director of Labor using the prescribed form and request that non-residents be hired for specific positions.

Source: RMI Investment Policy Statement 2019

The application form in Step 3 must be submitted at least 30 days after the first job advertisement. In the application, the investor must show evidence of efforts made to hire local residents. They must also prove that the proposed non-resident worker has the skills and experience required for the position, is free of communicable diseases, and has no criminal record. Work permits are issued to certain non-resident workers for a period of one year. The permit shall be issued at the end of the calendar year. The permit must be renewed at the end of each calendar year and may be renewed for up to two years in total. Employers must ensure that all employed non-resident workers return home

two years after the date of employment or upon early termination or retirement of the non-resident worker.

#### Exemption from Obtaining a Work Permit

Non-citizen investors who have been issued a Foreign Investment Business License are exempted from obtaining a work permit. In addition, U.S., FSM, and Palauan nationals are not required to obtain a work permit to be employed in the RMI. However, non-citizen investors who have been issued a Foreign Investment Business License and nationals of the above three countries will be required to register with the Labor Office. The government may exempt an investor from obtaining a work permit if the investor can prove that the investment will bring substantial economic benefits to the country. The measure is limited to investments in export industries. Applications should be submitted to the Chief of Labor.

#### Conditions Imposed on Investors Who Employ Non-Residents

The terms and conditions that the RMI government requires all investors who employ non-resident workers to agree to in writing are shown in the table below.

Table 255 Terms and conditions that investors are required to agree in writing

- |   |
|---|
| <ul style="list-style-type: none"><li>• Covering the cost of non-resident workers returning home.</li><li>• Employing, or already employing and training one or more local residents to perform the work for which the nonresident worker is employed.</li><li>• Notwithstanding any other law or regulation, all employers, unless exempted by the Cabinet, shall have at least a 50% of their workforce composed of Marshallese citizens in the first year of operation and each year thereafter.</li></ul> |
|---|

Source: RMI Investment Policy Statement 2019

#### Entry Permit and Alien Registration Card

The government requires all non-citizen investors, non-resident workers and their immediate family members to obtain Entry permits and Alien registration cards. Entry permits and alien registration cards are issued for a period not exceeding one year and must be renewed at the end of each calendar year.

Non-citizen investors are allowed to enter the RMI with 30-day visitor's entry permit. Once in the country, they may switch to a non-resident work permit and obtain an alien registration card. Entry permits, non-resident work permits and alien registration cards can be obtained by applying to the Chief of Immigration at the Office of the Attorney General using the prescribed forms. The application form must be accompanied by the applicant's passport identification page, health certificate, and criminal record. Non-resident workers are required to obtain an entry permit and alien registration card before entering the country, and employers must apply for these documents on behalf of the applicant as part of the process of obtaining a work permit.

### (3) Trade and Taxation

The RMI is well known as a tax haven, and many foreign companies, such as Flag of Convenience businesses, register in the RMI for tax benefits and operate abroad instead of in the RMI. Such companies are defined by law as Non-Resident Domestic Corporations and can be registered outside the RMI in any industry except banking, trust and insurance. This system is provided for in the Business Corporations Act 1990<sup>424</sup>, which has attracted many foreign companies seeking tax benefits.

### (4) Challenges for Foreign Investment and Potential Areas of Cooperation

According to the information provided by OCIT, the challenges for foreign investment include updating the Investment Policy Statement 2019, slow registration process for foreign companies (takes about two months), and comprehensive development of rural and remote islands (comprehensive real estate development including spatial design and architecture). In addition, tourism, agriculture, energy (especially solar), and infrastructure were cited as potential areas for investment.

Needs for cooperation from Japan included infrastructure development to promote tourism (airport and port docks, electricity supply and hotel development in rural and remote island areas, etc.), and aviation business management training and dispatch of experts to reduce costs at Air Marshall Islands.

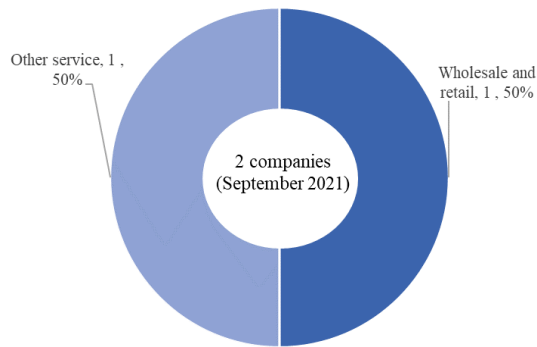
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<sup>424</sup> [https://rmiparliament.org/cms/images/LEGISLATION/PRINCIPAL/1990/1990-0091/BusinessCorporationsAct1990\\_4.pdf](https://rmiparliament.org/cms/images/LEGISLATION/PRINCIPAL/1990/1990-0091/BusinessCorporationsAct1990_4.pdf)

### 3.4. Private Investment

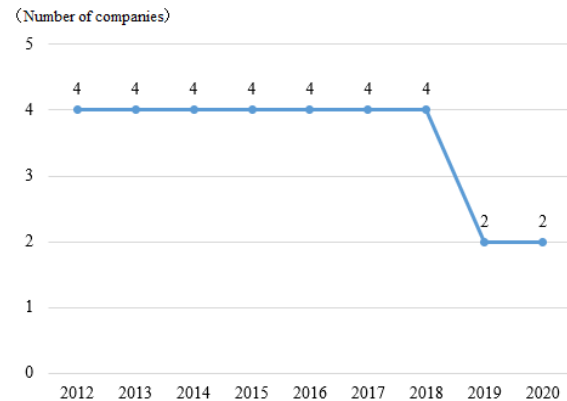
#### 3.4.1. Current Status and Trends of Private Investment

As for the trend of Japanese companies entering the RMI, the number of Japanese companies entering the RMI from 2012 to 2020 was four until 2018, but then decreased to two. The breakdown of industries is as shown in Figure 44: Services (not elsewhere classified) and wholesale and retail trade.



Source: Ministry of Foreign Affairs of Japan, Survey of Japanese Residents Abroad

Figure 44 Composition of Japanese Companies in Japan by Industry (Number and Percentage)



Source: Ministry of Foreign Affairs of Japan, Survey of Japanese Residents Abroad

Figure 45 Number of Japanese Companies in Japan (as of October in each year)

#### 3.4.2. Private Investment Policies and Institutions

The RMI government promotes private investment as a means to reduce dependence on the U.S. Compact and to secure independent financial resources, and the government agency OCIT is responsible for this. The following incentives have been implemented to attract private investment (see Table 256). These incentives apply to all investors, regardless of where they live.

Table 256 List of Incentives for Private Companies in RMI

Contents	Application period	Applicable conditions
Exemption from gross Receipts tax <sup>425</sup>	For 5 Years	Corporations engaged in export-oriented business in the following industries, with an investment of at least USD 1 million or more, or paying over USD 150,000 for locally hired labor <ul style="list-style-type: none"> <li>• Manufacturing for export, or manufacturing for export and domestic market</li> <li>• agriculture</li> <li>• Hotel and resort facilities</li> </ul>
	For 25 Years from operation	<ul style="list-style-type: none"> <li>• Factory doing fish loining</li> </ul>

Source: OCIT, RMI Investment Policy Statement 2019

The RMI has a regional trade agreement and a bilateral trade agreement with the United States.

Table 257 RMI Trade Agreements and Overview

Trade agreement				
	Name	Situation	Member year	Overview
	The Compact Agreement	Already in effect	1986	Exemption from import duties on goods exported to the US, except for the exceptions listed on the right: Watches and other timekeeping devices, buttons, textiles, shoes, handbags, briefcases, gloves, leather goods, and tuna from the RMI and the FSM, a signatory to the Articles of Agreement, if the volume of tuna imported (in airtight containers only) exceeds 10% of the annual consumption of tuna imported in airtight containers for consumption in the United States <sup>426</sup>
Preferential trade agreements				
	Name	Situation	Member Year	Contents

<sup>425</sup> The Gross Revenue Tax is levied on businesses operating in the RMI at a flat rate of USD 80 for annual sales of USD 10,000 or less, and USD 80 in addition to 3% of sales in excess of USD 10,000 for sales of USD 10,000 or more.

<sup>426</sup> Amended COMPACT OF FREE ASSOCIATION (2003), <https://www.state.gov/wp-content/uploads/2019/02/04-625-Micronesia-Compact-Amendment.pdf>

	EU Regulation (No. 978/2012) <sup>427</sup>	Already in effect	2012	All goods exported to the EU are subject to GSP-based tariff rates or duty-free.
	SPARTECA	Already in effect	1981	Preferential tariffs applied by Australia and New Zealand to imports from countries that are members of the Pacific States Forum. Goods from member countries are duty-free and can be exported to Australia and New Zealand without import quotas (sugar exports in Australia are excluded).
	GSP	Already in effect	1971	A system under which developed countries (such as Japan, Australia, New Zealand, Canada, and the United States) apply tariff rates lower than general tariff rates (called “preferential tariffs”) to agricultural and mineral products imported from developing countries, including the FSM.
Free trade agreements being negotiated				
	Name	Situation	Member Year	Contents
	PACER	Already in effect	Undecided	The RMI is a member but not a ratified member of the 14 Pacific Nations Forum, a comprehensive trade framework issued in 2020 by the Pacific Nations Forum led by Australia and New Zealand.
	PICTA	Already in effect	Undecided	It is an agreement to promote regional cooperation and integration through trade among the 14 Pacific nations, including the RMI, but the RMI has not ratified it.

Source: ADB, Asia Regional Integration Center website

<sup>427</sup> Kenji Uetsuki, "Enactment of New Regulations Amending the EU Generalized System of Preferential Tariffs," National Diet Library, [https://dl.ndl.go.jp/view/download/digidepo\\_8196098\\_po\\_02550105.pdf?contentNo=1](https://dl.ndl.go.jp/view/download/digidepo_8196098_po_02550105.pdf?contentNo=1)



### 3.4.3. Financial Sector (Overview of Government and Private Financial Institutions and Their Services)

#### (1) Overview

The RMI's financial sector is supervised by the Republic of the Marshall Islands Office of the Banking Commission (RMIOBC) and includes Bank of the Marshall Islands (BOMI), Bank of Guam, the government-affiliated Marshall Islands Development Bank (MIDB), a pension fund, two insurance companies, and two money transfer companies<sup>428</sup>. The Bank of Guam is the only bank in the RMI that is covered by FDIC deposit insurance<sup>429</sup>.

As for the financial condition of RMI commercial banks, total assets and loans have been on an upward trend for the past five years, and the banks have been steadily expanding their scale. Most of the loans are consumer and commercial loans to individuals. The company has been profitable for the past five years, and there are no particular problems with its profitability. The non-performing loan (NPL) ratio has remained low, at 1.1% as of September 2020, according to IMF data. The loan-to-deposit ratio has been stable in the upper 50% to 60% range.

Table 258 Financial Condition of RMI Commercial Banks

	(million USD)				
Major Balance Sheet Items	2016	2017	2018	2019	2020
Total assets	156.9	161.2	160.3	180.3	189.4
Loan	79.4	82.3	81.5	85.3	89.6
For corporate	22.1	22.4	22.9	26.0	27.0
For individuals	57.4	59.9	58.6	59.4	62.6
Total liabilities	124.2	130.9	128.8	150.0	159.0
Deposits	118.9	125.4	123.0	143.5	152.9
Shareholders' equity	32.7	30.3	31.5	30.3	30.4
Major income statement items	2016	2017	2018	2019	2020
Total revenue	13.5	15.2	16.4	16.6	12.8
Of which, interest income	10.1	11.9	12.7	13.0	9.7
Net income (loss)	5.8	7.5	9.5	8.8	7.2

Source: RMI FY20 Economic Statistics, Graduate School USA

<sup>428</sup> ADB, Pacific Financial Sector Briefs, 2019

<sup>429</sup> FDIC website

Table 259 Financial Indicators for RMI Commercial Banks

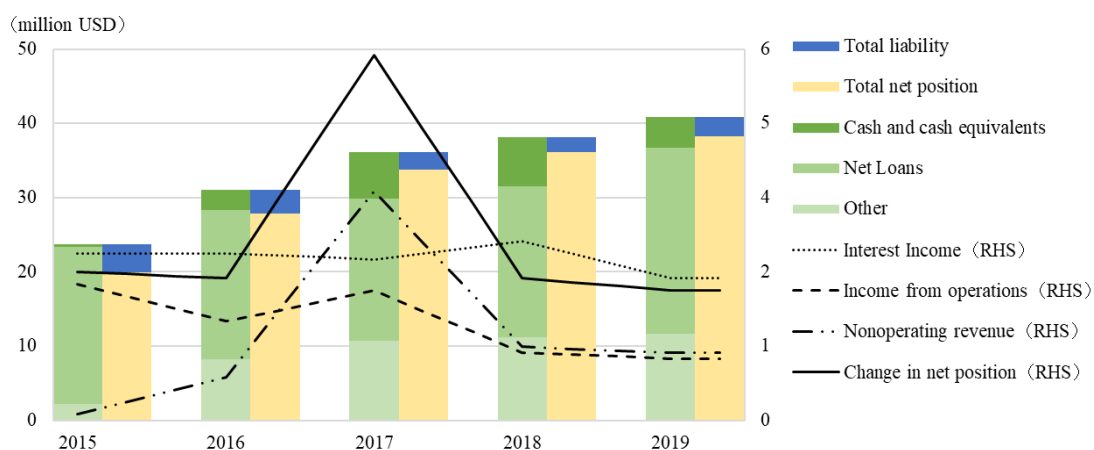
Key Financial Indicators	(%)				
	2016	2017	2018	2019	2020
NPL ratio	No Data	1.0	3.0	No Data	No Data
loan-deposit ratio	66.8	65.6	66.3	59.5	58.6

Source: RMI FY20 Economic Statistics, Graduate School USA (loan-to-deposit ratio), RMIBB Annual Report (NPL ratio)

### Overview of MIDB

MIDB is a government-owned development finance institution established in 1988, which prioritizes investments and loans in the areas of consumer finance and housing, SME business, and renewable energy, with the aim of improving living standards in the RMI.

As for MIDB's financial condition, assets such as loans and net assets are on an upward trend, and its profit level is in the black, with no particular problems.



Source: MIDB Annual Audit Report

Figure 46 MIDB's Financial Status

Table 260 MIDB's NPL ratio (%)

	2017	2018	2019	2020	2021
NPL ratio	9.55	8.14	12.61	18.37	18.11

Source: Information provided by MIDB

The menu of funds includes commercial loans for small and medium-sized enterprises, consumer loans for individuals, auto loans, and housing loans, with more emphasis on commercial loans and more emphasis on private sector development. It also provides solar energy loans for residential

buildings through a project of the Taiwan International Cooperation and Development Fund, and low-interest loans (4% interest rate) to copra-related companies located in remote islands hit by COVID-19. In terms of interest rates, commercial loans are 1.5%. The interest rates range from 1% to 7% for commercial loans, 6% to 7% for residential loans, and 5% to 14% for consumer loans.

## (2) Development Project

The RMI's NSP 2020-2030 aims to enhance the stability of the financial sector by (1) strengthening financial sector supervision, (2) improving access to affordable and competitive financial services, and (3) protecting and developing linkages with the international financial system. In order to achieve these goals, it is also important to maintain Correspondent Banking Relationships (CBR)<sup>430</sup>, address money laundering and terrorist financing, provide financial services in rural areas including remote islands through the use of technology, and improve financial literacy in local communities and schools. It is also important to improve financial literacy in local communities and schools.

## (3) Issues and Measures

According to the ADB, in the RMI, Marshall Bank has the only CBR in the country with First Hawaiian Bank, a subsidiary of BNP Paribas, but the renewal of the CBR is conditional on improvements in anti-money laundering and anti-terrorist financing measures, and there are issues with the stability of the CBR<sup>431432</sup>.

The IMF has also identified the following as challenges for the financial sector: developing a system to combat money laundering and terrorist financing and monitor soundness in line with international standards; developing laws to enable stronger supervision of domestic financial institutions, including MIDBs; and tightening the classification of consumer loans and other receivables. Another issue specific to RMIs is the issuance of SOV, the world's first legal tender based on cryptographic assets using blockchain technology, in 2018<sup>433</sup>. According to the IMF, the issuance of SOVs could pose risks to macroeconomic and financial stability, worsen the CBR, and disrupt the flow of funds, including money laundering and terrorist financing issues and foreign aid. Furthermore, with the issuance of the SOV, a bill on the establishment of the Digital Economic Zone on Rongelap Atoll (DEZRA)<sup>434</sup> has been submitted to the National Assembly, pointing out that institutional capacity and infrastructure building are important steps for actual operation. The RMI government is also fully aware of the reputational risk to the RMI and the risk of deterioration of CBR associated with the issuance of SOVs and the establishment of DEZRA, and has requested technical assistance from

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<sup>430</sup> A "foreign exchange contract between banks" in which the terms and conditions are agreed upon in advance when conducting exchange transactions between banks for funds to be sent and received.

<sup>431</sup> ADB, 2019, Pacific Financial Sector Briefs

<sup>432</sup> In fact, there is a history of being notified that the CBR is being considered for termination due to concerns over the rising costs of complying with anti-terrorism financing rules that were tightened mainly in the US. The dissolution of the CBR would result in a loss of linkages with US banks, which would adversely affect the economy in all sectors. In particular, it could disrupt international payments and weaken financial access in the remote islands where BOMI provides services.

<sup>433</sup> Established as a second legal tender in addition to the USD under the Declaration and Issuance of the Sovereign Currency Act 2018.

<sup>434</sup> The goal is to provide economic opportunities and investment incentives around a virtual exchange vehicle.

the IMF and other organizations, and has begun to consider the existence or abolition of the SOV law based on a due diligence study on SOVs<sup>435</sup>. The RMIOBC also said that it could not comment on the issue as it is still at the political level.

According to the information provided by RMIOBC, in addition to the above, modernization of access to financial services (ATMs, POS systems, mobile banking, mobile wallets, digital finance, etc.) is a challenge. The RMIOBC is also considering the establishment of a new central bank or monetary authority to take over the current scope of operations and responsibilities of the RMIOBC. In addition to technical assistance from international organizations for anti-money laundering and anti-terrorism financing, the RMI could also have its own monetary authority, according to the report.

As for potential areas for PPP, according to information provided by MIDB, port development (dry docks, seaport docks), fisheries, tourism, and agriculture (especially poultry production, copra by-product production and export) are expected.

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

The IMF and the Pacific Financial Technical Assistance Centre (PFTAC) are providing ongoing capacity building support in the financial sector, including macroeconomic planning, analysis and statistics, public financial management, and revenue management. Specifically, PFTAC conducts regional workshops and follow-ups on banking legislation, legal reform of banking law and supervision (2019), MIDB soundness assessment (2020), review and proposal of final draft of revised banking law and regulations, and training on risk-based supervision (2021)<sup>436</sup>.

In addition to the above, according to the information provided by RMIOBC, the Bank has provided technical assistance to international organizations such as the World Bank and ADB in capacity building for regulation and supervision of financial institutions and review of the law of the Marshall Banking Commission (Banking Act of 1987).

##### ② Japan

The cooperation needs of Japan include the introduction of financial literacy curricula in elementary and high schools based on the RMI's financial literacy policy, training for staff of the RMIOBC (financial regulation and supervision, financial statistics research methods and database development, etc.), and support for the establishment of a new central bank or monetary authority (especially in the areas of payment and settlement systems, consumer protection framework development, and USD distribution management).

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<sup>435</sup> IMF, Staff Report for the 2021 Article IV Consultation - Debt Sustainability Analysis

<sup>436</sup> IMF, Staff Report for the 2021 Article IV Consultation - Debt Sustainability Analysis

### 3.5. Sectoral Analysis

#### 3.5.1. Public Infrastructure (Including Transportation, Urban Planning, Water and Sewerage, and Telecommunications)

##### 3.5.1.1. Transportation

###### (1) Overview

###### 1. Roads and Bridges

According to the Ministry of Works, Infrastructure, & Utilities, the RMI's paved road network exists only on the islands of Majuro, Ebeye, and Kwajalein, with a road length of about 130km to 160km. The only bridges are on Majuro, and the only piers are docks and ramps built by the Japanese during World War II on Jaluit and Wotje<sup>437</sup>.

###### 2. Airports and Harbors

The RMI's only international airport is Amata kabua International Airport (runway length:2,407 m<sup>438</sup>), located in the southeast of Majuro Atoll.

There are 2 international ports: Majuro and Ebeye. Majuro port has 2 docks: the Delap dock for international cargo and the Uliga dock for domestic passengers and cargo<sup>439</sup>.

###### (2) Development Project

The NSP 2020-2030 sets out the policy objectives in the table below for building a sound and efficient transportation infrastructure that supports social and economic development.

Table 261 Policy Objectives of NSP 2020-2030

- |   |
|---|
| <ul style="list-style-type: none"><li>• Development of an efficient and reliable domestic and international air and sea transport network</li><li>• Compliance with international safety standards at ports and airports</li><li>• Development of a reliable road network</li></ul> |
|---|

Source: NSP 2020-2030, p.12

###### 1. Roads and Bridges

According to the Republic of the Marshall Islands National Infrastructure Investment Plan 2017-2026, maintenance or upgrading of existing roads, bridges and drainage systems in Majuro is a major development challenge for the road and bridge sector. The following priority project list has been prepared.<sup>440</sup>

<sup>437</sup> Information provided by the Ministry of Works, Infrastructure & Utilities

<sup>438</sup> <https://dlca.logcluster.org/display/public/DLCA/2.2.3++Marshall+Islands+%28RMI%29+Ailuk+Airfield>

<sup>439</sup> World Bank (2019), "Marshall Islands Maritime Investment Project - Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)".

<sup>440</sup> Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, p.45-46

Table 262 RMI's Priority Project List for the Roads and Bridges Sector

Project name	Initial investment (USD)
Majuro Existing Drain System Rehab	No data
Majuro Bridge Maintenance	No data
Outer Island Service Roads Rehabilitation	6,000,000
Majuro Road Project (Airport -Laura)	29,000,000
Majuro Island wide walkway system	19,000,000
Total initial investment	54,000,000

Source: Republic of the Marshall Islands National Infrastructure Investment Plan 2017-2026, p.46

## 2. Airports and Harbors

According to the Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, construction of a new airport terminal, seawall and shoreline improvement, overhaul of aging aircraft, hangar refurbishment, IT system upgrades, and capacity building are the major development challenges for the airport sector<sup>441</sup>, and the following priority project list has been prepared

Table 263 RMI's Priority Project List for the Airport Sector

Project name	Initial investment (USD)
Renovation of Hangar	320,000
GSE (Ground Service Equipment's)	380,000
Aircraft - Dornier (Engine Overhaul, Hot Section, Repaint & Refurbished)	638,000
Training & Development of Staff	96,000
Investment in IT Systems	100,000
Aircraft - Dash 8 (Airframe C-Check, Engine rental & repair)	2,075,000
Student Pilot Training in Fiji	300,000
Outer Island Runway	10,000,000
Seawall Replacement - AKIA	4,640,000
Improvements to Shoreline Protection - AKIA	13,600,000
New Airport Terminal Facility - AKIA	33,800,000
Total initial investment	65,949,000

Source: Republic of the Marshall Islands National Infrastructure Investment Plan 2017-2026, p. 44

<sup>441</sup> Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, p.43

In terms of ports, reliable and safe maritime transport and construction and repair of wharves and docks on remote islands are the major development issues for the port sector, <sup>442</sup>and the following priority project list has been prepared.

Table 264 RMI's List of Priority Projects in the Port Sector

Project name	Initial investment (USD)
Outer Island Boat Ramp & Dock	13,500,000
Procurement of Used Shipping Vessel	3,400,000
MISC R&M - Existing Fleet	-
Construction of New Shipping Vessels	11,600,000
International Wharf (Delap) repairs	8,300,000
International Wharf (Delap) expansion	16,800,000
Berthing and Dock facility upgrades	10,780,000
New fisheries dock complex (Majuro)	15,600,000
Construction/Installation of Outer Is. Mooring (initial 10 sites)	2,000,000
Total initial investment	81,980,000

Source: Republic of the Marshall Islands National Infrastructure Investment Plan 2017-2026, p.45

For the ports, the Port Master Plan was formulated in 2014. For the Delap dock, which handles international cargo at the Port of Majuro, and the Uliga dock, which handles domestic passengers and cargo, the necessary facility improvements are summarized in the table below.

Table 265 Facility Improvements Required for The Delap and Uliga Docks as Described in the Port Master Plan

<p><u>Delap Dock</u></p> <ul style="list-style-type: none"> <li>• Repair damage to quay wall at Dock A and install new cathodic protection</li> <li>• Increase available mooring space for inter-island passenger and cargo vessels</li> <li>• Expansion of mooring space for non-island passenger and cargo ships</li> <li>• Construction of inter-island passenger terminal building</li> <li>• Establish backup power supply</li> <li>• Establish a reliable water distribution system for drinking water and firefighting</li> </ul> <p><u>Uliga Dock</u></p> <ul style="list-style-type: none"> <li>• Replacement of shore fenders, dock apron bollards, front curves and cleats</li> <li>• Gradual widening of the dock apron</li> <li>• Paving the entire container yard</li> <li>• Reorganization of container storage and cargo handling corridors</li> <li>• Gradual transition to more efficient cargo handling equipment</li> </ul>
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<sup>442</sup> Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, p.44-45

- Construction of a new container cargo station
- Secondary container yard area with more efficient container loading, vehicle access, onsite vehicle parking, and ingress/egress from Delap docks
- Renovation or new construction of facilities for maintenance and repair of cargo handling equipment
- New power supply and distribution systems to handle the increased number of refrigerated containers, and improved lighting throughout the site
- Relocate and establish a safer fuel transportation and distribution system
- Development of a new water supply and distribution system for drinking water and fire fighting water
- Connection of existing facilities to the wastewater system of Majuro Water and Sewerage Company

Source: Port Master Plan, p.ES-12 ~ ES-13

### (3) Issues and Measures

#### 1. Roads and Bridges

The issues related to roads and bridges presented by the Ministry of Works, Infrastructure, & Utilities are shown in the table below.

Table 266 Details of Issues Related to Roads and Bridges

Subject name	Issue Details
Shortage of skilled workers to develop and maintain infrastructure	<ul style="list-style-type: none"> <li>✓ There is a shortage of skilled workers and a large dependence on skilled workers from overseas.</li> <li>✓ Skilled workers such as equipment mechanics and operators, engineers, architects, HVAC, electrical, carpenters, airport and construction technicians, and maintenance workers are needed.</li> </ul>
Inadequate and unsustainable budgets for infrastructure development and maintenance	<ul style="list-style-type: none"> <li>✓ The annual budget of the Ministry of Works, Infrastructure, &amp; Utilities is just over USD 2 million, of which only USD 1 million is for roads and airport runways. The budget is funded by Taiwan, and sustainability is an issue.</li> </ul>

Source: Information provided by Ministry of Works, Infrastructure & Utilities



## 2. Airports and Harbors

The following table shows the issues it was able to identify regarding airports and harbors.

Table 267 Details of Issues and Measures for airports and harbors

Subject name	Issue Details	
Airport		
Fewer flights in service	✓	Amata kabua International Airport is served only by 1 international airline and 2 domestic airlines.
Expensive airfare	✓	High airfares have a significant impact on the cost of local goods and services and are a disincentive to tourism and trade.
Port		
Capacity of the port	✓	With the increase in the size of ships and the volume of cargo, there are challenges with the current size of the port.

Source: NSP 2020-2030, p.13 and information provided by Ports Authority

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

- ADB

In recent years, ADB has provided an assistance to PRIFs as shown in the table below.

Table 268 Recent Projects by ADB

Approval date	Project name
Oct 2019	Pacific Region Infrastructure Facility Coordination Office-Leveraging Infrastructure for Sustainable Development

Source: ADB website<sup>443</sup>

- World Bank

The Marshall Islands Maritime Investment Project (amount of grant: USD 33.1 million) was approved in May 2019. The project will improve and repair the quays of Deplap, Uliga, Ebeye, and other remote island docks, and improve safety and port operations<sup>444</sup>.

#### ② Japan

Japan has set “Strengthening Foundation for Sustainable and Resilient Economic Development” as one of the priority areas for the next three years, which was announced at PALM9 held on July 2, 2021. One of the action plans for this priority area is to “strengthen connectivity through the development of quality infrastructure - ports, airports, ships, roads, ICT, etc.; build capacity for

<sup>443</sup> <https://www.adb.org/projects/country/rmi/sector/transport-1064/sector/transport-and-ict-1372>

<sup>444</sup> <https://www.worldbank.org/en/news/press-release/2019/05/10/two-projects-set-to-improve-safety-efficiency-climate-resilience-of-maritime-operations-in-federated-states-of-micronesia-and-marshall-islands>

effective management, maintenance and utilization of quality infrastructure through the dispatch of experts; and pursue possibilities for cooperation in the field of financial infrastructure. The Japanese government will continue to strengthen its support for infrastructure development, including roads, in line with the policy of “pursuing cooperation possibilities in the field of financial infrastructure.

In the Country Assistance Policy (April 2019), development issue 1-1 is to strengthen the foundation for economic growth. Under the "Program for Strengthening the Capacity of Economic and Social Infrastructure Development and Maintenance" of the policy, the government plans to: (1) provide equipment and materials for social infrastructure development and promote human resource development in this field through issue-specific training; and (2) dispatch experts and cooperative teams and accept trainees to help improve infrastructure development, maintenance, and financial management capacity through grant assistance.

As mentioned above, the RMI has prepared a list of priority projects in the road and bridge, airport, and port sectors in its National Infrastructure Investment Plan 2017-2026. It is considered to be an effective strategy to check the progress of the priority projects first and then consider the details of cooperation in collaboration with other donors.

The Ministry of Works, Infrastructure & Utilities indicated that there is a high need for the development of airports on remote islands, road paving on remote islands, and the construction of jetties and docks on the islands of Majuro and Kwajalein Atoll. In addition, as mentioned earlier, the shortage of skilled workers for infrastructure development and maintenance was cited as an issue, and there is a high need for support through the acceptance of trainees and dispatch of experts.

As for ports, the Port Master Plan outlines the necessary facility improvements for the Delap and Uliga docks, and this information should be referred to when considering support for the development of these docks.

### 3.5.1.2. City Planning

#### (1) Development Project

No specific plan has been formulated.

#### (2) Direction of Cooperation

No development plan has been formulated, and cooperation by partners other than Japan has not been confirmed. It is necessary to confirm the support needs for development planning, but it is considered premature to consider support other than planning.

### 3.5.1.3. Water and Sewerage

#### (1) Overview

The water and sewerage sector of the RMI is under the jurisdiction of the Ministry of Works, Infrastructure and Utilities, and the Majuro Water and Sewer Company (MWSC), which is supervised by the Ministry, operates the water and sewerage system in Majuro, the capital city and the largest population center in RMI.

An atoll country like RMI has no rivers or lakes and is highly dependent on rainwater, which is highly variable, making it a challenging environment to secure water. In Majuro, most households have rainwater harvesting tanks, and basically water stored in individual rainwater harvesting tanks is used preferentially, and water supply is used in combination with those rainwater harvesting, which provides a safety net when water is scarce in individual households' rainwater harvesting, especially during droughts. The MWSC supplements the water supply from individual water storage tanks with drinking water supply, and as of 2019, it serves about 9,500 residents (about 1,400 households) (about 31.5% of the total population in the water supply area). The water supply unit is about 15 gallons (56 liters/day/person), and the average water supply time is 4 hours per day, only 1-3 days per week. During periods of low rainfall, water supply tanker service to households, commercial facilities, government agencies, and fishing boats is also provided. The water tariff is USD 0.006 per gallon (about USD 2/m<sup>3</sup>) for domestic use, and the company is running at a deficit with operating revenue less than operating expenses on a regular basis<sup>445</sup>. The company receives USD 300,000 to 500,000 per year as an operating subsidy from the government, which is used for facility construction and repairs. As for non-revenue water, according to the information provided by MWSC, about 30 million gallons of non-revenue water is generated annually due to leaks and unauthorized use.

MWSC's drinking water supply system is divided into three zones as shown in the table below and the figure below.

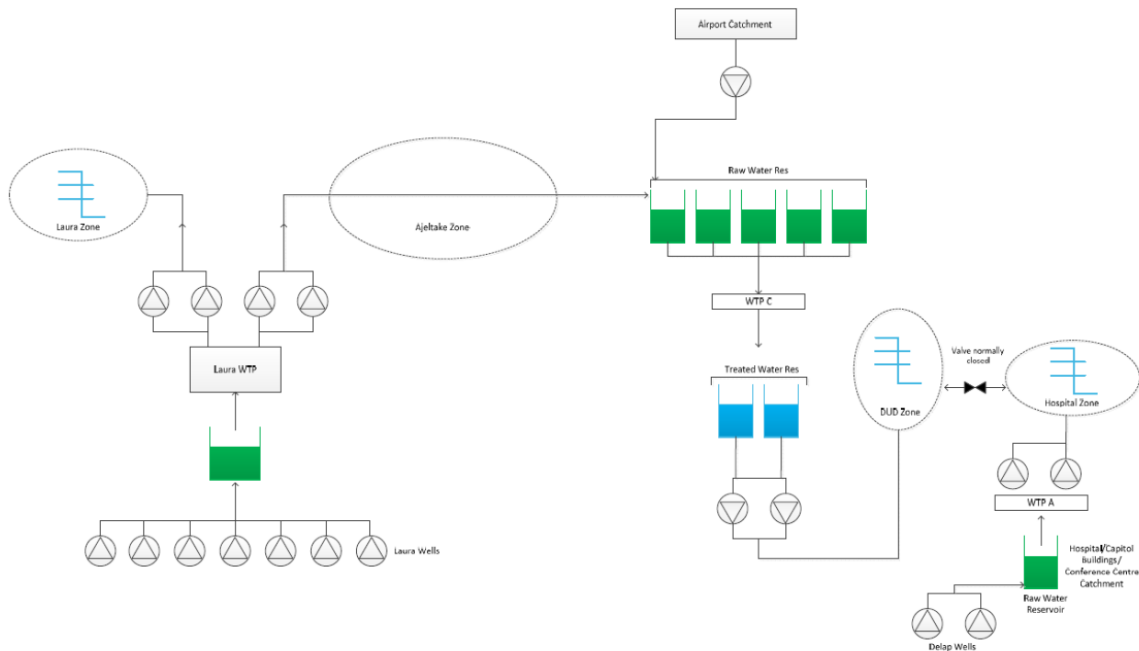
Table 269 Overview of MWCS Drinking Water Supply Zones and Treatment Facilities

Zone	Overview	Outline of treatment facilities
Delap-Uliga-Djarrit (DUD) Zone	✓ The main water source is rainwater from the airport catchment area, which is stored in 6 reservoirs.	Water Treatment Plant C ✓ Supply volume: 300,000-500,000 gallons/day ✓ Operation: Monday, Wednesday, Friday, 4:30 p.m. - 8:30 p.m. ✓ Network: Airport to Rita
Hospital and Capitol Building Zone	✓ Rainwater is collected at the hospital, parliament building, and international	Water Treatment Plant A

<sup>445</sup> JICA, July 2020, Report on the preparation of the project for the improvement of the water storage capacity of Majuro Atoll (advance public version)

Zone	Overview	Outline of treatment facilities
	<p>conference center, as well as from groundwater in Delap.</p> <ul style="list-style-type: none"> <li>✓ After being treated at a facility near the hospital, it is provided as drinking water for 24 hours and 365 days.</li> <li>✓ In early 2017, MWSC installed a salt water reverse osmosis (desalination) system with a processing capacity of 45,000 gallons a day to serve this zone, and is operating 40~ 60 hours per week.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Supply: 300,000 - 500,000 gallons / month</li> <li>✓ Operation: 24 hours, 365 days</li> <li>✓ Network: Hospitals, Parliament Building, International Conference Center</li> </ul>
Laura Zone	<ul style="list-style-type: none"> <li>✓ Groundwater is supplied to the Laura zone through 7 wells.</li> <li>✓ After water treatment, it will be supplied to the Laura zone and the airport area using high lift pumps.</li> <li>✓ Water can also be supplied from Laura to the airport reservoir, but it is only used during drought conditions due to high pumping costs.</li> </ul>	<p>Laura Water Treatment Plant</p> <ul style="list-style-type: none"> <li>✓ Supply volume: 1.5 - 3 million gallons per month</li> <li>✓ Operating hours: Monday through Friday, 8:00 a.m. to 5:00 p.m.</li> <li>✓ Network: Laura to Ajeltake</li> </ul>

Source: Information provided by MWSC



Source: Information provided by MWSC

Figure 47 Image of the MWSC Drinking Water Supply Network

Regarding the sewage treatment services of MWSC, according to the information provided by MWSC, sewage in the DUD zone is collected by a network of gravity sewers and pumping stations in the catchment area and discharged untreated to the sea through a short drain in Delap. Water for flushing toilets is provided by a network of pumped salt water, to which about 80% of the population in the catchment area is connected. Sanitation facilities in the unconnected areas include pit latrines and septic tank systems. A survey of toilet facilities conducted in 2009 among 3,620 households in Majuro showed that while most had flush toilets, about 11% of households borrowed from their neighbors or used the beach or bush. It should be noted that there is no sewerage service provided by MWSC in the Laura zone, but there is a septic tank treatment system in the sewerage facility on the small island. Also, the area from Laura to the airport is not served by MWSC's sewage service.

In Kwajalein Atoll, the second most populous atoll after Majuro, Kwajalein Atoll Joint Utilities Resources (KAJUR) provides electricity, water, and sanitation services to Ibai, the largest populated island in Kwajalein, as well as to Guegue Island and other small islands connected to Ibai. It provides fresh water with salt removed using reverse osmosis. The main sources of drinking water for domestic use in Ibai are fresh water provided by the Kwajalein Atoll Joint Utility Resources Corporation (84%), rainwater tanks for domestic use (15%), and bottled water (1%)<sup>446</sup>.

## (2) Development Project

The infrastructure pillar of the NSP 2020-2030 is “Water and Sanitation”, with the goal of “access to safe drinking water and sanitation for the economic and social development and well-being of all RMI people”. The policy objectives include the following 5 points.

1. Effective freshwater resource management
2. Continued access to drinking water that meets WHO standards
3. Improved sanitation for better health and well-being
4. Comprehensive wastewater management
5. Urban drainage and surface water management for a safe public

The Majuro Water and Sewerage Corporation has also developed The Water and Sanitation Strategic Plan (2017-2027). In this plan, they are aiming for a water supply intensity of 20 gallons/person/day (75.7 L/person/day). Light There is no plan to convert to fresh water, and the current policy of the Marshallese government is to increase rainwater harvesting<sup>447</sup>.

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<sup>446</sup> ADB, Ebeye Water Supply and Sanitation Project, Project Data Sheet

<sup>447</sup> JICA, July 2020, Report on the preparation of the project for the improvement of the water storage capacity of Majuro Atoll (advance public version)

According to the RMI's Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, the following priority projects have been identified for water and wastewater systems in key areas such as Majuro and Ebeye Island.

Table 270 RMI's Priority Project List for the Water and Sewerage Sector

Project name	Initial investment (USD)
Gugeegue Water System Improvements	823,443
Ebeye Water and Sanitation Project	17,500,000
Mother Concrete Catchment (Zone 1)	1,852,000
Mother Concrete Catchment (Zone 2)	3,570,000
Mother Concrete Catchment (Zone 3)	1,600,000
Majuro Sewer Outfall Replacement	3,900,000
Rita Water Supply Upgrade	18,000,000
RO Water Supply Program	4,200,000
Laura Sewerage Scheme	2,300,000
Laura Water Supply Upgrade	2,200,000
Placeholder for MWSC Projects (Strategic Plan in progress)	50,000,000
<b>Total initial investment</b>	<b>105,945,443</b>

Source: Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, p.50

### (3) Issues and Measures

Issues and Measures related to the water supply and sewerage sectors are shown in the table below.

Table 271 Details of Issues Related to the Water and Sewerage Sector and Countermeasures

Subject name	Details of the issue and countermeasures
Contamination of water in distribution pipes	✓ Water contamination is occurring in the distribution pipes for drinking water.
Water reuse and conservation	✓ Water shortages are becoming more serious, and water reuse and conservation are needed.
Rita Sewerage Treatment Facility	✓ Excessive water use (400 gallons per day) and excessive electricity consumption.
General repair of saltwater and sewerage pump facilities	✓ All saltwater and sewerage pumping facilities need to be overhauled. ✓ The outlets to the sea need to be replaced.
Lack of a community-wide sanitation system	✓ There is no community-wide sanitation system in Laura and it needs to be developed.

Source: Information provided by MWSC

With regard to PPP, according to the information provided by MWSC, it is desirable to collaborate with private companies in case of issues that cannot be addressed by MWSC's capacity, and collaboration is possible when necessary. It should be noted that no foreign companies have been seen to be involved in the project.

(4) Direction of Cooperation

① Non-Japanese Partners

• World Bank

In the Sustainable Energy Development Project, the World Bank provided pumping 7 platforms, high-efficiency motors, and control panels for sewer lift stations.

• ADB

In ADB's Strategy 2030, which sets out the guiding principles for the ADB's efforts, the ADB has identified 7 priorities for the Asia and Pacific region. Several of the priorities, including "addressing lingering poverty and reducing inequality" and "building more livable cities", refer to water safety and pricing.

The ongoing project, Ebeye Water Supply and Sanitation Project, aims to ensure safe supply of fresh water, provide effective and efficient sewerage services, improve hygiene awareness and hygiene behavior, ensure safe water and sewerage supply, and improve the financial and technical sustainability of Kwajalein Atoll Joint Utilities Resources Corporation in Ebeye, where the incidence of waterborne diseases is high. The activities are aimed at ensuring a safe supply of fresh water, providing effective and efficient sewerage services, improving hygiene awareness and hygiene behavior, ensuring a safe supply of electricity, and improving the financial and technical sustainability of the Kwajalein Atoll Joint Utilities Resources Company.

Table 272 List of ADB Projects in the Water Supply and Sewerage Sector

Period	Project name
1992-closed	Majuro Water Supply
1993-closed	Institutional Strengthening of the Majuro Water and Sewer Company
1995-closed	Majuro Water Supply and Sanitation Project
2012-2018	Results-Based Strategy and Sector Planning in the Pacific
2012-2017	Ebeye Water Supply and Sanitation Project
2015-2022	Ebeye Water Supply and Sanitation Project
2019-2023	Preparing Urban Service Improvement Projects
pending (decision, etc.)	Implementing the Pacific Approach through Strengthening Urban Services Operations

Source: ADB website



- Australia

Under the Australia-RMI Aid Partnership Agreement 2018 - 2022, the first priority of aid is to improve access to clean water and sanitation for the people of Ebeye, and ADB is funding the Ebeye Water Supply and Sanitation Project.

- European Union - Gesellschaft für Internationale Zusammenarbeit Adapting to Climate Change and Sustainable Energy Programme (EU-GIZ ACSE)

EU-GIZ ACSE is a program funded by the European Development Fund and managed by GIZ to enhance sustainable livelihoods in Pacific countries, strengthen national capacity to adapt to the adverse effects of climate change, and strengthen energy security at the national, state, and local/community levels. ACSE implemented the project “Long-term solution to improve water supply resilience for the outer islands high school” from 2017 to 2018, and implemented the project in Kwajalein Atoll High School and Northern Islands High School. EU-GIZ ACSE implemented the project “Long-term solution to improve water supply resilience for the outer islands high schools” in 2006-2008 to increase drinking water supply and improve water source management during drought and low rainfall periods at Kwajalein Atoll High School and Northern Islands High School.

- America

The US Department of the Interior assisted in the formulation of operation and development plans for the facilities as TAP (technical) and MAP (maintenance) Grants. In addition, the Bureau of Reclamation-Technical Service Centre provided assistance in monitoring the water supply system and identifying the sources of non-revenue water.

② Japan

In the Country Assistance Policy (April 2019), environmental conservation is listed as development issue 2-1, and climate change countermeasures are listed as issue 2-2. The policy is to support human resource development and to provide effective assistance through segregation and cooperation with other donors. One of the ongoing projects is "The Project for the Improvement of Water Reservoir at Majuro Atoll," a grant aid project to construct a 16-million-gallon water reservoir next to Majuro Airport from 2020. According to the information provided by MWSC, it has supported the introduction of two excavators and two water distribution vehicles, the Reverse Osmosis Water Supply Program, and the Improvement of water reservoir system as a grassroots grant.

Table 273 Japan's Major Cooperation Projects in the Water and Wastewater Sector in RMI

Start date	End Date	Project name
Official Development Assistance Grants		
1986	1988	Majuro Atoll Water Supply Facility Plan
2015	Unknown (Completed)	Economic and social development plan
Nov 2020	On going	The Project for the Improvement of Water Reservoir at Majuro Atoll

Source: Ministry of Foreign Affairs website

As for the cooperation needs from Japan, according to the information provided by MWSC, training programs such as engineering training programs in the field of O&M, vocational training and practical training to acquire basic skills are expected. There are also expectations for technical assistance to contribute to capacity building in various areas (governance and strategic management, engineering and contract management, asset management and maintenance, non-revenue water improvement planning, etc.).

### 3.5.1.4. IT & Telecommunications

#### (1) Overview

The IT and telecommunications sector of the RMI is under the jurisdiction of the Ministry of Transport and Communications (MoTC). As of January 2022, a submarine cable (HANTRU1 Cable System) connects the RMI to the FSM and to Guam, USA<sup>448</sup>. According to the World Bank, the RMI's personal internet usage was only 39% in 2017.

#### (2) Development Project

The RMI, in collaboration with the World Bank, has developed Digital RMI Project Environmental and Social Management Plan in 2020, which addresses the following 3 areas<sup>449</sup>:

1. Provide digital services to the public through market structure reform, digital government and digital economy development
2. Improve connectivity so that governments, public service providers (e.g., health and education services), and citizens can make better use of enhanced technologies and services
3. Reform laws and regulations to support proposed market structure reforms and the deployment of digital services

According to the information provided by the MoTC, the Cybersecurity Taskforce, which consists of the government, private sector, and state-owned enterprises, has been established and is currently working on building a framework for cybersecurity (completion date is yet to be determined).

#### (3) Issues and Measures

Issues and Measures related to the IT and telecommunications sectors are shown in the table below.

Table 274 Details of Issues Related to the IT and Telecommunications Sector in the RMI and Measures to Address

Subject name	Details of the issue and countermeasures
Cyber security measures	<ul style="list-style-type: none"> <li>✓ As mentioned above, although there is a cyber security task force, it is in its early stages and there are no concrete initiatives.</li> <li>✓ At present, the use of anti-virus is recommended.</li> </ul>

Source: Information provided by MoTC

<sup>448</sup> TeleGeography, Submarine Cable Map, <https://www.submarinecablemap.com/submarine-cable/hantru1-cable-system>

<sup>449</sup> Ministry of Transport and Communications, Digital Rmi Project Environmental and Social Management Plan, p.2, <https://documents1.worldbank.org/curated/en/684191611623934383/pdf/Stakeholder-Engagement-Plan-SEP-Digital-Republic-of-the-Marshall-Islands-Project-P171517.pdf>

(4) Direction of Cooperation

① Non-Japanese Partners

- World Bank

The World Bank has been providing assistance as shown in the table below.

Table 275 List of World Bank's IT and Telecommunications Sector Projects in the RMI

Period	Project name
2022 Planned	Digital Republic of the Marshall Islands Project
2014-2019	MH: ICT Technical Assistance Project
2013	MH: First ICT Sector Development Operation

Source: World Bank website

- ADB

ADB is providing assistance as shown in the table below.

Table 276 List of ADB's IT and Telecommunications Sector Projects in the RMI

Period	Project name
2017	Pacific Information and Communication Technology Investment Planning and Capacity Development Facility- Phase 2

Source: ADB website

- America

The US Department of State has issued a call for proposals for NGOs/NPOs for capacity building programs that will contribute to the RMI government's cybersecurity efforts (deadline for submissions in July 2021)<sup>450</sup>.

② Japan

Although there is no direct reference to the IT and telecommunication sectors in the Country Assistance Policy (April 2019), Development Issue 1-2, "Strengthening Education Functions," states that in view of the rapid increase in the number of young people seeking employment opportunities in the future, the government will support vocational training and technical training to expand employment possibilities both at home and abroad. According to information provided by the Ministry of Transportation and Communications, Asia Pacific Telecommunity (APT) and KDDI established a VSAT in Mejit in 2010.

No response was received from the MoTC regarding the cooperation needs for Japan. As one of the issues in the Pacific region as a whole is the improvement of telecommunication connectivity in

<sup>450</sup> <https://www2.fundsformgos.org/latest-funds-for-ngos/marshall-islands-cybersecurity-capacity-building-program/>

remote islands and rural areas, it is assumed that there are similar issues in the RMI, so there is a possibility to support the establishment of Wi-Fi spots and community tele-centers.

### 3.5.2. Energy

#### (1) Overview

The energy policy of the RMI is under the jurisdiction of the Ministry of Resources and Development (MRD). Most of the electricity supply is provided by Marshall Energy Company (MEC), while Kwajalein Atoll Joint Utility Resources (KAJUR) is responsible for Ebeye Island.

Access to electricity is 95% of the total population (urban: 96%, rural: 92%). Renewable energy (solar) accounts for 2.7% of total electricity generation, while 97.3% is dependent on diesel<sup>451</sup>.

#### (2) Development Project

##### National Strategic Plan 2020-2030 (NSP)

The NSP 2020-2030 sets the policy objectives in the table below for the provision of clean, reliable, affordable, accessible, resilient, and sustainable electricity services for economic development.

Table 277 Policy Objectives of NSP 2020-2030

- |  |
|--|
| <ul style="list-style-type: none"><li>• Improving the framework for reducing dependence on imported fossil fuels</li><li>• Improving energy efficiency in homes, business, government, transportation, and other sectors</li><li>• Reliable, sustainable, and affordable energy supply</li></ul> |
|--|

Source: National Strategic Plan 2020-2030, p.13

The NEPEAP was formulated in 2009 and revised in 2016. Similar to the National Strategic Plan 2020-2030, it has the policy objectives in the table below for the provision of clean, reliable, affordable, accessible, resilient, and sustainable electricity services for economic development.

Table 278 Policy Objectives of NEPEAP

- |   |
|---|
| <ul style="list-style-type: none"><li>• Strengthen the financial, policy, and legislative framework for the energy sector</li><li>• Provide electricity to 100% of urban households by 2015</li><li>• Provide off-grid electricity to 95% of rural processes outside the atoll by 2015</li><li>• 90% of all households will have access to modern cooking facilities by 2010</li><li>• Increase energy efficiency in homes and businesses by 50% and in government buildings by 75% by 2020</li><li>• Increase fuel efficiency in the transportation sector by 20% by 2020</li><li>• Reduce supply-side energy losses due to MEC by 20% by 2017</li><li>• 20% of power generation to come from renewable sources in own country by 2020</li></ul> |
|---|

Source: NPEPEAP, p.7-8

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<sup>451</sup> Energy Transitions Initiative, Micronesia Energy Snapshot  
[https://www.energy.gov/sites/prod/files/2020/09/f79/ETI-Energy-Snapshot-Micronesia\\_FY20.pdf](https://www.energy.gov/sites/prod/files/2020/09/f79/ETI-Energy-Snapshot-Micronesia_FY20.pdf)

The policy targets are set for up to 2020, and the action plan to achieve the same targets has only been formulated for up to 2019, which needs to be reviewed again.

Republic of the Marshall Islands National Infrastructure Investment Plan 2017-2026

According to the Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, based on the NEPEAP revised in 2016, a list of priority projects to be implemented by 2026 has been prepared as shown in the table below.

Table 279 Rmi's List of Priority Projects in the Energy Sector

Project name	Initial investment (USD)
Ebeye Water and Sanitation Project (Energy Component)	1,500,000
Seawater Pump House Upgrade	50,000
Dock side bunkering shed rebuild	30,000
Sludge Storage Bins	40,000
Majuro Distribution Transformer Upgrade project	2,000,000
Water Storage Upgrade	80,000
Wotje Power Plant Fuel Import Line replacement	15,000
Jaluit Power Plant Fuel Tank Replacement	70,000
Fuel Farm Pipework replacement	50,000
Laura Distribution Depot upgrade	30,000
Fuel Dispensing Depot	15,000
Station 2 Fuel Storage Expansion	300,000
LPG System Upgrade	60,000
Network upgrades	3,000,000
Station 1 Replace and Modify Pipework	200,000
MEC Housing	1,000,000
Energy Sector Reform - EU	8,000,000
Majuro Station 1 Building Renovation works	1,000,000
Energy Sector reforms - Solar City project	23,000,000
Upgrade of MEC fuel farm and engineering facilities	6,000,000
Majuro Distribution Network System rehabilitation	2,000,000
Vehicle Fleet Upgrade	1,250,000
Equipment Fleet upgrade	1,250,000
Majuro Distribution Network Manhole upgrade project	3,000,000
Power Cable from end of Rita to adjacent Is. Replacement	300,000
Majuro Auto Shop Rehabilitation	300,000
Majuro Distribution Shop Rehabilitation	400,000
Majuro Fuel Farm Seawall Rehabilitation	1,000,000
Engine Replacement Program	15,000,000
Jaluit System - Overhead Lines Install Underground	900,000

Fuel Farm Fire Fighting Facility	1,000,000
Administration Office replacement	1,000,000
Majuro Hospital Dual Power Supply	250,000
Laura Village Pole and Line removal	2,000,000
Laura Energy Storage Facility	500,000
Rita Energy Storage Facility	500,000
Loop Power Supply to Rita	4,000,000
Wind Turbine Project	2,000,000
MEC Gas & Jet Fuel Storage Facility	6,000,000
Majuro Mass RE Grid Tie Project	20,000,000
Airport to Laura underground cable upgrade	20,000,000
Red Algae Project	1,000,000
RMI Syngas Plant	946,500
Solar Electric Car Fleet and Charging Stations	400,000
<b>Total initial investment</b>	<b>131,436,500</b>

Source: Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, p.48-49

The Marshall Islands Electricity Roadmap was developed with the support of New Zealand in December 2018. In order to achieve the Nationally Determined Contribution (NDC) submitted to the UNFCCC under the Paris Agreement, the electricity sector has set a goal of phasing out the use of diesel fuel, as shown in the table below, to reach zero by 2050. Other goals include cheaper power, improved power efficiency, better energy security, more reliable services, and better quality of life<sup>452</sup>.

Table 280 National and Power Sector Targets for Achieving NDCs

		Greenhouse gas reduction targets for the country as a whole (%)	Greenhouse gas reduction targets for the electricity sector (%)	Diesel fuel use (million USG/year)
2010 (base year)	Actual number Target value	0	0	5.84
2016		-	-	5.60
2025		32	50	2.90
2030		45	65	2.00
2050		100	100	0.00

Source: Marshall Islands Electricity Roadmap, p.14

<sup>452</sup> Marshall Islands Electricity Roadmap, p.15



### (3) Issues and Measures

The World Bank's Sustainable Energy Development Project's "Combined Project Information Documents / Integrated Safeguards Datasheet (2017)" summarizes the issues. The challenges of the RMI energy sector as identified in the datasheet are as follows.

Table 281 Challenges in the Energy Sector

- High dependence on expensive imported fuel
- MEC and KAJUR fee revenues are insufficient to meet operation and maintenance costs (hence the need for government subsidies)
- High maintenance costs for power generation and distribution systems in the marine environment
- Insufficient capital to finance energy infrastructure needs
- Weaknesses in the regulatory framework of the energy sector

Source: World Bank, 2017 Sustainable Energy Development Project - Combined Project Information Documents / Integrated Safeguards Data Sheet, p.7

"The Project for the Installation of Solar Electricity Generation System in Ebeye Island Preparatory Study Report" (October 2017) (JICA) also summarized the challenges of the RMI energy sector. The report points out the following issues: (1) the island lacks energy resources and relies on diesel power generation using imported fuels; (2) imported fuels are vulnerable to international oil price fluctuations and are more expensive due to the added transportation costs, which has a significant impact on the lives of the people; and (3) the island is vulnerable to energy security issues such as prolonged power outages in case of equipment failure or transportation problems caused by bad weather<sup>453</sup>.

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

- ADB

In "Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific," which sets the guidelines for the ADB's efforts, the ADB has identified seven priority issues in the Asia and Pacific region. One of them is "climate change. One of them is "Addressing Climate Change, Building Climate and Disaster Resilience, and Improving Environmental Sustainability," which calls for prioritizing investment in low greenhouse energy, selective use of concessional financing, broadening private sector cooperation, and supporting innovative PPPs. From the perspective of water security, it also calls for the promotion of less water-intensive energy sources such as solar and wind. Recent project achievements are shown in the table below.

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<sup>453</sup> JICA, October 2017, "Preparatory Study Report for the Development of the Solar Power Generation System on Ebeye Island, Republic of the Marshall Islands", p.1-1

Table 282 Recent Projects by ADB

Approval date	Project name
Dec 2021	Energy Security Project (additional financing)
Nov 2021	Preparing Clean and Renewable Energy Investments in the Pacific
Oct 2021	Development of the Pacific Energy Regulators Alliance
Mar 2021	Preparing the Pacific Regional Financing Facility
Dec 2020	Preparing Floating Solar Plus Projects under the Pacific Renewable Energy Investment Facility
Jul 2019	Preparing the Pacific Renewable Energy Investment Facility (Phase 2)
Apr 2019	Pacific Renewable Energy Program
Dec 2018	Energy Security Project
Nov 2017	Majuro Power Network Strengthening Project
Nov 2017	Capacity Building and Sector Reform for Renewable Energy Investments in the Pacific
Nov 2016	Majuro Power Network Strengthening
Aug 2010	Improved Energy Supply for Poor Households

Source: ADB website<sup>454</sup>

- World Bank

The World Bank's achievements include the Sustainable Energy Development Project, which was approved in December 2017. The project has 4 components: (1) investment in renewable energy, (2) energy and fuel savings estimation, (3) promotion of energy efficiency and loss reduction programs, and (4) technical cooperation, capacity development, and project management<sup>455</sup>.

- Pacific Environment Community Fund<sup>456</sup>

In 2013, USD 849,895 funding was provided through the Pacific Environment Community Fund to install solar street lights in Majuro<sup>457</sup>.

- Taiwan

Taiwan's International Cooperation and Development Fund (ICDF) is currently implementing the Home Energy Efficiency and Renewable Energy Project in the Marshall Islands (loan amount: USD 4,000,000), which was approved in November 2016. The project consists of two components: (1) a sub-loan for households to install energy efficient equipment and lighting fixtures and, if necessary, improve the wiring in their homes, and (2) a sub-loan for the installation of solar power generation systems.

<sup>454</sup> <https://www.adb.org/projects/country/rmi/sector/energy-1059>

<sup>455</sup> <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099023012082113716/disclosable0ve0910000sequence0no008>

<sup>456</sup> USD 66 million fund created at the suggestion of Japan to help Pacific nations deal with climate change issues.

<sup>457</sup> <https://pacificdata.org/data/publications/pacific-environment-community-pec-fund-profiles2/resource/5ad7853a-1bd6-4be7-bc01-082b5579e4e9>

## ② Japan

In the Country Assistance Policy (April 2019), development issue 2-2 "Climate Change Action" has been set. In addition to Japan's support for the improvement of facilities and human resource development, Japan will consider providing effective support by sharing and collaborating with other donors. Japan's major cooperation achievements so far include "The Project for the Installation of Solar Electricity Generation System in Ebeye Island" and "The Project for Introduction of Hybrid Power Generation System in the Pacific Island Countries" (Both are being implemented).

The biggest challenge for the RMI is to break away from its dependence on diesel power generation using imported fuels, and the Marshall Islands Electricity Roadmap sets a goal of using renewable energy for all fuel by 2050. Other donors are also implementing many projects to introduce renewable energy, and it would be beneficial for Japan to follow this policy. In that case, it would be effective to check the progress of priority projects listed in the National Infrastructure Investment Plan 2017-2026 and consider the details of cooperation in collaboration with the ADB, which is implementing many renewable energy-related projects.

### 3.5.3. Industry (Including Agriculture, Forestry, Fisheries, Tourism, and Mining)

#### 3.5.3.1. Agriculture

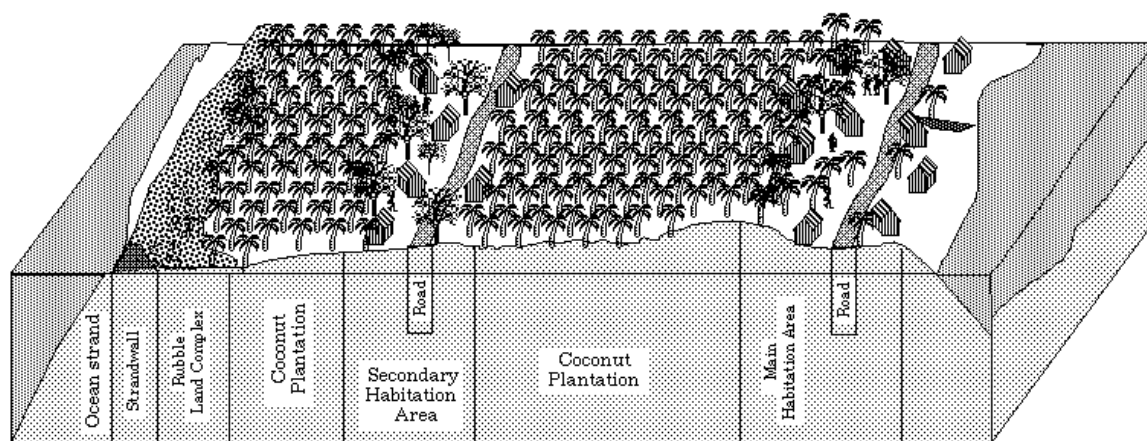
##### (1) Overview

The agricultural sector in the RMI is under the jurisdiction of the Ministry of Natural Resource & Commerce, Division of Agriculture (MNRC-DA). According to the information provided by the Department, agricultural production accounts for about 4% of the RMI's economy, and the number of people engaged in agriculture is only 1% of the working population.

The number of commercial farmers who sell their products at local markets such as Majuro is less than 10, and most of the farmers are small-scale farmers who sell their products for their own consumption. Therefore, it is difficult to obtain macro data on agricultural production, and the agricultural census has not yet been conducted<sup>458</sup>.

As for the land ownership system, there is no government-owned land for agricultural production. The process of leasing land for new projects is very time consuming and budgets for new leases for agricultural projects may not exist<sup>459</sup>.

As a traditional form of agriculture in the RMI, agroforestry<sup>460</sup> is often practiced, where artificial forests of coconut and other trees and herbs are planted on agricultural croplands<sup>461</sup>.



Source: Plants and Environments of the Marshall Islands<sup>462</sup>

Figure 48 Image of RMI's Agroforestry

<sup>458</sup> MNRC-DA has data on the number of seedlings distributed to the residents of Majuro Atoll and the number of seedlings and piglets distributed by the Taiwan Technical Mission.

<sup>459</sup> Information provided by MNRC-DA

<sup>460</sup> Technically, it is defined as "a sustainable land use system that maintains or increases total yield by combining annual crops (crops) with permanent crops (trees) and livestock rearing in the same land unit.

<sup>461</sup> <https://www.hawaii.edu/cpis/MI/VegTypes/Agroforestry.html>

<sup>462</sup> <https://www.hawaii.edu/cpis/MI/VegTypes/Agroforestry.html>

In the agricultural sector of the RMI, Copra (desiccated coconut) production is flourishing, and Tobolar Copra Processing Authority (Tobolar), a state-owned company, is responsible for processing coconuts purchased from producers into Copra.

The price of coconut has been steadily increasing since it started at USD 0.20 per pound in early 2000, and as of December 2021, the price is USD 0.60 per pound. Considering that coconut is a major source of cash income for many of the outer island communities, Tobolar will be subsidized by the government to maintain the coconut purchase price. The company sells coconut oil (CNO), copra meal (Copra Meal Cake), and processed products (cooking oil, body oil, soap, etc.) to major markets in the Pacific (FSM, etc.), the US, and Asia (Vietnam, Philippines, Malaysia, etc.). The company's share of sales is 55% for CNO, 20% for copra meal, 15% for processed products, and 10% for others (as of the December 2021). In addition, copra production, CNO production/sales volume/average price, and subsidy receipts over the past five years have been as follows.

Table 283 Changes in Tobolar's Key Management Figures (2017-2021)

	2017	2018	2019	2020	2021
Copra production volume (tons)	5,590	5,951	7,233	7,505	6,439
CNO production (tons)	3,228	2,350	2,438	3,075	3,442
CNO sales (thousand USD)	4,120	2,360	1,349	1,931	3,850
CNO average selling price (USD/ton)	1,276	1,004	553	628	1,119
Government subsidies (thousand USD)	2,958	4,474	8,968	8,327	6,452

Source: Information provided by Tobolar

## (2) Development Project

The Republic of the Marshall Islands Agriculture Sector Plan 2021-2031 is the latest development plan for the agriculture sector and has the following output targets. According to the information provided by the MNRC-DA, as of December 2021, the necessary budget for the implementation of the plan is still being calculated.

Table 284 RMI's Output Targets for the Agricultural Sector

Output Target	Item
Minimizing environmental degradation	Coastal afforestation
	Promotion of afforestation, including coconut
	Protecting the diversity of traditional and cultural plant species
	Support for the development of agroforestry systems
	Promotion of urban greening
Development and dissemination of sustainable small livestock production systems	Promoting livestock breeding in rural areas
	Improving feed with local ingredients
	Development and dissemination of appropriate livestock management methods
	Improving livestock waste management
Development and dissemination of sustainable crop production systems	Improve soil conditions
	Improvement of water use
	Development of pest control methods
	Increase, conserve, and improve crop diversity
	Development of appropriate agroforestry systems
	Development of business packages for major agricultural products
Increase consumption of nutritious locally produced foods	Promote home vegetable gardening
	Recipe development
	Preservation of traditional knowledge
	Food preparation and storage
	Support for nutrition education in schools
	Develop domestic and export markets
Improving biosecurity and marketing	Establishing a value chain that includes organic
	Securing access to overseas markets for exports
	Develop animal and crop protection programs
Capacity building of agricultural stakeholders	Conduct a capacity needs assessment
	Develop capacity building programs, including support for schools (curriculum)
	Implementation of training and evaluation of effectiveness
Formulate feasible policies and regulations	Review of current policies and regulations
	Formulate appropriate policies and regulations
	Lobbying strategy and policy development
	Briefs on key issues
	Implementation and impact assessment

Source: Information provided by MNRC-DA and Republic of the Marshall Islands Agriculture Sector Plan 2021-2031, p.22-26

(3) Issues and Measures

The following issues were identified by the information provided by the MNRC-DA.

Table 285 Details of RMI's Agricultural Sector Challenges and Measures

Subject name	Details of the issue and countermeasures
Poor soil properties	✓ The soil in the RMI consists of coral sandy loam soil, which is not suitable for crop production.
Lack of water resources	✓ The northern part of the RMI is a drought-prone atoll and does not have sufficient freshwater resources for agricultural production. Most of the freshwater supply comes from rainwater.
Diseases and Pests	✓ Inadequate measures against crop diseases and pests.
Persistence of endemic species	✓ Some of the local edible trees and traditional fruits and medicinal herbs such as Pandanus, Breadfruit, Taro, Coconut and Banana are in danger of extinction.
The cost of agricultural production is high.	✓ In the Pacific region, especially in coral atoll countries, inputs required for agricultural production are generally expensive.
Loss of traditional knowledge	✓ Traditional knowledge on how to preserve food safely is gradually being lost.
Climate change	✓ Climate change impacts that will adversely affect the agricultural sector include soil erosion and increased salinity due to rising sea levels and extreme weather events such as droughts due to changes in precipitation patterns.
Livestock breeding	<p>✓ One of the biggest challenges regarding livestock is the lack of adequate domestic feed production. Domestic feed resources that contain sufficient vitamins and nutrients for livestock feed are very limited.</p> <p>✓ Another challenge is the limited number of livestock breeds.</p>

Source: Information provided by MNRC-DA

According to the information provided by Tobolar, the most important issue is the replanting of coconut trees due to their old age. Although a survey on Copra replanting was conducted in 2019, no replanting has been done since the survey. Another factor that affects Copra production is transportation cost, and in particular, setting the appropriate frequency of liner service for purchasing coconuts and supplying goods from the outer islands is an issue. To address this issue, Marshall Islands Shipping Corporation and Tobolar jointly established a Joint Board, which enabled timely operation by setting atoll classification according to the geographical proximity of the islands.

The MNRC-DA conducts the following agricultural extension and promotion activities

- Development and dissemination of promotional and training videos to local communities in the country on the importance of agroforestry for food security.

- In Majuro, the MNRC-DA provides training in horticulture, agroforestry, livestock rearing, etc. in response to requests from local communities, organizations and schools in the capital city and neighboring atolls and islands.
- He visits neighboring islands to provide training to local communities on basic horticulture, agroforestry techniques and pest management.

(4) Direction of Cooperation

① Non-Japanese Partners

- ADB

The table below shows ADB's support since 1991.

Table 286 List of ADB's Agricultural Sector Projects in the RMI

Period	Project name
1993	Strengthening Agricultural Support Services
1991	Privatization and Institutional Strengthening

Source: ADB website

In addition to the above, ADB has had several discussions with Tobolar regarding Copra production (no funding).

- America

A micro-loan program for farmers by the US Department of Agriculture has been established in 2013, providing loans of up to USD 50,000 and for 7 years (maximum) to small or underserved family farming entities<sup>463</sup>. The US Forest Service also implemented agroforestry promotion, including the promotion of traditional crops (pandanus and breadfruit)<sup>464</sup>.

- Taiwan

The RMI and Taiwan signed the "Agreement of Agricultural Technical Cooperation between the Government of the Republic of China (Taiwan) and the Government of the Republic of the Marshall Islands" in 1999 (renewed in 2021). Under the agreement, the two countries agreed that "every five years, the government will develop new agricultural and livestock concepts based on national goals and priorities through the MNRC, and the Taiwan Technical Mission (TTM) will support the government's implementation," mainly to support the development of the RMI's agricultural sector and promote crop and livestock productivity<sup>465</sup>.

TTM established sub-center community farms in Kwajalein, Arno, Wotje, Jaluit, and Ailinglaplap atolls, and set up a system to supply fresh produce to their local markets. An agreement was also

<sup>463</sup> <https://mh.usembassy.gov/usda-extends-agriculture-microloan-program-to-pacific-island-nation/>

<sup>464</sup> Information provided by MNRC-DA

<sup>465</sup> Information provided by MNRC-DA



signed with TTM and the Public School System (PSS) to initiate a three-year project on nutrition and agriculture in high schools. The project aims to increase the intake of local foods and vegetables, promote a balanced diet, and continue to develop agricultural skills among students<sup>466</sup>.

Taiwan is one of the recipients of funding for Tobolar, and in addition to the RMI government grant, has received a grant of 1 million USD as of the December 2021<sup>467</sup>.

- China

There is no record of Chinese cooperation with the RMI government or Tobolar, including grants, concessional loans and technical assistance<sup>468</sup>.

- South Pacific Commission (SPC)

MNRC and SPC are currently implementing the MICCO19 project to address food insecurity under COVID-19. The specific objective is to address the impact of COVID-19 on food and nutrition security by strengthening sustainable and resilient food systems and good governance<sup>469</sup>.

- UNDP

UNDP carried out the development and dissemination of Dry-litter pig pens, which facilitate the drying and processing of pig waste<sup>470</sup>.

② Japan

Although there is no direct reference to the agricultural sector in the Country Assistance Policy (April 2019), it is stated in the development agenda 1-1 “Strengthening the Foundations for Economic Growth” that the government will support the promotion of small and medium-sized industries that utilize locally produced goods such as marine products, handicrafts, and Copra products in the industrial promotion program.

Table 287 Japan's Major Cooperation Projects in the Agricultural Sector in the RMI

Start date	Project name
Grassroots Technical Cooperation	
2003	International Cooperation Project for Pacific Island Countries: Vegetable Cultivation Guidance Method

Source: JICA website

In addition to the above, a research report on food system was conducted in November 2021 with technical support from Sophia University ISU and financial support from UNRCO<sup>471</sup>. Tobolar was

<sup>466</sup> Information provided by MNRC-DA

<sup>467</sup> Information provided by Tobolar

<sup>468</sup> Information provided by MNRC-DA

<sup>469</sup> Information provided by MNRC-DA

<sup>470</sup> Information provided by MNRC-DA

<sup>471</sup> Information provided by MNRC-DA

also involved in the early stages with JICA on the BIO Degradable Waste Disposal Project, but this did not materialize due to the post COVID-19 pandemic<sup>472</sup>.

As for the cooperation needs of the agricultural sector in Japan, financial support for the implementation of the existing national development plan and educational activities for the promotion of agriculture (providing opportunities for students to enter the agricultural field) are mentioned<sup>473</sup>. In addition, according to the information provided by Tobolar, support for small vessels to transport Copra cargo from land to ocean carriers and the development of dock ports for loading and unloading of goods are expected during Copra transportation. In addition, it is necessary to consider the construction and establishment of warehouses and dock ports for storing and loading Copra, which will serve as relay points for each island when transporting Copra to Majuro, where Copra is processed (as of December 2021, Guegeue on Ebeye Island was considered as a relay point for the Kabin Meto region in the eastern RMI).

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<sup>472</sup> Information provided by Tobolar.

<sup>473</sup> Information provided by MNRC-DA

### 3.5.3.2. Forestry

#### (1) Overview

The forestry sector of the RMI, like the agriculture sector, is under the jurisdiction of the MNRC-DA, and the MNRC-DA's Forester is in charge of the forestry sector.

Most of the forest resources in the RMI have been converted to agroforestry since the Marshallese settlement, and the agroforestry in the RMI is a mixture of trees and other shrubs such as breadfruit, coconut, pandanus, and many areas are also managed as coconut plantations. Many areas are also managed as coconut plantations.

Regarding land management in the RMI, according to the information provided by the RMI, it is based on the traditional chieftainship system, where the chief manages the land and sets the rules for land use, and the residents get the right to live on the land and use the resources in exchange for tribute to the chief. Regarding the conditions for foreign direct investment in the forestry sector, no response was received from the MNRC.

The status of forest area in the RMI is shown in the table below (as of 2018). According to the information provided by MNRC-DA, there is no data on the forest area to be conserved in the long term.

Table 288 RMI Forest Area and Breakdown (2018)

Type	Area (ha)	Percentage (%)
Lowland Tropical Rainforest	3,813	39.3
Agroforest	3,078	31.7
Strand Forest	2,672	27.5
Mangrove	147	1.5
Total	9,709	100.0

Source: Information provided by MNRC and US Department of Agriculture FIA Marshall Islands Inventory 2018<sup>474</sup>

#### Trends in the Private Sector

No response was received from MNRC on the availability of major forestry-related private companies in the RMI, examples of cooperation with foreign companies, and the presence of foreign companies in the RMI.

#### (2) Development Project

In the forestry sector of the RMI, the Forest Action Plan 2020-2030 has been developed, which identifies 4 challenges and 23 strategies.

<sup>474</sup> <https://www.fs.usda.gov/pnw/page/pnw-fia-inventory-data>

Table 289 Issues and Strategies in RMI's Forest Action Plan 2020-2030

Issue	Strategy
Biodiversity Conservation	✓ Develop a management plan through the Reimaanlok process
	✓ Establishment of a forestry department in the Ministry of Natural Resources and Commerce.
	✓ Expand education and outreach on forest management
	✓ Development and institutionalization of terrestrial data collection and analysis
Food Security and Sustainable Livelihoods	✓ Promotion of agroforestry, including high value-added crops, and dissemination and education to local communities
	✓ Promote the use of traditional crops, and spread the use of drought-tolerant indigenous species for food.
	✓ Minimizing environmental degradation <ul style="list-style-type: none"> <li>- Planting salt-tolerant traditional trees along the coast</li> <li>- Promotion of tree planting on farmland, including coconut replanting</li> <li>- Promotion and protection of diverse traditional and cultural plants</li> <li>- Support the development of appropriate agroforestry systems</li> <li>- Promotion of urban forestry</li> </ul>
	✓ Development and dissemination of sustainable crop production systems <ul style="list-style-type: none"> <li>- Soil improvement</li> <li>- Improvement of water use</li> <li>- Development of control methods for pests and diseases</li> <li>- Improve, conserve, and utilize crop diversity</li> <li>- Development of appropriate agroforestry systems</li> <li>- Development of practice packages for major crops</li> </ul>
	✓ Increase consumption of nutritious locally produced foods <ul style="list-style-type: none"> <li>- Promote home vegetable gardening (combining starchy staples with nutritious traditional and exotic vegetables)</li> <li>- Preservation of knowledge on traditional food preparation and preservation</li> <li>- Develop recipes and create recipe books</li> <li>- Supporting Appropriate Nutrition Guidance in Schools</li> </ul>
	✓ Development of Tree of Life <ul style="list-style-type: none"> <li>- Regeneration and replanting</li> <li>- Sawmill program (locally funded project to utilize aging coconuts and replant coconuts)</li> </ul>
✓ Pests and diseases of forests and old-growth forests <ul style="list-style-type: none"> <li>- quarantine</li> <li>- Extermination and control programs, response plans</li> <li>- Develop animal and crop protection programs</li> <li>- Biological control measures</li> <li>- General education on quarantine</li> </ul>	

	<ul style="list-style-type: none"> <li>- Monitoring and surveillance</li> <li>- Pest prevention and early detection</li> <li>- Pest detection and pest management training (e.g., insecticide spraying)</li> </ul>
Reinforcement of coastal forests	<ul style="list-style-type: none"> <li>✓ Support development of terrestrial baseline survey methodology (focus on coastal change and vegetation)</li> <li>✓ Capacity building of partners to implement terrestrial baselines in all atolls</li> <li>✓ Conduct ongoing monitoring and analysis, management and replanting</li> </ul>
	<ul style="list-style-type: none"> <li>✓ Replanting of native salt-tolerant plants (increase in “Jannar”, a traditional coastal protection method)</li> <li>✓ Establishment of protected areas focused on vulnerable coastlines</li> <li>✓ Establishment and maintenance of seed banks and nurseries of salt-tolerant and coastal vegetation plants</li> </ul>
Urbanization	<ul style="list-style-type: none"> <li>✓ Develop policies and ordinances to require and coordinate tree planting activities in the project <ul style="list-style-type: none"> <li>- Organizing advisory groups for local governments</li> <li>- Volunteer Recruitment</li> <li>- Formulation of tree ordinances (including designation of conservation areas)</li> <li>- Community Assessment and Planning</li> <li>- nature conservation education</li> <li>- Pest detection and control</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>✓ Beautification activities and cultural awareness <ul style="list-style-type: none"> <li>- Pre- and post-evaluation</li> <li>- Education and awareness strategies</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>✓ Promotion of tree-planting activities at schools</li> <li>✓ Increase young people's interest in agriculture and forestry</li> <li>✓ Pre- and post-evaluation</li> </ul>
	<ul style="list-style-type: none"> <li>✓ Education on organic composting <ul style="list-style-type: none"> <li>- Education and awareness-raising in communities and schools</li> <li>- Promote the use of organic materials and compost as alternatives to incineration</li> </ul> </li> </ul>

Source: Forest Action Plan 2020-2030, Table 5-8

### (3) Issues and Measures

The following issues were identified based on the information obtained from the desk survey.

Table 290 Details of Issues Related to the Forestry Sector in the RMI and Measures to Address

Subject name	Details of the issue and countermeasures
Biodiversity Conservation	<ul style="list-style-type: none"> <li>✓ Biodiversity conservation in the RMI concerns terrestrial indigenous species (especially endemic and migratory birds) and traditional cultivars.</li> <li>✓ It also focuses on sustainable land management to protect biodiversity and the productivity of the species-rich marine environment.</li> </ul>
Food Security and Sustainable Livelihoods	<ul style="list-style-type: none"> <li>✓ Agroforestry is a source of subsistence and commercial products.</li> <li>✓ Many Marshallese are suffering from malnutrition and diabetes, which could be addressed with increased agricultural and forestry production.</li> <li>✓ Since household income is low, there is potential for cash income through agroforestry.</li> </ul>
Reinforcement of coastal forests	<ul style="list-style-type: none"> <li>✓ Coastal forests are forests located at the top of the coast above the storm surge line. The roots of the forest reinforce the shoreline or cliffs of the beach, and contribute to maintaining durability against coastal erosion and preventing inland penetration of high waves by maintaining the embankment.</li> <li>✓ Although coastal forests are thinned or removed in many urban and rural areas, maintaining and restoring them in their natural state is a “no-regrets strategy” and is the first line of defense against the effects of sea level rise.</li> </ul>
Urbanization	<ul style="list-style-type: none"> <li>✓ The majority of the population is now concentrated on a few urban islands, resulting in a decline in forest cover.</li> </ul>

Source: Forest Action Plan 2020-2030

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

##### • The US

The Compact Agreement with the United States provides<sup>475</sup> access to all of the USDA Forest Service's State & Private Forestry Programs. The US Department of Agriculture (USDA) conducted a Forest Inventory Assessment (FIA) to collect data on forest conditions and trends to help track changes in forest resources and develop reforestation plans<sup>476</sup>. According to the information provided by the MNRC, it has also provided funding for the provision of resource data for coconut plantations, support for the development of technology for image detection of coconut status and

<sup>475</sup> MNRC, Forest Action Plan 2020-2030, p.7

<sup>476</sup> <https://www.fs.usda.gov/inside-fs/delivering-mission/apply/improving-community-sustainability-marshall-islands-through-fia>

pests, and support for the development and institutionalization of technology for collection and analysis of terrestrial data. As mentioned in the agriculture sector above, support for agroforestry has also been provided.

- Ridge to Reef

Implemented a food security program that included coastal afforestation.

- ② Japan

There is no direct reference to the forestry sector in the Country Assistance Policy (April 2019).

The results for the forestry sector could not be confirmed through interviews with RMIs and desk research.

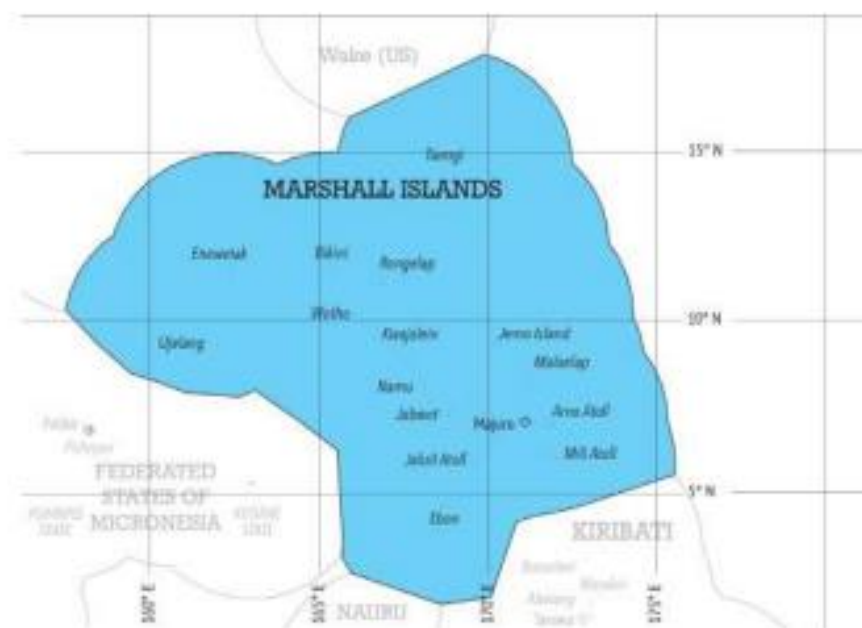
The cooperation needs of Japan are expected to include the development of methods for collecting and analyzing data on forest conditions, education and training on forestry in general, funding for the implementation of the Forest Action Plan and the National Strategic Action Plan, and the introduction of large machinery such as backhoes for land preparation.

### 3.5.3.3. Fisheries

#### (1) Overview

The fisheries sector of the RMI is under the jurisdiction of the Department of Resources and Development (DoRD). In addition, the Marshall Islands Marine Resources Authority (MIMRA) is responsible for the management of the RMI's fishery resources, covering inshore and offshore fishery resources within the EEZ and RMI-flagged vessels fishing outside the EEZ.

The RMI's water area is 2,131,000 km<sup>2</sup>, and the contribution of fisheries to GDP is 14.1% (2014).



Source: FAO, Fisheries of the Pacific Islands regional and national information, p.143

Figure 49 Sea Area of the RMI

The fisheries industry has become an important component of the diet and industry of the RMI people. Although imported foods have become more important since the 1960s, fish consumption is still high, and license fees from foreign vessels for fishing permits in RMI waters constitute a significant portion of government revenue. The capital city of Majuro has the necessary infrastructure and facilities for fishing activities<sup>477</sup>, and the port of Majuro is one of the most important assets for the tuna fishery and the economic development of the RMI as a whole, as it provides a safe berth for purse seiners and frozen fish carriers within the Majuro Atoll<sup>478</sup>.

<sup>477</sup> It includes floating docks, container handling facilities, a deep-water port, refrigeration facilities, warehouses with satellite refrigeration facilities for air transportation, fuel storage facilities, international transportation services, and an international airport. Majuro also has a large number of stores, stocking goods imported mainly from the United States.

<sup>478</sup> FAO, 2018 Fisheries of the Pacific Islands Regional and national information, p.144



The value of RMI fishery exports is USD 96,441 thousands (2014) and the value of RMI fishery imports is USD 5,791 thousands (2014)<sup>479</sup>. The RMI's fishery production volume and production value are shown in the table below.

Table 291 Fishery Production and Value of Production in RMI (2014)

	Aquaculture	Fresh water	Commercial Coastal fishing	Self-sufficient Coastal fishing	Offshore fishing <sup>480</sup> (RMI vessel registry)
Production volume (t)	10,000 (pieces)	0	1,500	3,000	79,562
Production value (USD)	50,000	0	4,350,000	6,000,000	-

Source: FAO, 2018, Fisheries of the Pacific Islands regional and national information, p145

As for the offshore fishery, it targets tuna and consists of longline, purse seine and single line fishing. Foreign longline fleets include Japan, the United States, China, Taiwan, and FSM, all of which are based in Majuro except for Japan. The production volume of the offshore fishery continues to increase as shown in the table below.

Table 292 Production of Offshore Fisheries in the RMI by Fishing Method (t)

Year	Purse seine	Longline
2010	13,794	5,663
2011	16,565	5,081
2012	17,777	6,390
2013	27,608	6,002
2014	43,571	7,798

Source: FAO, 2018, Fisheries of the Pacific Islands regional and national information, p146

The production by species is shown in the table below, and from 2010 to 2014, skipjack tuna is the most commonly caught species in the purse seine fishery and bigeye tuna in the longline fishery.

<sup>479</sup> FAO, 2018, Fisheries of the Pacific Islands regional and national information, p. 144

<sup>480</sup> Production may be indicated by vessel registry or by fishing region. Each of these different ways of identifying production has its own purpose, with the classification by vessel registry being important for consistency with international conventions, and the classification by region being important for managing the contribution of the fishery to GDP and the income from license fees for foreign-flagged fisheries in that country's area.

Table 293 Production of Purse Seine Fishing by Species in the RMI (t)

	Bigeye tuna	Skipjack tuna	Yellowfin tuna	Other	Total
2010	179	13,058	557	0	13,794
2011	321	15,448	791	5	16,565
2012	283	16,916	564	14	17,777
2013	1,165	25,796	641	6	27,608
2014	2,419	40,596	538	18	43,571

Source: FAO, 2018, Fisheries of the Pacific Islands regional and national information, p148

Table 294 Production by Longline Fishing in the RMI by species (t)

	Albacore tuna	Bigeye tuna	Yellowfin tuna	Other	Total
2010	242	3,301	1,417	703	5,663
2011	133	3,164	1,087	697	5,081
2012	254	4,027	1,372	737	6,390
2013	237	2,972	2,014	779	6,002
2014	172	4,680	2,364	600	7,798

Source: FAO, 2018, Fisheries of the Pacific Islands regional and national information, p148

The management of offshore fisheries is managed on a national and regional basis, with the Marshall Islands Tuna Management and Development Plan managing the RMI on a national basis, and on a regional basis by the Vessel Days Scheme (VDS) among the PNA Parties, and as a member of the Western and Central Pacific Fisheries Commission (WCPFC).

Coastal fisheries are conducted for subsistence and for sale in local and export markets. Although the statistical system is not yet developed for coastal fisheries, it is estimated that the production of commercial coastal fisheries was 1,500 tons and subsistence coastal fisheries was 3,000 tons in 2014<sup>481</sup>.

In terms of aquaculture, production activities have been carried out since the 1980s through various projects. Mainly coral, black pearls, and pearl oysters are produced, with an estimated annual production of 10,000 pieces and an estimated production value of 50,000 USD in 2014<sup>482</sup>.

<sup>481</sup> FAO, 2018, Fisheries of the Pacific Islands regional and national information, p. 147

<sup>482</sup> FAO, 2018, Fisheries of the Pacific Islands regional and national information, p. 153

(2) Development Project

The MIMRA strategic plan 2019-2023 defines 3 strategic objectives and associated strategic actions as shown in the table below.

Table 295 Overview of MIMRA Strategic Plan 2019-2023

Contents	
1.	Maximizing the long-term value of fisheries for the benefit of RMI people
✓	Promote strong and profitable partnerships that contribute to the development of RMI economies
✓	Maintain, secure, and improve RMI fisheries revenues
✓	Promoting a strong private fishing industry in the RMI
2.	Aquatic resource conservation and management for current and future generations of RMIs
✓	Using technology and precautionary approaches for sustainable management of RMI fisheries
✓	Implementing a state-of-the-art monitoring, control and surveillance system to help detect, deter and eliminate illegal, unreported, and unregulated fishing in the RMI.
✓	Establish a management system that is compliant, clear, and useful.
3.	Professional and transparent accountability in RMI's fisheries resource management practices
✓	Use of best practice business management practices for MIMRA operations
✓	Capacity building of MIMRA management/staff, industry and community and productive contribution to the development and management of RMI fisheries
✓	MIMRA's management of RMI fisheries for the benefit of RMI citizens and ensuring adequate stocks

Source: MIMRA strategic plan 2019-2023, p.40-42

(3) Issues and Measures

The following issues were identified based on the information obtained from the desk survey.

Table 296 Details of issues related to the fisheries sector in the RMI and measures to address

Subject name	Details of the issue and countermeasures
Offshore fishing industry	
Coordination of interests with other countries in tuna fisheries	✓ Most of the tuna fisheries management is done at the WCPFC and PNA/FFA levels, where there are strong interests that do not necessarily align with RMI interests. For example, many pelagic fishing nations have not fully embraced VDS management in tuna fisheries.
Impacts of climate change	✓ The effects of El Niño and La Niña weather patterns and general climate change could affect the availability of tuna in the RMI's EEZ.

Subject name	Details of the issue and countermeasures
Management of demand, price, market access, etc. for tuna	✓ Global demand, prices, and market access for tuna are also very difficult to manage, given the relative size of the RMI and its distance from the market.
Coastal fishing	
Securing local employment	✓ MIMRA needs to hire, train and manage local people in each fishing area.
Fisheries data collection	✓ Collecting the data needed for good fisheries management in remote areas is costly.
Development of fishery regulations	✓ The necessary coastal fisheries regulations are not fully in place, which poses a challenge for fisheries management.
Environmental impacts of development	<ul style="list-style-type: none"> <li>✓ Population growth and development in Majuro and Ebeye has resulted in coastal degradation and overfishing, putting additional fishing pressure on other islands and atolls and worsening the quality of fish available in the market.</li> <li>✓ The effects of marine pollution from ships discharging to the atoll, heavy metals and PCBs, degraded sewer outfalls, and waste generated on land are degrading the local marine environment.</li> </ul>

Source: MIMRA, Strategic Plan 2019-2023, p.17-19

According to the information provided by MIMRA, for the offshore fishery, the transportation cost (fuel cost, etc.) for moving between many islands is high, and the improvement of the monitoring system and lack of number of fishing vessels were mentioned. For coastal fisheries, the lack of professional human resources with knowledge and skills in fisheries management was cited.

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

- World Bank

The World Bank has been providing assistance as shown in the table below.

Table 297 List of World Bank's Fisheries Sector Projects in the RMI

Period	Project name
2015-2020	Pacific Islands Regional Oceanscape Program

Source: World Bank website

- ADB

ADB is providing assistance as shown in the table below.

Table 298 List of ADB's Fisheries Sector Projects in the RMI

Period	Project name
1995	National Fisheries Development Plan
1991	Privatization and Institutional Strengthening
1990	Fisheries Development

Source: ADB website

- EU and Sweden

The Pacific-European Union Marine Partnership Programme (PEUMP), which aims to protect biodiversity and sustainably use marine resources, was launched in October 2017 with a total co-financing of EUR 45 million by the EU and Sweden (EUR 35 million by the EU and EUR 10 million by Sweden), and is scheduled to end in 2023, with a possible extension of one or two years. It aims to support the sustainable development and management of fisheries, which are the basis for food security and economic growth, while considering climate resilience and marine biodiversity in 15 countries in the Pacific region. The implementing organizations of this program include the regional organizations: SPC, FFA, SPREP, and USP, as well as the NGOs IUCN, LMMA, PITIA, and WWF.

In addition to the above, the EU and FAO have “Fish for Africa, Caribbean and Pacific (FISH4ACP)”, which is a fisheries initiative aimed at expanding the value chain of tuna fisheries for 5 years<sup>483</sup>.

② Japan

In the Country Assistance Policy (April 2019), as part of the industrial promotion program under development issue 1-1 “Strengthening the Foundations for Economic Growth,” it is stated that the distribution network for selling fish catches from the remote islands to Majuro, the consumption area, will be developed in cooperation with the fish market developed by the grant aid, in order to make effective use of marine resources and improve the lives of the residents of the remote islands. The project also aims to improve the lives of the residents of the islands. The project will also support the promotion of small and medium-sized industries that make use of locally produced goods such as marine products, handicrafts, and Copra products.

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<sup>483</sup> <https://www.mz.co.nz/international/pacific-news/435317/eu-backs-fisheries-value-chain-initiative-in-marshall-islands>

Table 299 Japan's Major Cooperation in the Fisheries Sector in the RMI

Start date	Project name
Official Development Assistance Grants	
2018	Strengthening Livelihoods and Food Security through Fisheries with Coastal Harvesting Devices in the Pacific Ocean (FAO Collaborative) (for Kiribati, Samoa, Tuvalu, Vanuatu, Palau, Fiji and Marshall Islands)
Mar 2009	The Project for Construction of Fish Market Center at Majuro
Grassroots Technical Cooperation	
2003	International Cooperation Project for Pacific Island Nations: Fishery Training Guidance Method
2002	International cooperation project for Pacific island countries (training of fishery training instructors)

Source: JICA website

In addition to the above, grant aid for the provision of fisheries-related equipment (fishing boats, etc.) was provided as part of the Economic and Social Development Plan (limit: JPY 200 million 2018)<sup>484</sup>.

In addition, OFCF implemented a project for MIMRA to survey and manage resources in the atolls (Atoll I project) to establish a system to collect fisheries information such as catch data for Arno and Majuro atolls (from 2006 to 2010)<sup>485</sup>.

As for the needs for cooperation with Japan, according to the information provided by MIMRA, for the offshore fisheries, the improvement and efficiency of the surveillance system for monitoring fish catches was mentioned. As for coastal fisheries, training on aquaculture industry, improvement of fish market operation, and monitoring system for illegal fishing control were mentioned as needs.

<sup>484</sup> Ministry of Foreign Affairs website, [https://www.mofa.go.jp/mofaj/gaiko/oda/data/gaiyou/odaproject/pacific/marshall/index\\_01.html](https://www.mofa.go.jp/mofaj/gaiko/oda/data/gaiyou/odaproject/pacific/marshall/index_01.html)

<sup>485</sup> OFCF, <http://www.faiacqua.com/zaidan/03.pdf>

### 3.5.3.4. Mining

#### (1) Overview

The RMI's mining sector is overseen by MNRC, including Deep Sea Minerals (DSM), which has no experience in mineral resources or other extractive industries<sup>486</sup>. The Interim Seabed Minerals Board was established in 2014, and the National Seabed Minerals Policy was still in the drafting stage according to the World Bank report as of 2018<sup>487</sup>. The commercialization of the cobalt deposits is expected to in 2040 at the earliest<sup>488</sup>.

#### (2) Development Project

The NSP 2020-2030 does not include any reference to the mining industry, including the DSM.

#### (3) Issues and Measures

According to the World Bank report<sup>489</sup>, the challenges for the DSM sector include capacity building within the government, development of regulatory authorities (human resource and infrastructure capacity building), development of a national DSM policy, development of DSM environmental permitting guidance, and integration of DSM resource use into fiscal policy.

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

The RMI is a member of the International Seabed Authority. SPC and the World Bank conducted a preliminary economic cost-benefit analysis of DSM mining in the Pacific Island region (ferromanganese cobalt-rich crusts in the RMI EEZ)<sup>490</sup>. SPC is assisting in the formulation of the National Seabed Minerals Policy.

##### ② Japan

There is no mention of the mining sector in the Country Assistance Policy (April 2019).

No hearing response was received from the MNRC, suggesting that the RMI's needs for cooperation in the mining sector are limited.

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<sup>486</sup> World Bank, 2017, Precautionary Management of Deep Sea Minerals, p.71

<sup>487</sup> World Bank, 2017, Precautionary Management of Deep Sea Minerals, p.107

<sup>488</sup> World Bank, 2017, Precautionary Management of Deep Sea Minerals, p.30

<sup>489</sup> World Bank, 2017, Precautionary Management of Deep Sea Minerals, p.70

<sup>490</sup> World Bank, 2017, Precautionary Management of Deep Sea Minerals, p.30

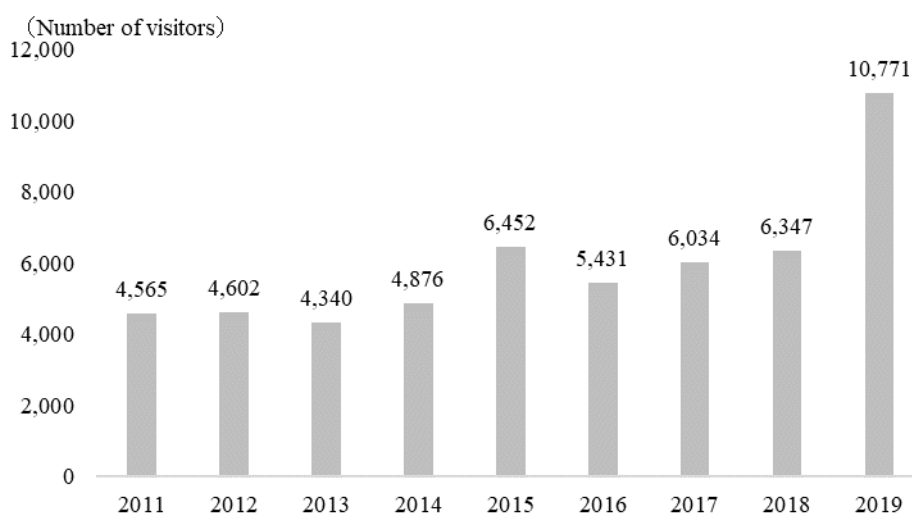
### 3.5.3.5. Tourism

#### (1) Overview

The Office of Commerce, Investment & Tourism (OCIT) is responsible for both tourism policy and development planning as well as tourism marketing and promotion.

The RMI has beautiful beaches and atolls where one can enjoy various marine sports including wreck diving. While the RMI is undeveloped and unspoiled, its tourism resources are similar to those of other countries in the Pacific. The Bikini Atoll Nuclear Test Site, where repeated nuclear tests were conducted by the US, is a World Cultural Heritage site.

The number of visitors to the RMI had increased significantly in 2019. Tourism revenue for the year was USD 11.8 million (share of GDP was 5.68%) in 2017<sup>491</sup>.



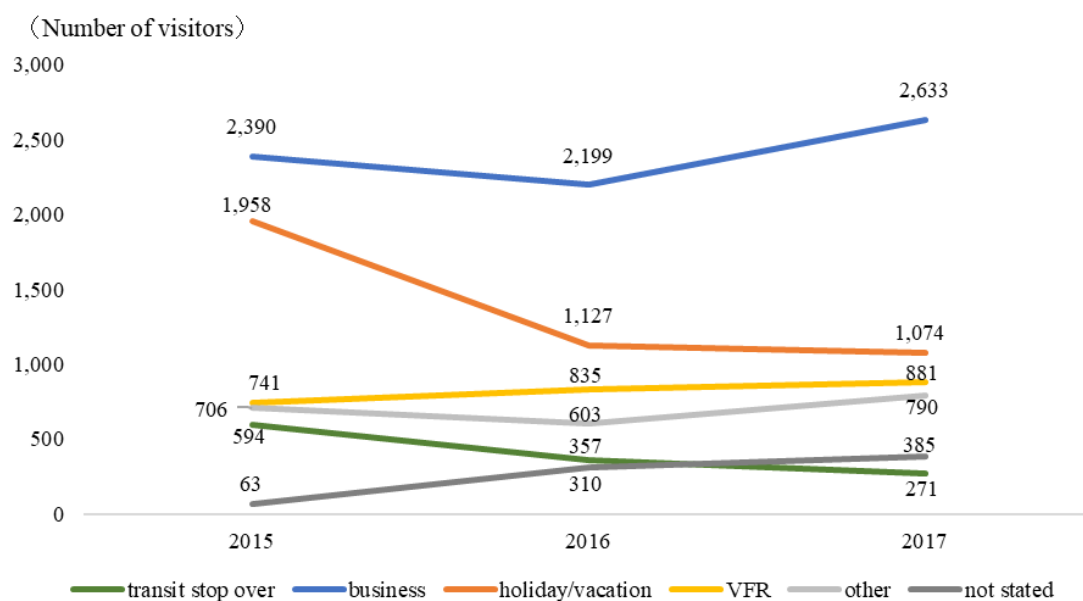
Source: Statistical year book (EPPSO) and Quarter 1, 2021 Visitor Arrivals Report (SPTO). Where the figures differ between the two, the EPPSO figures are used (in the SPTO report, 6,311 visitors in 2015 and 5,332 visitors in 2016).

Figure 50 Number of Visitors to RMI

In terms of the purpose of visits to the RMI, the largest number of visitors came for business purposes, and there was a noticeable decrease in the number of visitors for vacation purposes.

<sup>491</sup> DK Jennings Consulting, Inc., Strategic Tourism Development Plan 2020-2024





Source: Statistical year book (EPPSO)

Figure 51 Number of Visitors to RMI by Purpose

The average length of stay by purpose is about a week for both business and vacation purposes.

Table 300 Average Length of Stay by Purpose

Objective.	2016	2017
Transit stop over	2.5	1.9
Business	7.5	8.3
Holiday/Vacation	7.4	6.7
VFR	14.5	16.8
Other	27.1	18.0
Not stated	2.1	3.7
Average	10.2	9.2

Source: OCIT, 2019 Tourism Sector Profile

Looking at the number of visitors and their percentage by purpose and nationality, the percentage of visitors from the US was high for both vacation and business purposes, but the percentage decreased between 2015 and 2017. As for the decrease in the number of visitors for vacation purposes in 2016, which can be seen in Figure 51, Table 301 shows that the number of visitors from all countries decreased, although the decrease in the number of visitors from the United States was particularly significant.

Table 301 Number and Percentage of Visitors by Purpose and Nationality (Top 6 countries or areas in 2017)

Country name	Number of visitors (persons)			Percentage of all visitors (%)		
	2015	2016	2017	2015	2016	2017
<b>Vacation purpose</b>						
US	740	297	205	37.8	26.4	19.1
Japan	235	177	193	12.0	15.7	18.0
Nauru	182	162	148	9.3	14.4	13.8
Taiwan	149	104	103	7.6	9.4	9.6
Kiribati	46	44	70	2.3	3.9	6.5
Australia	78	59	43	4.0	5.2	4.0
<b>Business purpose</b>						
US	937	743	800	39.2	33.8	30.4
FSM	182	137	252	7.6	6.2	9.6
Taiwan	142	149	231	5.9	6.8	8.8
Australia	168	155	182	7.0	7.0	6.9
Japan	159	197	170	6.7	9.0	6.5
Philippines	105	138	154	4.4	6.3	5.8

Source: EPPSO, Statistical year book

According to OCIT's 2019 Tourism Sector Profile, Majuro has two major hotels, Marshall Islands Resort and Hotel Robert Reimers. Both are estimated to be 2 to 2.5 stars (RMI does not give star ratings to accommodations) and do not have rooms for visitors who want high quality and luxurious rooms. The number of accommodations was 12 and the number of rooms was 281<sup>492</sup>.

According to flight information as of January 2019, although flights as a transit point on the Island Hopper route connecting Guam and Hawaii were flying daily, the only other country connected by international flights was Nauru, and air access was limited<sup>493</sup>. As for domestic routes, the Strategic Tourism Development Plan 2020-2024, prepared in 2019 by DK Jennings Consulting, Inc. on behalf of OCIT, states that the Air Marshall Islands, which provides domestic routes, is always in the red. It is widely acknowledged that the Air Marshall Islands, which provides domestic flights, is consistently in the red and that frequent cancellations and erratic service have decimated dive tourism in Bikini Atoll.

## (2) Development Project

In the Strategic Tourism Development Plan 2020-2024, a long-term (3~5 years) tourism development plan and a short-term tourism promotion plan are summarized. The long-term component identifies 4 key tourism development areas: (1) policy and regulatory environment, (2)

<sup>492</sup> SPTO, 2020, Annual Visitor Arrivals Snapshot

<sup>493</sup> JICA, January 2021, Progress report on the information collection and validation study on tourism development in the Pacific region

infrastructure development, (3) human resource development, and (4) product development and promotion.

### (3) Issues and Measures

The following issues were identified from the desk study and the information provided by OCIT.

Table 302 Details of Issues and Measures related to the tourism sector

Subject name	Details of the issue and countermeasures
Lack of hotels and rooms	<ul style="list-style-type: none"> <li>✓ Many lodging facilities are concentrated in Majuro.</li> <li>✓ There are only 2-star hotels at best, and no hotels for the high-end market customers.</li> </ul>
Shortage of human resources	<ul style="list-style-type: none"> <li>✓ There is a shortage of human resources such as hospitality staff, managers, and tour guides for accommodations and restaurants, tourism strategists, marketing strategies, marketing implementation staff, and ecotourism product development.</li> </ul>
Lack of infrastructure	<ul style="list-style-type: none"> <li>✓ There is a lack of infrastructure that contributes to the promotion of tourism, such as small-scale port docks, urban space, land and marine use, and traffic management.</li> <li>✓ In addition, there is a lack of funds for infrastructure development.</li> </ul>

Source: Information provided by OCIT and Strategic Tourism Development Plan 2020-2024 (OCIT)

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

##### • SPTO

The SPTO is headquartered in Suva, Fiji. As of October 2021, the SPTO has private sector members from the governments of the following 21 countries: American Samoa, Cook Islands, FSM, Fiji, French Polynesia, Kiribati, Nauru, RMI, New Caledonia, Papua New Guinea, Samoa, Solomon Islands, East Timor, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis & Futuna, Rapa Nui (Easter, etc.), China and 200 private sector members. It consists of marketing, research, sustainable tourism development, and finance/corporate services divisions, and works to improve access by air and sea, strengthen the Pacific brand, and develop government and private sector capacity for sustainable tourism.

In its Strategic Plan 2020-2024, the SPTO has identified three core priority areas: (1) regional marketing, (2) sustainable tourism planning and development, and (3) research and statistics. The innovative partnership priority areas are (1) cruise and yacht sector development, (2) supporting and promoting investment and product development, (3) improving air access and route development, and (4) capacity building and empowerment of the people of the Pacific.

The SPTO has also developed the “Pacific Tourism Statistics Strategy 2021-2030” with the support of PARIS 21, OECD and the New Zealand government, in response to the challenges of data quality,

consistency and comprehensiveness, as well as gaps in the statistical capacity of various agencies in one of the priority areas of tourism statistics. Statistics Strategy 2021-2030.

- ADB

From 2020 to 2022, the Tourism Sector Assessment for the North Pacific project has been underway in the FSM, RMI, and Palau, with the aim of deepening governments' awareness of potential opportunities and challenges for building tourism industries in their countries.

- World Bank

Since 2017, the World Bank has been running the Pacific Possible campaign to examine the real transformational opportunities that exist for Pacific countries over the next 25 years and to identify the region's biggest challenges that require urgent action. One of the seven major themes is tourism, and in its 2016 publication *Tourism: Pacific Possible Background Paper No. 4*, the World Bank states that increasing demand from Chinese tourists, retirees, high-income earners, and cruise ships will accelerate growth in tourism numbers. The World Bank also issued "How Could the Pacific Restore International Travel?" on January 19, 2021, which outlined three possible phases of border crossing policies in Papua New Guinea and the Pacific countries.

- New Zealand

MFAT is cooperating in the development of SPC's Pacific Data Hub, and aims to collect and publish tourism data through SPC as well as SPTO in the future<sup>494</sup>.

## ② Japan

Although there is no specific development agenda for tourism in the Country Assistance Policy (April 2019), "Industrial Promotion Program" is included in Development Agenda 1-1 "Strengthening the Foundations for Economic Growth". JICA will support the development of agricultural and fishery product processing technology to effectively utilize local resources, and capacity building of tourism bureaus by dispatching Japan Overseas Cooperation Volunteers and accepting trainees. In addition to the above, JICA has been conducting the "Information Collection and Confirmation Survey on Tourism Development in the Pacific Region" since March 2020 as a tourism-related project.

In terms of human resource development, JICA is expected to provide support in the form of volunteers and experts for capacity building in areas such as human resources, marketing, customer service, interpretation, tour guiding, projects to attract Japanese tourists (food presentation, improvement of fish cooking skills such as sushi, etc.), and development of activities to enjoy on the islands.

In terms of infrastructure, there are expectations for support for the construction of an airport terminal and the expansion of docks in the airport area to enhance marine transportation for tourists.

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<sup>494</sup> JICA, January 2021, Progress report on the information collection and validation study on tourism development in the Pacific region

### 3.5.4. Climate Change and Disaster Prevention

#### 3.5.4.1. Climate Change

##### (1) Overview

The Office of Environmental Planning and Policy Coordination (OEPPC), under the Office of the President, is the focal point for SPREP, other international organizations, and international treaty-related meetings. It is also responsible for the implementation of projects on climate change, desertification prevention, etc. It is also the oversight body for the Joint National Action Plan (JNAP)<sup>495</sup>. The National Weather Service Office, a meteorological observatory established by the US Oceanic and Atmospheric Administration, is a related organization and serves as a base for implementing climate change-related projects. In addition to its regular meteorological observations, the National Weather Service Office<sup>496</sup> is a major target of the Pacific-Australia Climate Change Science and Adaptation Planning Program, a cooperative project in the field of climate change led by Australia. The Climate Change Directorate, under the Ministry of Environment<sup>497</sup>, is responsible for strengthening relevant institutions and procedures, sharing relevant knowledge, building resilience to climate change, and supporting community development for adaptation in order for the RMI to meet its climate change obligations<sup>498</sup>.

The major natural hazards in the RMI are floods, cyclones, storm surges, droughts, and heat waves<sup>499</sup>. The width of the atoll islands rarely exceeds 200m, and almost all land is less than 2m above sea level. The RMI is located in a tropical climate strongly influenced by the northeast trade winds, with a high risk of cyclones and low-lying islands susceptible to coastal flooding and tsunamis.

Submitted the Third National Communication Report to the UNFCCC in 2015 as a comprehensive document on the impacts of climate change, extensively documenting the risks that climate change poses to RMI communities and economies. It was also the first country to submit a Second Nationally Determined Contribution (NDC)<sup>500</sup>.

The RMI's target for CO<sub>2</sub> emission reduction is zero emissions in the energy sector (including electricity and transportation) and waste-related emissions compared to 2010 levels, based on the assumption that emissions will be phased out by 2050 (32% reduction in 2025, 45% in 2030, and 58% in 2035)<sup>501</sup>.

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<sup>495</sup> JICA, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.10-12

<sup>496</sup> JICA, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.10-12

<sup>497</sup> Established under the Ministry of Environment Act 2018

<sup>498</sup> Information provided by the Climate Change Directorate

<sup>499</sup> World Bank and ADB, 2021, Climate Risk Country Profile Marshall Islands, p.11-15

<sup>500</sup> World Bank and ADB, 2021, Climate Risk Country Profile Marshall Islands, p.13

<sup>501</sup> JICA, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.13

### Climate Trends and Future Projections for RMIs

In terms of temperature, the annual and monthly mean temperatures are generally stable at around 27°C, with a maximum diurnal variation of about 7°C. It has also been suggested that the entire island is warming, which is consistent with the trend of global warming. The annual precipitation at Majuro in the southern RMI has been decreasing since 1954<sup>502</sup>.

In terms of climate projections, rainfall is difficult to predict, but under the highest CO<sub>2</sub> emission scenario, the annual average temperature is projected to reach about 3.1°C by the 2090s (about 3.7°C globally)<sup>503</sup>.

### Impact on Natural Resources

In terms of water resources, the RMI has insufficient water storage capacity due to the small size of the country, despite relatively high precipitation. The main sources of fresh water are rainwater and groundwater. Urban areas use rainwater, groundwater, and imported water, while remote islands mainly use rainwater and groundwater. While the population in Majuro and Ibai is increasing, the supply for future water demand is a major issue due to the aging of the water supply system. Under such circumstances, if rainfall continues to decrease and temperatures continue to rise due to global warming, water evaporation from reservoirs, taro fields, and wells will accelerate, and there is concern that freshwater resources may be lost due to increased saltwater mixing caused by rising sea levels. In addition, droughts caused by El Niño events and other factors are expected to cause significant damage, especially in atolls that do not have sufficient rainwater storage and collection capacity to withstand the dry season. In fact, the 1998-1999 El Niño event was one of the most pronounced droughts in the RMI, with only 8% of normal rainfall over a four-month period<sup>504</sup>.

In terms of sea level rise, the RMI faces the most urgent and challenging climate change challenge in the world, as the average sea level in the RMI is predicted with high confidence to continue rising until 2100. Coastline erosion due to sea level rise is already a major problem throughout the RMI, with the coastline of Majuro eroding at a significant rate as palm trees and coastal vegetation soils are washed away. This situation is further exacerbated by the dredging and sand mining that is taking place, especially around the airport<sup>505</sup>.

With regard to fisheries, lower saturation of carbonate minerals in the ocean could compromise the current marine ecosystem, which is expected to become saturated below the threshold required to maintain healthy coral reefs in the RMI. Increasing sea temperatures and ocean acidification (increased carbon dioxide concentrations), combined with extreme low tides and sedimentation/pollution, could have significant negative impacts on coral reef bleaching, coastal ecosystems, and migratory fish stocks such as tuna. The direct impact of higher ocean temperatures on the tuna fishery, the mainstay of the RMI's economy, is unclear, as the El Niño event of 2002-

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<sup>502</sup> World Bank and ADB, 2021, Climate Risk Country Profile Marshall Islands, p. 6-7

<sup>503</sup> World Bank and ADB, 2021, Climate Risk Country Profile Marshall Islands, p. 7-11

<sup>504</sup> World Bank and ADB, 2021, Climate Risk Country Profile Marshall Islands, p. 15-16

<sup>505</sup> World Bank and ADB, 2021, Climate Risk Country Profile Marshall Islands, p. 16-19

2003 caused major tuna stocks to leave RMI waters and congregate in Papua New Guinea and neighboring countries in the Western Hemisphere. The RMI is thought to have experienced a decline in fish catches<sup>506</sup>.

As for the island's ecosystem, it has been pointed out that the flooding of low-lying islands may reduce important refuges for migratory birds and shrink the habitat of endemic lizards<sup>507</sup>.

#### Impact on Economic Sectors

With regard to agriculture, the increase in salinity due to sea level rise will have a negative impact on plant species in the atoll. In addition, most of the settlements in the RMI are necessarily located near the coast, and some of the settlements may be threatened and require relocation due to progressive coastal erosion. Fluctuations in rainfall are likely to have a direct impact on crop yields in the RMI. Like many other islands, the RMI is considered to be an agricultural system that relies heavily on manual labor and is considered to be highly vulnerable to temperature increases<sup>508</sup>.

With regard to tourism, the dual threats of sea level rise and coastal erosion in the long term may reduce the quantity and quality of sandy beaches, making them less attractive as tourist destinations. Furthermore, recreational diving may be adversely affected by environmental degradation, loss of coral reefs, and coastal erosion. Increasing international airfares through global efforts to mitigate climate change may reduce the attractiveness of the RMI as a tourist destination<sup>509</sup>.

#### Impact on the Community

The effects of climate change are certain to have widespread impacts on the economy and local livelihoods, with particular concerns about negative impacts on local fishery resources due to rising sea levels and changes in precipitation. As in many countries, most of the projected climate change is likely to have a negative impact on the poor. For example, physical labor is generally at the highest risk of productivity loss due to heat stress. In addition, cash-strapped businesses cannot afford to buy air conditioners, so rising temperatures worsen productivity. Poor farmers and communities are likely to have less access to knowledge and technology about local reservoirs and irrigation infrastructure<sup>510</sup>.

#### (2) Development Project

The RMI's development plans related to the climate change sector include the following as of December 2021.

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<sup>506</sup> World Bank and ADB, 2021, Climate Risk Country Profile Marshall Islands, p.19-20

<sup>507</sup> World Bank and ADB, 2021, Climate Risk Country Profile Marshall Islands, p.21

<sup>508</sup> World Bank and ADB, 2021, Climate Risk Country Profile Marshall Islands, p.21-22

<sup>509</sup> World Bank and ADB, 2021, Climate Risk Country Profile Marshall Islands, p.22-23

<sup>510</sup> World Bank and ADB, 2021, Climate Risk Country Profile Marshall Islands, p.23-24

Table 303 Status of Development Planning Related to the Climate Change Sector in the RMI (as of December 2021)

Name	Status
National Adaptation Plan, NAP <sup>511</sup>	In preparation
Tile Til Eo 2050 Climate Strategy	Being carried out
Nationally Determined Contributions Partnership Plan	Being carried out
Green Climate Fund Country Program	Cabinet decision already made
National Infrastructure Implementation Plan	In preparation
Energy Roadmap	Being carried out
Reimaanlok Framework for National Conservation Area Plan	Being carried out

Source: Information provided by Climate Change Directorate

According to the RMI's Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, the following priority projects are focused on protecting the coastline and enhancing resilience to mitigate the effects of climate change.

Table 304 RMI's List of Priority Projects in the Climate Change and Disaster Risk Reduction Sector

Project name	Initial investment (USD)
RMI Coastal Resilience Project	49,000,000
RMI Integrated Water Resilience Project	45,000,000
Total initial investment	94,000,000

Source: Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, p.54

<sup>511</sup> The initial schedule has been delayed due to delays in the submission of documents from various government agencies and the inability of the UK's NAP preparation support expert to stay in the RMI due to COVID-19.



(3) Issues and Measures

The following issues were identified from the information provided by the Climate Change Directorate.

Table 305 Details of RMI's Climate Change Sector Challenges and Measures

Subject name	Details of the issue and countermeasures
Human resource development related to climate change	<ul style="list-style-type: none"> <li>✓ While the majority of ministries have included climate change considerations in their own human resource development plans, there is still a need to continue to supply capacity and knowledge on the specific impacts of climate change.</li> <li>✓ In the National Strategic Plan 2020-2030, emphasis is placed on building resilience in thematic areas that reflect climate change.</li> <li>✓ Specific capacity building needs will be identified when the NAP is completed in later 2022.</li> </ul>
Dissemination of climate change-related knowledge to the general public	<ul style="list-style-type: none"> <li>✓ Dissemination of knowledge on climate change to the general public is also a major issue and this will be on the agenda of the remote island NAP consultations to be held in the first half of the 2022.</li> </ul>
Legal and policy planning for climate change issues	<ul style="list-style-type: none"> <li>✓ The number of domestic climate change experts is limited, and RMI is dependent on foreign experts.</li> </ul>

Source: Information provided by Climate Change Directorate

(4) Direction of Cooperation

① Non-Japanese Partners

• UNDP

Under the Disaster Resilience for Pacific Small Island Developing States project, which aims to enhance disaster preparedness and climate change resilience by strengthening disaster prevention-related facilities and infrastructure, cooperation on disaster prevention and climate change countermeasures is being implemented in the FSM, RMI, and Palau under a scheme funded by the Government of Japan and implemented by UNDP. In RMI, for example, the construction of the NDMO center in Majuro is being carried out as "Enhancing Disaster and Climate Resilience in the Republic of the Marshall Islands through Improvement Disaster Preparedness and Infrastructure" from March 2019 to the end of September 2020 at a cost of USD 7.4 million<sup>512</sup>.

• Green Climate Fund

Implemented the Pacific Islands Renewable Energy Investment Program (USD 29.2 million, approved in December 2016, to be completed in July 2025), which aims to transition from fossil

<sup>512</sup> JICA, April 2020, Basic information on the environment, climate change and disaster prevention in the Micronesian region, Version 4, p.20.

fuels to renewable energy and includes F/S to expand the scope of renewable energy, reform the management of power companies, and promote private sector participation<sup>513</sup>.

- World Bank

In addition to the table below, the Global Facility for Disaster Reduction and Recovery (GFDRR) funds were used in collaboration with the Japanese government to assess vulnerability to natural disaster and climate change risks, design climate resilient power generation systems, assess power generation companies' disaster prevention systems and identify issues, and share knowledge within the Pacific island region<sup>514</sup>.

Table 306 List of World Bank Projects in the Climate Change and Disaster Risk Reduction Sector in the RMI

Period	Project name
2017-2024	Pacific Resilience Project II under the Pacific Resilience Program

Source: World Bank website

- ADB

ADB is providing assistance as shown in the table below.

Table 307 List of ADB's Climate Change and Disaster Risk Reduction Sector Projects in the RMI

Period	Project name
2023-	Proposed Integrated Urban Services Improvement Project
2020-2025	Support to Climate Resilient Investment Pathways in the Pacific
2020-2024	Pacific Disaster Resilience Program, Phase 3
2013-2017	Implementation of the Strategic Program for Climate Resilience: Pacific Region
1993	Disaster Mitigation and Management

Source: ADB website

- USAID

As a partner of the Micronesia Conservation Trust (MCT), which supports conservation-related activities in the Micronesian region, USAID provides human resource development and support for the acquisition of funds from the UN Adaptation Fund and the Green Climate Fund. It also supports the preparation of proposals for the Green Climate Fund using the Simplified Approval Process (SAP).

<sup>513</sup> <https://www.greenclimate.fund/project/fp036>

<sup>514</sup> JICA, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p. 23-24

- Australia

Between 2012 and 2016, through the Climate Adaptation, Disaster Reduction and Education Program (CADRE), USD 3.6 million was provided to 50 communities in Micronesia and the Marshall Islands, including the implementation of climate change and disaster risk reduction education programs in schools, support for the development of climate and disaster risk management plans in schools, and public information campaigns<sup>515</sup>.

Other partners in the climate change sector include the RMI Red Cross Society, International Organization for Migration, church organizations, and Women United Together for the Marshall Islands<sup>516</sup>.

- ② Japan

In the Country Assistance Policy (April 2019), the following will be implemented under Development Issue 2-2 "Climate Change Countermeasures": Task-specific training for human resource development necessary to promote energy conservation and the introduction of renewable energy, and Development of human resources for more effective improvement and maintenance of facilities, and study and support of climate change adaptation measures in the country through the cooperation between “Ebeye Island Photovoltaic System Improvement Project” and “Pacific Region Hybrid Power Generation System Introduction Project”.

Table 308 Japan's Major Cooperation in the Climate Change and Disaster Risk Reduction Sector in the RMI

Start date	Project name
Official Development Assistance Grants	
Sep 2020	The Project for the Improvement of Water Reservoir at Majuro Atoll
Nov 2017	The Project for the Installation of Solar Electricity Generation System in Ebeye Island
Sep 2015	Strengthening of Multi-Hazard Risk Assessment and Early Warning Systems in Pacific Island Countries (UN Partnership/ESCAP Implementation)
Technical Cooperation	
Mar 2017	The Project for Introduction of Hybrid Power Generation System in the Pacific Island Countries

Source: JICA website

<sup>515</sup> Australian Department of Foreign Affairs and Trade website, <https://www.dfat.gov.au/about-us/publications/Pages/australias-commitment-to-climate-change-action-in-north-pacific>

<sup>516</sup> Information provided by the Climate Change Directorate.

Climate change sector cooperation needs from Japan will be formalized when the NAP is completed later 2022, and the Climate Change Directorate will coordinate with the Chief Secretary's Office on specific details<sup>517</sup>.

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<sup>517</sup> Information provided by the Climate Change Directorate

### 3.5.4.2. Disaster Prevention

#### (1) Overview

The Office of the Chief Secretary (OCS) is in charge of public works and administration under the Office of the President, and oversees JNAP and the National Disaster Management Office (NDMO), which is the center for disaster prevention and response. The RMI has formulated disaster management arrangements in the National Disaster Risk Management Arrangement (Reviewed June 2017)<sup>518</sup>, which adopts a cluster approach as a system of communication and action during disasters and emergencies. In the approach, the ministries and related organizations in charge of each cluster are identified in advance. The NDMO is placed at the head of the cluster to enable rapid communication and action during disasters and emergencies<sup>519</sup>.

The following is a list of clusters and the ministries and organizations in charge.

Table 309 RMI's Disaster Preparedness Clusters and Responsible Ministries and Organizations

Cluster	Responsible ministries and related organizations
Water (esp. Cool, fresh water, e.g. Drinking water)	Majuro Water Sewer Company
Health	Ministry of Health and Human Services
Food Security and Agriculture	Ministry of Fisheries, Agriculture, Commerce and Tourism
Logistics	Ministry of Finance, Banking and Postal Service
Infrastructure	Ministry of Works, Infrastructure and Utilities
Education	Ministry of Education, Sports and Training
Shelter	Ministry of Internal Culture, Social Services and Outer Island Affairs

Source: Information provided by RMI's NDMO and National Disaster Risk Management Arrangement (Reviewed June 2017), p.65. Note that the name of the responsible ministry or relevant organization may differ from the latest one.

#### (2) Development Project

“The National Action Plan for Disaster Risk Management 2008-2018 (DRM)” and “the Joint National Action Plan 2014-2018 (JNAP)” have been developed as development plans for the disaster risk reduction sector of the RMI. While the establishment of cluster organizations through the formulation of these plans has been a great success, the NDMO recognizes that the implementation has not been successful in terms of disaster risk reduction (DRR)<sup>520</sup>.

Plans related to the disaster management sector are expected to be developed and updated as follows, which will include guidance on the development of DRM plans at the atoll level and DRM priorities for the coming 10 years.

<sup>518</sup> [https://www.preventionweb.net/files/68522\\_rmidisasterrickmanagementforweb.pdf](https://www.preventionweb.net/files/68522_rmidisasterrickmanagementforweb.pdf)

<sup>519</sup> Information provided by the RMI's NDMO

<sup>520</sup> Information provided by the RMI's NDMO

Table 310 Status of Planning Related to the Disaster Reduction Sector in the RMI (as of December 2021)

Name	Status
New National Action Plan for Disaster Risk Management	Scheduled to complete in early 2023
Standard Operation Procedures	Scheduled to review within 2022
Roadmap for DRR improvement	Scheduled to complete within 2022

Source: Information provided by RMI's NDMO

### (3) Issues and Measures

The following issues were identified from the information provided by the NDMO.

Table 311 Details of issues Related to the Disaster Reduction Sector in the RMI and Measures to Address

Subject name	Details of the issue and countermeasures
Secure human resources and budget for disaster prevention	<ul style="list-style-type: none"> <li>✓ There is a limited budget situation to secure more positions related to disaster prevention.</li> <li>✓ Focal points based on neighboring islands provide occasional support to NDMO, but it is generally ad hoc and does not increase the support they can provide to NDMO.</li> <li>✓ Working on developing incentives to maintain focal points.</li> </ul>

Source: Information provided by RMI's NDMO

In terms of human resource development, a needs analysis has been completed and a training program to address the identified needs will be developed soon<sup>521</sup>.

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

##### • UNDP

Under the Disaster Resilience for Pacific Small Island Developing States project, which aims to enhance disaster preparedness and climate change resilience by strengthening disaster prevention-related facilities and infrastructure, cooperation on disaster prevention and climate change countermeasures is being implemented in the FSM, RMI, and Palau under a scheme funded by the Government of Japan and implemented by UNDP. In RMI, for example, the construction of the

<sup>521</sup> Information provided by the RMI's NDMO.

NDMO center in Majuro is being carried out as "Enhancing Disaster and Climate Resilience in the Republic of the Marshall Islands through Improvement Disaster Preparedness and Infrastructure. Preparedness and Infrastructure" from March 2019 to the end of September 2020 at a cost of USD 7.4 million<sup>522</sup>.

- Green Climate Fund

The GCF is a major source of funding for RMI and has supported several projects as follows<sup>523</sup>

PREP II was implemented in USD 44million for early warning system development, coastal inundation (seawall at Ebeye Island) and emergency relief for disasters (approved in May 2017)<sup>524</sup>.

"Enhancing Climate Information and Knowledge Services for resilience in 5 island countries of the Pacific Ocean", which aims to provide early warnings on the regional weather, climate and marine environment and to support the development of adaptation plans and early action systems to cope with long-term climate change impacts, was implemented (USD 49.9 million, approved in November 2020, to be completed in September 2026)<sup>525</sup>.

"The Addressing Climate Vulnerability in the Water Sector (ACWA) in the Marshall Islands", which aims to improve the resilience of water resources for drinking and sanitation in the Marshall Islands, including improving household and community rainwater storage systems and strengthening the technical capacity of national and local institutions and key stakeholders, has been implemented (USD 24.7 million, approved in July 2019, expected to be completed in February 2027)<sup>526</sup>.

- World Bank

In addition to the table below, "the Global Facility for Disaster Reduction and Recovery (GFDRR)" funds were used jointly with the Japanese government to assess vulnerability to natural disaster and climate change risks, design climate-resilient power generation systems, assess power producers' disaster prevention systems and identify issues, and share knowledge within the Pacific island region<sup>527</sup>.

Table 312 List of World Bank Projects in the Climate Change and Disaster Risk Reduction Sector in the RMI

Period	Project name
2017-2024	Pacific Resilience Project II under the Pacific Resilience Program

Source: World Bank website

<sup>522</sup> JICA, April 2020, Basic information on the environment, climate change and disaster prevention in the Micronesian region, Version 4, p.20

<sup>523</sup> Information provided by CCD of RMI

<sup>524</sup> JICA, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.22-23

<sup>525</sup> <https://www.greenclimate.fund/project/fp147>

<sup>526</sup> <https://www.greenclimate.fund/project/fp112>

<sup>527</sup> JICA, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.23-24

- ADB

ADB is providing assistance as shown in the table below.

Table 313 List of ADB's Climate Change and Disaster Risk Reduction Sector Projects in the RMI

Period	Project name
2020-2025	Support to Climate Resilient Investment Pathways in the Pacific
2020-2024	Pacific Disaster Resilience Program, Phase 3
2013-2017	Implementation of the Strategic Program for Climate Resilience: Pacific Region
1993	Disaster Mitigation and Management

Source: ADB website

- Australia

From 2012 to 2016, through the Climate Adaptation, Disaster Reduction and Education Program (CADRE), USD 3.6 million was provided to 50 communities in Micronesia and the Marshall Islands to implement climate change and disaster risk reduction education programs in schools, support the development of climate and disaster risk management plans in schools, and conduct public information campaigns<sup>528</sup>.

In addition to the above, other partners in the disaster risk reduction sector include the Federal Emergency Management Agency (FEMA), which has received funding from the agency's Federal Emergency Program Grant (FEPG)<sup>529</sup>.

② Japan

In the Country Assistance Policy (April 2019), support for disaster preparedness is included in the Climate Change Preparedness Promotion Program under Development Issue 2-2 “Climate Change Preparedness”.

Table 314 Japan's Major Cooperation in the Climate Change and Disaster Risk Reduction Sector in the RMI

Start date	Project name
Official Development Assistance Grants	
Sep 2020	The Project for the Improvement of Water Reservoir at Majuro Atoll
Sep 2015	Strengthening of Multi-Hazard Risk Assessment and Early Warning Systems in Pacific Island Countries (UN Partnership/ESCAP Implementation)

Source: JICA website

<sup>528</sup> Australian Department of Foreign Affairs and Trade website, <https://www.dfat.gov.au/about-us/publications/Pages/australias-commitment-to-climate-change-action-in-north-pacific>

<sup>529</sup> Information provided by the RMI's NDMO



In addition to the above, Japan also provides grant aid such as the provision of equipment and products related to disaster prevention (with a limit of JPY 300 million in 2015).

The cooperation needs of the disaster management sector for Japan include technical training<sup>530</sup> in the areas of disaster risk management, climate change, information management and early warning systems.

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<sup>530</sup> Information provided by the RMI's NDMO

### 3.5.5. Environmental Conservation

#### (1) Overview

The Ministry of Environment<sup>531</sup> is responsible for environmental protection, conservation, restoration and sustainable use of natural resources, sustainable energy use, and mitigation and adaptation to climate change impacts and natural disasters. The Office of the Chief Secretary (OCS) oversees public works and administration under the Office of the President, and is a member of the Joint Coordinating Committee for Waste Management and J-PRISM 2. The Office of Environmental Planning and Policy Coordination (OEPPC), under the Office of the President, formulates environmental policies and strategies at the national level, and is the focal point for SPREP, other international organizations, and international treaty-related meetings. The Environmental Protection Authority (EPA)<sup>532</sup>, based in Majuro and Ebeye, is a regulatory agency that oversees the environmental sector. The EPA is responsible for the supervision of activities that affect the environment and for environmental protection in accordance with the National Environmental Protection Act and other basic laws. Majuro's EPA also has a department responsible for water quality control, which tests seawater and tap water. The Ministry of Works, Infrastructure and Utility (MWIU) is the agency responsible for the country's infrastructure, and in terms of waste management, it manages the securing and construction of final disposal sites. Department of Public Works, The Department of Public Works, Kwajalein Atoll Local Government (KALGOV) is responsible for waste collection, transportation to the disposal site and operation and maintenance of the disposal site in Kwajalein Atoll. Majuro Atoll Waste Company (MAWC) is a public corporation responsible for waste management in Majuro Atoll, including waste collection, sorting, operation and management of the final disposal site.

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<sup>531</sup> Established under the Ministry of Environment Act 2018

<sup>532</sup> Information provided by CCD of RMI

(2) Development Project

In the National Environment Management Strategy 2017-2022, the strategic focus areas in the 7 themes are shown in the table below.

Table 315 Overview of the National Environment Management Strategy 2017-2022

Theme	Strategic Focus Areas
Atmosphere and climate	<ul style="list-style-type: none"> <li>✓ GHG reduction and reduction of fossil fuel purchases</li> <li>✓ Reduction of ODS usage</li> <li>✓ Provide an environment for the protection and management of the physical environment.</li> <li>✓ Securing the RMI's Commitment to Adapt to Climate Change</li> </ul>
Land	<ul style="list-style-type: none"> <li>✓ Protection of existing vegetation, coconut, breadfruit and pandanus</li> <li>✓ Sustainable agriculture practices and traditional farming practices in cultivated areas</li> <li>✓ Wetland protection</li> </ul>
Ocean	<ul style="list-style-type: none"> <li>✓ Fishery control of offshore marine resources</li> <li>✓ Appropriate management of the coastal marine environment</li> <li>✓ Protection of marine mammals and sea turtles</li> </ul>
Biodiversity	<ul style="list-style-type: none"> <li>✓ Protecting ecosystems, traditions, languages, and species diversity</li> <li>✓ Promote long-term protection and maintenance of biodiversity in the RMI</li> </ul>
Culture and heritage	<ul style="list-style-type: none"> <li>✓ Preservation of Historic Sites</li> <li>✓ Preservation of the local Marshallese language</li> <li>✓ Maintain traditional food, medicine, and consumption patterns</li> </ul>
Building the Environment	<ul style="list-style-type: none"> <li>✓ Provide efficient, sustainable, and accessible energy</li> <li>✓ Provide appropriate waste management services</li> <li>✓ Appropriate management of hazardous wastes</li> <li>✓ Maintain and provide adequate water resources</li> </ul>

	✓ Provide sound sewerage and sanitation management
Nuclear legacy	✓ Strengthening governance support for those affected by the nuclear accident

Source: National Environment Management Strategy 2017-2022, p.2

According to the RMI's National Infrastructure Investment plan 2017-2026, the National Waste Management In line with the goals of the National Waste Management Strategy (NWMS), which is to develop, implement and maintain a solid waste management system and minimize the negative impacts of poor waste management on human health and the environment, the following list of priority projects have been developed, including the establishment of new landfills and waste facilities in Majuro and Ebeye.

Table 316 RMI's List of Priority Projects in the Environmental Protection Sector

Project name	Initial investment (USD)
New Ebeye Solid Waste Facility	1,300,000
New Majuro Atoll Landfill Project	17,115,735
New Transfer Station	460,000
Total initial investment	18,875,735

Source: Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, p.51

### (3) Issues and Measures

The following issues were identified based on the information obtained from the desk survey.

Table 317 Details of Issues and Measures Related to the Environmental Protection Sector in the RMI

Subject name	Details of the issue and countermeasures
Atmosphere and climate	<ul style="list-style-type: none"> <li>✓ Destruction of the ozone layer</li> <li>✓ Identification of greenhouse gas emission sources</li> <li>✓ Climate change and rainfall variability</li> </ul>
Land	<ul style="list-style-type: none"> <li>✓ Reduction of agricultural activities due to lifestyle changes</li> <li>✓ Agricultural census has not been conducted</li> </ul>
Ocean	<ul style="list-style-type: none"> <li>✓ Overfishing of Tuna in Offshore Fisheries</li> <li>✓ Impacts of coastal fishing on coral and other ecosystems</li> <li>✓ Management plans for marine management zones have not yet been formulated.</li> <li>✓ Degradation of sea water quality in urban areas of Majuro Island</li> <li>✓ Sea turtle marine mammal population decline</li> </ul>
Biodiversity	<ul style="list-style-type: none"> <li>✓ Conservation of Endangered Species</li> </ul>

Subject name	Details of the issue and countermeasures
	✓ Impact of invasion of alien species on agriculture, etc.
Culture and heritage	✓ Lack of funds makes it difficult to manage historic sites ✓ Loss of local Marshallese language and traditional food habits
Building the Environment	✓ Does not meet waste collection and recycling demands ✓ Impact on the area surrounding the landfill site ✓ Improvement of sanitation facilities

Source: The Republic of the Marshall Islands State of the Environment Report 2016, v-vii

According to interviews with the EPA, there are also challenges in areas such as water quality management, waste management, drought management, and pest control.

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

- Secretary of Pacific Regional Environmental Programme (SPREP)

"The Building National and Regional Capacity to Implement Multilateral Environment Agreements (MEA) by Strengthening Planning and State of Environment Assessment and Reporting in the Pacific" project was launched in 15 countries in the Pacific region, including three in Micronesia, from September 2016 to January 2021 (budget: 4.32 million USD).

In addition, the Biodiversity and Protected Areas Management Project (BIOPAMA) Phase two has been implemented from February 2018 to September 2023 to support the development and analysis of information on biodiversity, natural resource management, and protected area management that will be accessible to stakeholders in 14 countries in the Pacific, including three in Micronesia (budget 1.62 million USD)<sup>533</sup>.

- ADB

ADB is providing assistance as shown in the table below.

Table 318 List of ADB's Environmental Conservation Sector Projects in the RMI

Period	Project name
2021-	Ebeye Solid Waste Management Project
1992	Institutional Strengthening of the Environmental Protection Bureau

Source: ADB website

In addition to the above, a cooperative project for waste management in Ibai was approved in December 2020 (USD 6.5 million). The support is similar to the implementation of the waste

<sup>533</sup> JICA, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.36

management strategy and plan supported under J-PRISM 2, and includes the pilot installation of a small-scale high temperature incinerator.

② Japan

In the Country Assistance Policy (April 2019), it is stated that the results and findings of past technical cooperation, grant aid, and dispatch of cooperative teams will be reflected in waste management policies and strategies under development issue 2-1 “Environmental Conservation”. The project will also support the development of human resources who will be responsible for the realization of environmental conservation and management plans through the improvement of monitoring capacity.

As for the wide-area support for the three Micronesian countries (FSM, RMI, Palau), the "Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries (J-PRISM)" was implemented from February 2011 to February 2016. The successor project, "Japanese Technical Cooperation Project for Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries Phase 2 (J-PRISM 2)" is being implemented from February 2017 to February 2022<sup>534</sup>.

In addition to the above, as part of the Economic and Social Development Program, grant assistance was provided for the provision of equipment for the removal of oil spills in the ocean (limit: JPY 200 million in 2018).

As for the cooperation needs from Japan, according to the information provided by the EPA, there is an expectation that Japan will continue to support waste management efforts and also support drought countermeasures.

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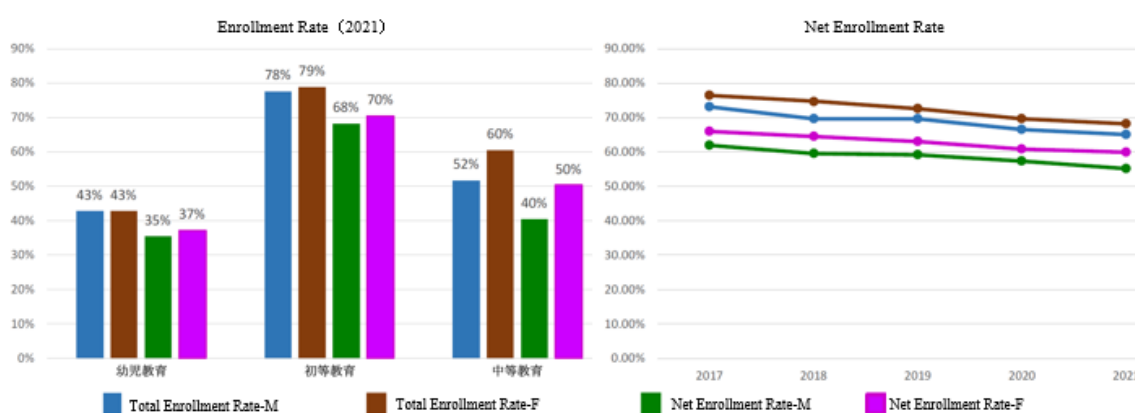
<sup>534</sup> JICA, April 2020, Basic Information on the Environment, Climate Change and Disaster Prevention Sector in the Micronesian Region, Version 4, p.31

### 3.5.6. Education and Health

#### 3.5.6.1. Education

##### (1) Overview

The education sector of the RMI is under the jurisdiction of the Ministry of Education, Sports and Training (MoEST). The RMI's education system has four levels: early childhood education (ages 3-5), primary education (grades 1-8) (ages 6-13), secondary education (grades 9-12) (ages 14-17), and higher education (College of the Marshall Islands or University of the South Pacific Majuro campus). The RMI has 94 elementary schools and 18 secondary schools, 86 public schools and 26 private schools<sup>535</sup>, and schooling is compulsory for all children between the ages of 5 and 18<sup>536</sup>. RMI enrollment is low, with a slight downward trend from 2017 to 2021.



Source: MoEST, Education statistics digest September 2021, version 1, p.1.3-1.4

Figure 52 School Enrollment Rate by Gender (2021)

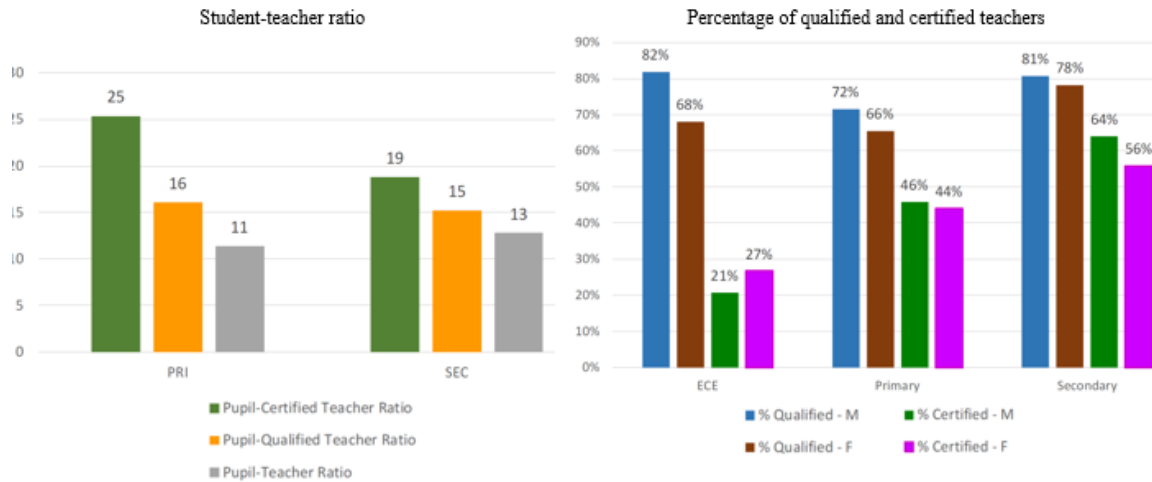
In terms of transition rates<sup>537</sup>, from the 2019-2020 to 2020-2021 school year, the transition rate from early childhood education to primary education was 92% for males and 97% for females, while the transition rate from primary to secondary education was 52% for males and 59% for females. The transition rate to primary education is 94% in urban areas and 95% in rural areas, which is not much different from each other. At RMI, Certified teachers who have passed one of the nine certification exams provided by RMI are licensed to teach at RMI, and Qualified teachers are those with at least a junior college degree. Checking the student-teacher ratio (the higher the ratio, the more students a teacher is responsible for), the RMI has fewer Certified teachers in primary and secondary education and fewer Qualified teachers in secondary education compared to the global average of 23.446 in primary education (2018: World Bank) and 16.998 in secondary education (2018: World Bank). The

<sup>535</sup> MoEST, Education statistics digest September 2021 version 1

<sup>536</sup> Strategic Plan: 2017-2020 (Public School System)

<sup>537</sup> The number of students enrolled in the first grade of an institution at the relevant level in a given year as a percentage of the number of students enrolled in the final grade of an institution one level lower in the previous year. Example: Transition rate from early childhood education to primary education = number of students enrolled in the first 1 year of primary education in a given year / number of students enrolled in the final year of early childhood education in the previous year.

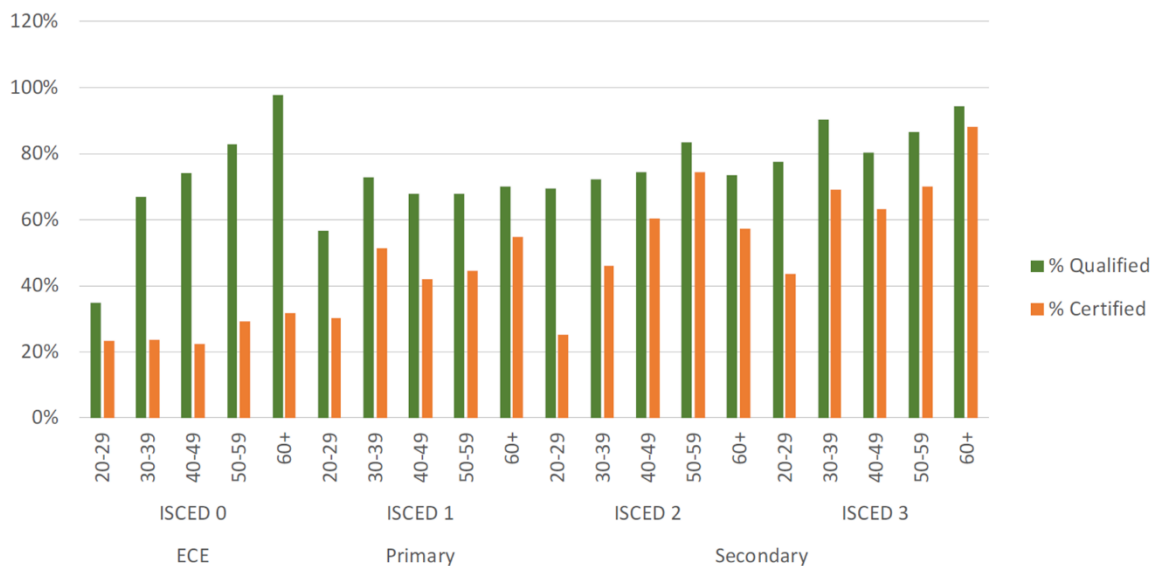
percentage of certified teachers is lowest in early childhood education, and even in primary education, more than one in two teachers is not certified.



Source: MoEST, Education statistics digest September 2021 version 1

Figure 53 Student-Teacher Ratio and Percentage of Qualified and Certified Teachers

In addition, with the exception of qualified teachers in primary education, the age group with the highest percentage of qualified and certified teachers in any educational program is those in their 50s who are about to retire and 60s or older.

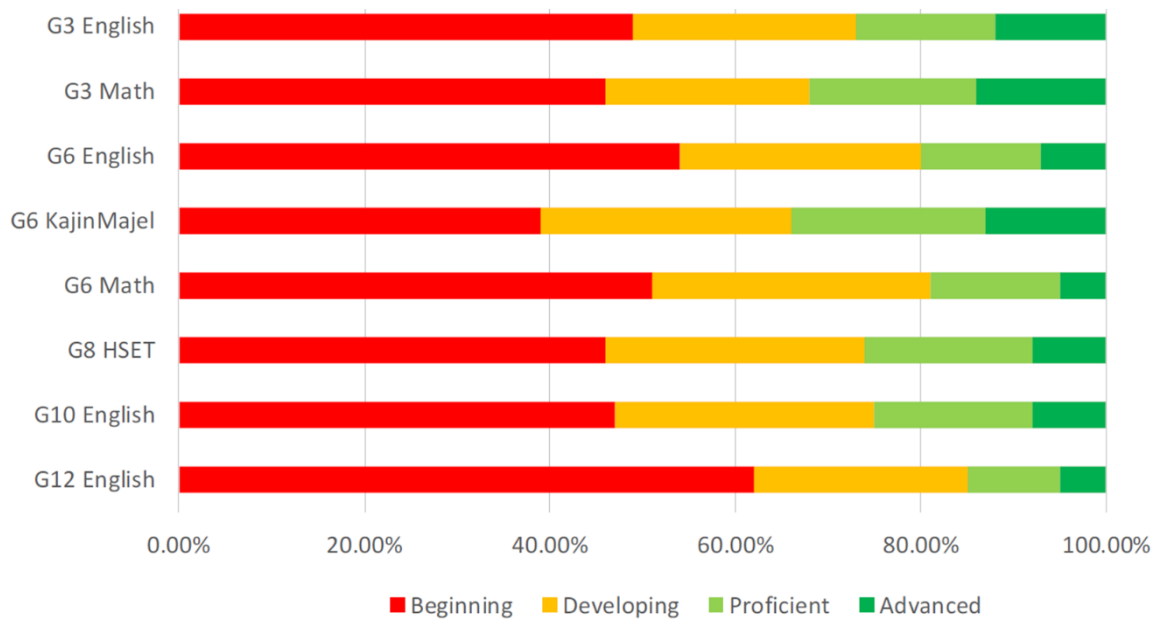


Source: MoEST, Education statistics digest September 2021, version 1, p.4.7

Figure 54 Age of Qualified and Certified Teachers



The Marshall Islands Standards Assessment Test (MISAT) is administered annually in the RMI as the primary end-of-year summative assessment tool for grades 3, 6, 8, 10, and 12. For the 2020-2021 school year, the MISAT participation rate is 84% for grade 3, over 100% for grade 6, 94% for grade 8, 83% for grade 10, and 64% for grade 12. Test results show that the percentage of students who "do not understand the concept being measured," the lowest level, is the highest in any grade and in any subject.



Source: MoEST, Education statistics digest September 2021, version 1, p.5.4

Figure 55 MISAT Results (2020-2021)

The percentage of students whose academic performance in the target subjects “meets grade level expectations” or “exceeds grade level benchmark expectations” has been less than 50% in any grade and any subject since 2013, and low academic performance has been an issue.

Table 319 Percentage of Students with MISAT Results above Grade-Level Expectations (2013-2021)

	2013	2014	2015	2016	2017	2018	2019	2020	2021
<b>Gr 3 English</b>	21%	19%	19%	25%	25%	29%	31%		27%
<b>Gr 3 Kajin Majol</b>	34%	33%	28%	33%	36%	48%	39%		na
<b>Gr 3 Math</b>	30%	29%	33%	37%	41%	35%	35%		32%
<b>Gr 6 English</b>	19%	18%	19%	19%	16%	17%	19%		20%
<b>Gr 6 Kajin Majol</b>	33%	34%	33%	39%	36%	34%	38%		34%
<b>Gr 6 Math</b>	19%	21%	21%	20%	18%	22%	19%		19%
<b>Gr 8 HSET</b>	36%	39%	37%	41%	41%	44%	44%	26%	26%
<b>Gr 10 English</b>	22%	23%	24%	25%	25%	27%	24%		25%
<b>Gr 10 Math</b>	10%	11%	12%	13%	10%	10%	10%		na
<b>Gr 12 English</b>	32%	28%	30%	31%	24%	27%	27%		15%
<b>Gr 12 Math</b>	12%	12%	12%	11%	13%	18%	15%		na

Source: MoEST, Education statistics digest September 2021 version 1, p.5.5

The share of state spending on education has remained high compared to the global average, except in 2018. According to information provided by the MoEST, teacher salaries have increased since 2014<sup>538</sup>, which has increased teacher motivation and improved the quality of education.

Table 320 Information on State Spending on Education

Item	2016	2017	2018	2019
Spending on education (USD)	20,364,368.85	24,033,903.44	19,049,762.59	25,931,997.82
Share of education expenditure in total state expenditure (RMI)	16.6%	16.7%	12.4%	16.7%
Education spending in percentage of national spending (worldwide)	13.971%	14.5%	13.828%	N/A
Education spending in percentage of GNP (RMI)	7.8%	8.9%	6.8%	8.9%
Education spending in percentage of GDP (world)	4.165%	4.328%	4.256%	3.663%

Source: MoEST, Education statistics digest September 2021 version 1, p.7.3 and World Bank website

<sup>538</sup> The average annual salary of a university graduate as a teacher is approximately USD 21,000, which is an increase from 2014. Information provided by MoEST.

(2) Development Project

The RMI's education sector development plans are the Education Sector Plan and the Public School System Strategic Plan (2017-2020) shown in the table below. For the two plans, a new plan for 2022 and beyond is being prepared, but as of December 2021, it is still under review by the National Board of Education (NBE). In addition, the Education Sector Wide Planning Project by the Global Partnership for Education is also under review by the NBE<sup>539</sup>.

Table 321 Overview of RMI's Public School System Strategic Plan

GOALS	Objective
<b>1. Improving student achievement</b>	
1.1. Increase the average MISAT score by 10% in all schools over the next year	1.1a. Increase by 10% each year the number of students receiving credit for CMI and other postsecondary programs in all middle and high schools.
	1.1b. By 2020, 70% of students in 3 grade, 6 grade and grade 8 will reach Proficient or higher.
	1.1c. Grade 9 enrollment rate will increase by 10 % in each year.
	1.1d. By 2019, the rate of enrollment of grade 9 increases to 80%.
	1.1e. Obtain technical assistance on curriculum and assessment alignment (including the nature and role of the MISAT testing program).
	1.1f. Assign 2 teacher to K-3 class in an urban area.
TVET will be integrated into the curriculum of all middle and high schools by 2020	1.2. coordinate with CMI and other government agencies.
1.3. Life skills education will be included in the school curriculum by 2020	-
1.4 Provide opportunities for high achievers	1.4a. Enroll in both high school and college.
	1.4b. Provide online learning opportunities.
<b>2. Improve student persistence, especially at the secondary level</b>	
2.1. Increase the number of students enrolled by 10 % each year	2.1a. By 2019, 90% of 5 years old children will attend kindergarten.
	2.1b. Achieve a 100% enrollment rate for first grade students.
2.2. Reduce the dropout rate in elementary school to 10% by 2020	2.2a. Reduce the dropout rate in grades 1-8 from 32% in 2011-12 to 10% by 2020.

<sup>539</sup> Information provided by MoEST

GOALS	Objective
2.3. Reduce the dropout rate in secondary education to 25% by 2020	2.3a. Reduce the dropout rate in grades 9-12 from 51% to 25% by 2020 through the following concrete steps <ul style="list-style-type: none"> <li>✓ Reliable School Bus</li> <li>✓ Reliable sea and air transportation to deliver students to the island where the high school is located.</li> <li>✓ A student information system (Power School) will be implemented in all schools in Majuro and Ebeye to facilitate early detection and attention to at-risk students.</li> <li>✓ Enhance the counseling program.</li> <li>✓ Encourage strong parental involvement.</li> <li>✓ Conduct a national awareness campaign to address the dropout problem.</li> <li>✓ Dormitory set up for students on the outer islands.</li> </ul> 2.3b. The school counselor will identify students with attendance problems early and work with parents, community agencies, and teachers to provide remedial programs for those students.
2.4 Improve attendance.	2.4 By 2019, achieve an average daily attendance rate of 90% in all schools. <ul style="list-style-type: none"> <li>✓ Establish social work agencies in urban areas to support families of students who are chronically out of school.</li> <li>✓ Strengthen local school boards, local governments, and PTAs.</li> </ul>
2.5 Implement a permanent school feeding program.	2.5. Secure public and parental donations so that students do not have to go home for lunch or go hungry.
2.6 Understand the root causes of dropout.	2.6. Commission an investigation into the causes and possible solutions.
<b>3. Improving the qualifications and performance of principals and teachers</b>	
3.1. By 2020, attract and employ only well-qualified teachers at all school levels.	3.1a. Request CMI to increase the number of teachers with associate degrees by 50% by 2020.
	3.1b. By 2020, all principals will comply with the performance standards set forth in the plan.
	3.1c. By 2020, engage all schools and teachers in professional development activities through the “Improving Quality Basic Education” project.
3.2 Improving the status of the teaching profession	3.2a. Raise teachers' salaries according to approved scale.
	3.2b. Assign principals, who are strong educational leaders, to large schools.
	3.2c. Provide 401k style benefits to fully qualified teachers and principals.
	3.2d. Teachers will demonstrate an awareness of their responsibilities in organizing and leading a learning community.
3.3. Strengthen support for teachers	3.3a. Assign subject specialists to schools.
	3.3b. Provide support for more frequent formative assessment of students and coordination of instruction by principals, specialists, and supervisors.

GOALS	Objective
	3.3c. Require that elementary school supervisors spend the majority of their time in the school's classrooms.
	3.3d. Principals and vice principals will encourage a culture of active teacher participation and help-seeking in school improvement planning.
3.4 Define what it means to be an effective teacher	3.4a. Research the literature on what makes an effective teacher.
	3.4b. Tuition assistance for professional development
	3.4c. Based on research findings, create targeted workshops on multi-grade teaching strategies and how to be a high-performing school.
3.5. Attract more Marshallese to teach at the secondary level	3.5a. Same as 3.2
<b>4. Improve school characteristics</b>	
4.1. By 2019, convert all elementary school with less than 50 student to grade 1 ~6 schools	4.1.a. All grade 7 and 8 students attending elementary schools with less than 50 students will be transferred and enrolled in the nearest large school.
4.2. By 2020, the number of very small public elementary schools will decrease	4.2. By 2020, 3~10 small schools will be closed and their students will be enrolled in large schools.
4.3 Strengthening K-3 instruction	4.3. Secure classrooms by placing 2 teachers in large K-3s and transferring teachers from overstaffed schools.
4.4 Fully staffed school	4.4a. Recruit, hire, and place high school teachers at the start of the school year.
4.5. Increase the number of excellent schools	4.5 Each school will incorporate the nine characteristics of a good school.
<b>5. Accreditation rate improvement and school improvement plan</b>	
5.1 By 2020, all schools will be accredited at or above the level 2 of the RMI School Accreditation System.	5.1a. All RMI schools will conduct and submit an annual school self-survey by 2020.
	5.1b. By 2020, all schools will annually submit a school improvement plan that complies with quality guidelines.
	5.1c. Starting in September 2016, schools will convene at least once a year to discuss annual goals and adopt some specific measures to become a good school.
5.2. Ten schools are accredited by the Western Association of Schools and Colleges (WASC).	5.1a. See 5.1. WASC accreditation applies primarily to large schools.
<b>6. Developing community-based school governance and parental involvement</b>	
6.1. By 2020, all PSS schools will demonstrate compliance with community-based governance systems.	6.1a. The community's high demand for better schools will be evident by 2017.
	6.1b. Explore legislation that would allow for flexibility in CBGS in response to local conditions.
6.2. Use CBGS to increase parental involvement.	6.2. Actively recognize high-achieving schools.
6.3. Provide results-oriented instruction.	6.3. Highlight the characteristics of 9 excellent schools.

GOALS	Objective
6.4. Involve the community in school improvement planning.	6.4. Each principal or vice principal will develop a school improvement plan with the active participation of teachers and staff. 6.5. Strengthen procedures to facilitate and support school improvement.
Promote the effective use of technology in education	
7.1. All schools have appropriate packages of Internet access or offline.	7.1a. Monitor and evaluate the Achieve 3000 system being used in Majuro secondary schools.
	7.1b. Evaluate the current and potential use of KA Lite (Khan Academy).
7.2. Install a school information system (where connectivity is practical).	7.2a. Establish Power Schools in all schools in Majuro and Ebeye.
	7.2b. Provide practical guidance to teachers, counselors, parents, students, and school personnel on how to better utilize Power School.
7.3. By 2017, re-evaluate the standards, recommendations, and annual targets specified in 2010 Comprehensive Technology Plan.	7.3a. Review, simplify, adapt to current conditions and technologies, and implement adoption.
	7.3b. To adopt the recommendations of the CMI-PSS Task Force on EMIS.
	7.3c. Regularly survey and post on the website basic information about the public school system at least once a year.
7.4 Strengthen technical assistance for teachers and the public school system.	7.4a. Educate and train more local people.
	7.4b. Employ a full-time instructional technology specialist to support teachers and students.
	7.4c. Use technology to support science, technology, engineering, and mathematics.
7.5 Distribute test results and other data more proactively in ways that are useful to teachers.	7.5 The Policy and Planning Department of the public school system will develop policies and procedures for the rapid dissemination of MISAT results so that teachers and principals have access to data on the strengths and weaknesses of each student by curriculum standards as measured by the MISAT. This will also apply to the JICA math test.
7.6 Improve the effectiveness of EMIS.	7.6.a. Enable the use of data for performance monitoring and planning of public school systems.
	7.6b. Keep the public school system website more up-to-date.
	7.7c. Obtain more timely and accurate data on dropout and graduation rates.

Source: Public School System Strategic Plan 2017-2020, p.6-12

According to the information provided by MoEST, the progress of the above plan mentions the increase in the retention rate of students, especially at the secondary level; construction of facilities (school dormitories, classrooms, water storage facilities, etc.) and donation of school buses through grassroots technical cooperation; improvement of teachers' performance; and increase in the number of WASC accredited schools. On the other hand, the report mentions the participation of local communities and parents in schools, and the use of IT to provide education to remote islands.

In addition, according to the Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, the following priority project list has been prepared, focusing on the development of College of the Marshall Islands (CMI), University of the South Pacific (USP) and secondary schools.

Table 322 RMI's list of Priority Projects in the Education Sector

Project name	Initial investment (USD)
CMI Ebeye Center	810,000
CMI Student Center expansion	100,000
Learning Center	7,000,000
Construction of Jaluit High School New Boys Dormitory	1,200,000
North Delap Elementary School (formerly DUD Kinder. and Elem. School)	2,367,343
New Jaluit High School Cafeteria	1,075,000
Rairok Elementary School Building (4 Classrooms)	917,700
Kwajalein Atoll High School PDP (Development Plan)	200,000
Ebeye Elementary School Project	14,427,000
Laura Elementary School Phase 2 (6 Classrooms)	1,491,550
Rita Elementary School Building (4 Classrooms)	946,450
MIHS Student Center	745,000
Laura Elementary School Phase 2 - Phase 4	3,384,450
Life Skills Academy Building	900,000
Placeholder for MOE Administrative Renovation	No data
USP: Long Island Campus remodeling and renovation	1,848,412
<b>Total initial investment</b>	<b>37,412,905</b>

Source: Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, p.53

### (3) Issues and Measures

The following issues were identified through the information provided by MoEST.

Table 323 Details of Issues and Measures Related to the Education Sector

Subject name	Details of the issue and countermeasures
Lack of teachers in specific fields	<ul style="list-style-type: none"> <li>✓ There is a shortage of math and science teachers.</li> <li>✓ As for public administration, there is a lack of personnel who can teach public management skills (analytical, technical, leadership, and educational administration planning).</li> </ul>
Installation of computer lab and improvement of internet connection	<ul style="list-style-type: none"> <li>✓ All schools need to ensure computer labs and reliable internet.</li> </ul>

Source: Information provided by MoEST

#### (4) Direction of Cooperation

##### ① Non-Japanese Partners

###### • Pacific Community (SPC)

The Educational Quality and Assessment Programme (EQAP) is working to focus on ICT for education and educational data, quality and systems management.

###### • The Pacific Regional Education Framework (PacREF)

PacREF is a regional policy guide endorsed by 15 members of the Pacific island countries at the Forum Education Ministers' Meeting in 2018, and PacREF 2018-2030 was adopted at this meeting. PacREF is designed to help developing Pacific member states address the continuing challenge of improving the quality of education, and has 17 Pacific countries, including the FSM, as members. It has four policy areas: quality and relevance, learning pathways, student outcomes and wellbeing, and teaching.

###### • ADB

The ADB has identified seven priorities for the Asia and Pacific region in its Strategy 2030, which sets out guidelines for the ADB's efforts. One of them is "Improving Education and Training" under the "Addressing Remaining Poverty and Reducing Inequality".

Ongoing projects include "Strengthening Education in the Pacific Region," which funded the first phase of PacREF (2019-2022) and supported the establishment of a regional repository and learning management platform for open, distance, and flexible learning. In addition, "Improving the Quality of Basic Education in the North Pacific" will provide teacher support, learning assessment support, literacy and numeracy support, and support for strengthening school governance and management.

Table 324 List of ADB Projects in the Education Sector

Period	Project name
2012-2015	Quality Primary Education in the North Pacific
2014-2020	National Education Planning and Management
2016-2017	Improving the Quality of Basic Education in the North Pacific
2017-2024	Improving the Quality of Basic Education in the North Pacific
2018-2025	Strengthening Education in the Pacific Region

Source: ADB website



- Global Partnership for Education (GPE)

The RMI's "Covid-19 Education Sector Response" program has been funded through UNICEF since November 2020. The RMI has also provided financial support to the ADB's Strengthening Education in the Pacific Region program mentioned above.

- World Bank

The RMI Education and Skills Strengthening Project will be implemented from 2021 to 2026 to improve equitable access to quality secondary education, post-secondary vocational and technical education and training, and employment intermediary services.

② Japan

In the Country Assistance Policy (April 2019), the RMI has identified education as one of the most important issues in its development plan, with the enhancement of education functions as Development Issue 1-2.

The RMI's policy is to improve the comprehensive level of local teachers by dispatching cooperative teams, to continue supporting the improvement of math education and capacity building, and to support vocational training and technical training to expand the possibilities of employment in Japan and abroad.

### 3.5.6.2. Health

#### (1) Overview

The following is an overview of the roles and status of health service delivery institutions in the RMI and the service delivery system and decentralization.

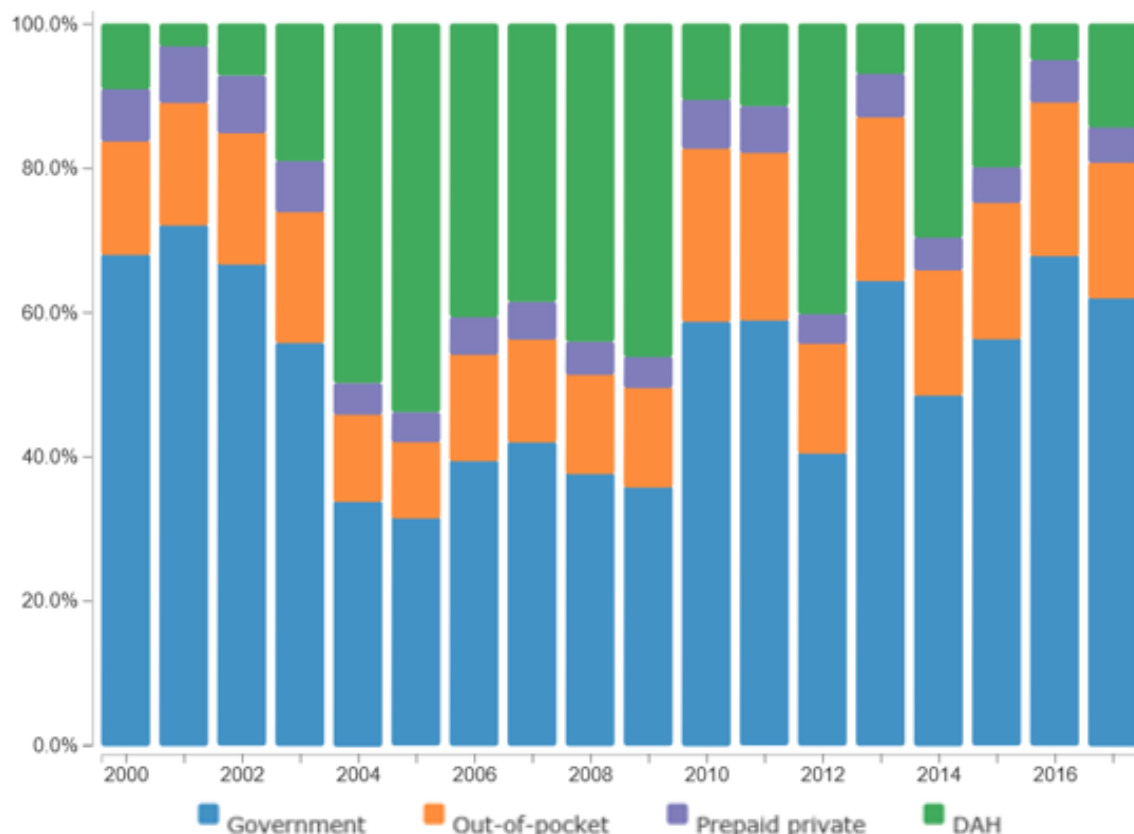
Table 325 Overview of the Roles and Status of Health Care Service Delivery Institutions, Delivery Systems, and Decentralization

Item	Overview
Role and status of service provider organizations	<ul style="list-style-type: none"> <li>✓ Health care services are provided by the Ministry of Health in cooperation with the Regional Health Councils. Direct aid from the US government to the Marshall Islands is the mainstay of the economy, and an annual review of government programs at the national level reveals a low rate of spending in the health sector. Nonetheless, there is a lack of funding to implement programs, contributing to fragmentation of health service delivery.</li> </ul>
Service delivery system and decentralization	<ul style="list-style-type: none"> <li>✓ There are two hospitals (in Majuro and Ebeye) and 56 medical centers on the outer atolls and on the island. Both hospitals provide primary, secondary, and limited tertiary care. Patients requiring full tertiary care are referred overseas.</li> <li>✓ The Health Center is staffed by full-time health assistants who provide health promotion, prevention, and basic clinical services.</li> </ul>

Source: JICA, June 2021, Final Report of the Information Collection and Verification Study on Strengthening Maternal and Child Health and Community Health in the Pacific Region

As for medical insurance, the Basic Health Plan is available to RMI residents and non-residents who have lived and paid taxes in the RMI for at least 1 year.

As of 2017, the share of health expenditure was borne by the government (62.14%), self-financing (18.61%), individual prepayment (5.02%), and development assistance (14.23%). The share of government and development assistance varies greatly from year to year, but the self-financing and individual prepayment rates have remained largely unchanged.



Source: Global Data Health Exchange (GDHx), Institute for Health Metrics and Evaluation

Figure 56 Share of Health Care Expenditure

Health care expenditure as a percentage of GDP is high, but per capita health care expenditure is low, and both neonatal mortality and under-five mortality have not met the SDG targets. Obesity and diabetes rates are very high, and the rapid increase in NCDs is a major challenge for the RMI. As for the number of doctors per 1,000 population, the data as of 2012 is shown in the table below, and according to the information provided by the Ministry of Health as of January 2021, the number of doctors per 1,000 population is 0.856 (the number of nurses is 3.937 per 1,000 population).

Table 326 Basic Information on Health Care

Item	RMI	Whole world
Health care spending as % of GDP (2018) WHO recommendation is at least 5%	17.553%	9.857%
Medical Expenditure per person (2018)	USD 643.066	USD 1,111.082
Average life expectancy (2019)	67.883	72.742
Neonatal mortality rate per 1,000 people (2019) SDG target: Less than 12	15.3	17.5
Under-five mortality rate per 1,000 live births (2019) SDG target: Less than 25	31.8	37.7
Number of physicians per 1,000 population	0.423 (2012)	1.566 (2017)
Number of nurses + midwives per 1,000 population The number of doctors, nurses, and midwives recommended by WHO is 4.45	3.339 (2018)	3.816 (2018)
Adult obesity rate (BMI $\geq$ 30) (2016)	52.9% Male:48.4% Female:57.3%	N/A
Hypertension ratio (SBP $\geq$ 140 or DBP $\geq$ 90, over 18 years old) (2015)	21.3 Male:23.8% Female:18.6%	N/A
Diabetes ratio (% of population, 20-79 years old) (2019)	30.5%	8.812%

Source: World Bank and WHO websites

Table 327 Ranking of Diseases that Cause Death

Rank	2000	2019
1	Ischemic heart disease (13.61%)	Ischemic heart disease (19.01%)
2	Stroke (10.03%)	Stroke (11.92%)
3	Lower respiratory tract infection (6.93%)	Diabetes (8.44%)
4	Neonatal disorders (5.96%)	Infection of the following pathways (4.72%)
5	Diabetes (5.56%)	Chronic kidney disease (3.95%)

Cancer does not 5rank in the top 10 when aggregated by individual disease, but the total of all cancer-related deaths is approximately 12.662% (2019).

Source: Global Data Health Exchange (GDHx), Institute for Health Metrics and Evaluation

(2) Development Project

The Ministry of Health has released 3-year rolling strategic plan (October 2017 to September 2019) under the theme “Kumiti Ejmour” (Health is a Shared Responsibility), with the following 8 priorities:<sup>540</sup>

1. Ensuring Quality Health Care in the Open Sea Islands
2. Achieve universal access to quality care for all patients with infectious diseases
3. Provide non-communicable disease services that are integrated with the tools and support people need to manage their health.
4. Strengthening national capacity to deliver quality maternal, infant, child, and adolescent health and community-based interventions
5. Increased access to community-based care and support for adults and children with mental illness and substance use disorders through a network of service providers committed to a person-centered and recovery-oriented system of care.
6. Increase immunization rates and reduce preventable infections
7. Promote and educate people to change to a healthier lifestyle
8. Provide preventive and public health services that are efficiently and effectively managed and coordinated

According to the Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, the following priority project list has been developed with a focus on the redevelopment of Majuro Hospital.

Table 328 RMI's list of Priority Projects in The Health Sector

Project name	Initial investment (USD)
Majuro Hospital Redevelopment Project	42,095,000
Outer Island Health Assistance Housing	592,250
Outer Island Health Center	318,750
Rita Health Center	318,750
Total initial investment	43,324,750

Source: Republic of the Marshall Islands National Infrastructure Investment plan 2017-2026, p.54

<sup>540</sup> JICA, June 2021, Final Report of the Information Collection and Verification Study on Strengthening Maternal and Child Health and Community Health in the Pacific Region

### (3) Issues and Measures

The issues of NCDs and child obesity are common in the Pacific region. The Pacific Monitoring Alliance for NCD Action (MANA) has set up a MANA dashboard to monitor progress towards the NCDs target, and has compiled a list of countries' current strengths and areas requiring action. In addition, the Pacific ECHO has been established to address child obesity.

Table 329 Details of Issues and Measures Related to the Healthcare Sector

Subject name	Details of the issue and countermeasures
NCDs	✓ High consumption of imported canned and instant foods, lack of exercise, and tobacco products are contributing to NCDs and obesity.
Shortage of medical personnel	<p>✓ There is a shortage of radiologists and family physicians, but due to COVID-19 travel restrictions, there are no available physicians. The Ministry of Health has asked the Pacific Islands Health Officers Association (PIHOA) and Philippine Overseas Employment Administration (PAMS) to mediate applicants.</p> <p>✓ There is a shortage of maintenance technicians for emergency rooms, anesthesiologists, pediatricians, respiratory therapists, radiologists, biomedical technicians, and hospital air conditioning.</p>
Maintenance personnel for medical equipment	✓ There is a shortage of personnel to maintain, manage, and inspect medical equipment in hospitals.

Source: WHO Country Cooperation Strategy 2018 - 2022 and information provided by the Ministry of Health

### (4) Direction of Cooperation

#### ① Non-Japanese Partners

##### • SPC

The RMI and SPC have agreed on the “The Republic of the Marshall Islands - Pacific Community Country Programme 2019-2022. One of the strategic priorities in the document is “health,” which includes curbing the incidence of diabetes and obesity, reducing consumption of tobacco and sugary products, and timely and accurate cancer screening. The SPC's public health department has provided various support to the RMI, including technical cooperation on child obesity research and tobacco control, and funding for nurse training.

##### • WHO

The Country Cooperation Strategy 2018-2022 identifies the following 3 strategic priorities for the RMI:

1. Build a resilient and sustainable health system to improve the availability of need-based health services
2. Support the implementation of international health regulations for preparedness and management of medical emergencies and natural disasters

3. Prioritize essential public health programs based on the needs to be delivered to the public

- ADB

In ADB’s Strategy 2030, which defines the guiding principles of the ADB’s efforts, the ADB has identified 7 priority issues in the Asia and Pacific region, one of which is “addressing persistent poverty and reducing inequality” and the other is “improving health for all”.

The Pacific Region wide project is implementing projects on health program review and analysis, government capacity and preparedness strengthening, and immunization against cervical cancer and other infectious diseases. The other RMI projects implemented since 2010 are Social Protection of the Vulnerable in the Pacific, which ended in 2018, and COVID-19 Emergency Response, which has been ongoing since 2020.

Table 330 ADB's Pacific Regional Project

Period	Project name
2019-2022	Supporting Improved Health Outcomes in Asia and the Pacific
2018-2020	Accelerating Universal Health Coverage in Asia and the Pacific for Strategy 2030
2018-2023	Developing the Health Sector in the Pacific
2017-2019	Systems Strengthening for Effective Coverage of New Vaccines in the Pacific

Source: ADB website

- World Bank

The RMI COVID-19 Emergency Response Project has been implemented since 2020 and includes COVID-19 detection and confirmation of positive cases, strengthening of contact tracing capacity, provision of medical supplies, and training for health care workers. In addition, the Multisectoral Early Childhood Development Project, which is being implemented from 2019, aims to improve coverage of multisectoral early childhood development services, including reproductive health, maternal and child health and nutrition, and the first years of a child’s life (from womb to age 2).

- US

According to the information provided by the Department of Health, there are contributions to the health sector from the Compact Fund and support from the US Centers for Disease Control (CDC), the US Substance Abuse and Mental Health Services Administration (SAMHSA), and the US Health Resource’s and Services Administration (HRSA).

- Australia

Australia, with its “The Pacific Step-up” policy, is the largest development assistance partner for the Pacific region. In the RMI, the focus is on clean water and sanitation, but the health sector accounts for less than 1% of the total planned ODA investment in the 2021-2022 North Pacific (FSM, RMI, Palau).

- New Zealand

New Zealand has developed a Strategic Action Plan on the Well-being of Children and Youth 2021-2025 in Pacific State. In the area of health care, the plan includes early childhood interventions in multiple areas such as health, nutrition, care and protection, and prevention of NCDs through adolescent health programs.

- Taiwan

In 2017, Taipei Medical University Shuang-Ho Hospital continued its medical internship program with the RMI Department of Health and Human Services. The program includes the installation of Hospital Information System (HIS) in Majuro Hospital and digitization of patient records.

② Japan

Japan has set "COVID-19 Response and Recovery" as one of the priority areas for the next three years, which was announced at PALM9 held on July 2, 2021. In addition to the provision of equipment and technical cooperation for the development of the cold chain necessary for vaccination, PALM9 announced that it would provide vaccines to countries in the Pacific region through COVAX and other organizations from mid-July onward, with the aim of providing a total of 3 million doses within this year. In addition, in order to address the health vulnerabilities of the countries in the Pacific region, JICA will provide a wide range of assistance, including the development of medical facilities, provision of high-quality medical equipment, and human resource development for health and medical personnel (including capacity-building support for health systems and JICA technical assistance to reduce NCDs, which are a major risk factor for COVID-19).

In the Country Assistance Policy (April 2019), improvement of health and medical services is set as development issue 1-3. The policy is to strengthen and expand awareness-raising activities on lifestyle-related diseases, which are currently being coordinated and implemented, by continuing to dispatch JOCVs, and to develop support for measures against lifestyle-related diseases in Ebeye in collaboration with cooperative teams and training programs. In addition, through grant aid, Japan will cooperate in improving medical services throughout the RMI, including in remote islands. Japan's major cooperation achievements in the field of health and medical care to date are as follows.



Table 331 RMI's Major Collaborations with Japan in the Medical and Health Sector

Start date	End Date	Project name
Official Development Assistance Grants		
Sep 2020 (adopted)	-	The Project for Improvement of the Majuro Hospital Follow-up Project (Field survey postponed due to travel restrictions)
Jul 2003	Dec 2005	The Project for Improvement of the Majuro Hospital
Technical Cooperation		
2022 (planned)	2027 (planned)	Project for Strengthening Cooperation to Build a Robust Health System in the Pacific Region
Feb 2005	Feb 2010	Project for Strengthening EPI in the Pacific Region (13 countries including RMI)

Source: Final Report of the Information Collection and Verification Study on Strengthening Maternal and Child Health and Community Health in Oceania Region (June 2021) (JICA) and JICA website.

In addition to the above, as part of the economic and social development plan, medical ships and infectious disease control measures has been provided (provision of CT scanners, radiography equipment, etc.).

One of the cooperation needs from Japan is the dispatch of experienced HR managers who can carry out effective human resource management for the general shortage of doctors. In the area of medical equipment, an offer from JICS for the introduction of CT scans has been provided. There is also a need for funds of the construction of a CT scan room and technical support. Ventilators, heart rate monitors, oxygen ventilators, and portable X-rays are also needed.

### 3.6. Economic and Financial Impact and Response to the Spread of Covid-19 Infection

#### 3.6.1. Economic Impact and Response to COVID-19

##### Economic Growth

Since the beginning of 2020, the spread of COVID-19 infection has led to a decline in fishery production and worsening profits in related manufacturing industries due to the travel ban and other movement restrictions, resulting in a GDP growth rate of -5.5% in 2020. Both the ADB and the IMF are forecasting positive economic growth in 2022, with a gradual recovery expected as travel restrictions are gradually eased.

Table 332 RMI GDP Growth Rate Projections by Agencies

Organization (Figures in parentheses indicate the time of publication or hearing)	2021	2022	2023
IMF (Oct 2021)	-1.5%	3.5%	2.5%
ADB (Sep 2021)	-3.3%	4.0%	-

Source: ADB website, IMF website

The main sources of revenue for the RMI's finances are economic assistance to various sectors under the Compact with the United States and economic assistance related to COVID-19. According to the IMF, although COVID-19-related expenditures are expected to increase in 2020, the RMI is expected to return to a budget surplus due to expected revenues from economic assistance.

##### Each Sector

According to the information provided by some authorities of the RMI sectors, donors' planned project budgets have been redirected to projects for COVID-19, and projects have been cancelled. In addition, the health sector has been affected by the recruitment of doctors.

Table 333 Impacts of COVID-19 and Countermeasures in Each Sector

Sector	Impacts and countermeasures
Financing	<ul style="list-style-type: none"> <li>✓ According to information provided by the RMI Banking Commission, the country was to receive technical assistance from ADB in the area of financial inclusion, but due to the impact of COVID-19, the budget was reallocated for COVID-19 measures.</li> <li>✓ MIDB is extending low interest loans (4%) to Copra-related companies located in the remote islands hit by COVID-19.</li> </ul>
agriculture	<ul style="list-style-type: none"> <li>✓ Tobolar was involved in the early stages with JICA on the BIO Degradable Waste Disposal Project, but this did not materialize due to the COVID-19 pandemic<sup>541</sup>.</li> </ul>
hygiene	<ul style="list-style-type: none"> <li>✓ There is a shortage of radiologists, family physicians, etc., but due to COVID-19 travel restrictions, there are no physicians available for employment.</li> </ul>

Source: Information provided by ministries and agencies in each sector.

### 3.6.2. Response of Each Donor

- ADB

In 2020, ADB's COVID-19 related measures include USD 16 million from the Health Expenditure and Livelihoods Support Program, USD 6 million from the Pacific Disaster Resilience Program, USD 1.5 million from the Ebeye Solid Waste Management Project, and USD 1 million from the COVID-19 Emergency Response (total USD 24.5 million)<sup>542</sup>.

- South Pacific Commission (SPC)

SPC is implementing the MICCO19 project to address food insecurity under MNRC and COVID-19. The specific objective is to address the impact of COVID-19 on food and nutrition security by strengthening sustainable and resilient food systems and good governance<sup>543</sup>.

- Global Partnership for Education

The Global Partnership for Education (GPE) is funding the RMI's Covid-19 Education Sector Response program through UNICEF starting in November 2020.

- World Bank

The World Bank has provided more than USD 15.7 billion in response to COVID-19 in East Asia and the Pacific Islands. The RMI has been implementing the RMI COVID-19 Emergency Response Project since 2020, which includes detection of COVID-19, confirmation of positive cases, strengthening of contact tracing capacity, provision of medical supplies, and training of medical personnel.

<sup>541</sup> Information provided by Tobolar.

<sup>542</sup> ADB Fact Sheet, 2020

<sup>543</sup> Information provided by MNRC-DA

• US

In the U.S., the RMI government is providing various technical assistance to the RMI government, including the preparation of emergency response plans and inspection support, in collaboration with the U.S. Centers for Disease Control and Prevention (CDC), the U.S. Department of Health and Human Services (HHS), and USAID. HHS is also providing USD 370,000 in supplementary financial support<sup>544</sup>. The US Department of Labor is also providing Pandemic Unemployment Assistance (PUA) as a compensation support program for those who have fallen into unemployment due to COVID-19 in the RMI<sup>545</sup>. In the education sector, the US Department of Education has provided USD 1.96 million in assistance to the College of the Marshall Islands<sup>546</sup>.

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<sup>544</sup> <https://fm.usembassy.gov/u-s-assistance-to-federated-states-of-micronesia-on-covid-19/>

<sup>545</sup> <https://www.dol.gov/newsroom/releases/eta/eta20200901>

<sup>546</sup> <https://www.doi.gov/oia/covid19>

### 3.7. Recommendations on Priority Sectors and Cooperation from JICA

#### (1) Japan's Policy on Cooperation with the Pacific and RMI

In the third part of the study, although there was insufficient information from the field, a survey was conducted for RMIs on the following issues:

- Understand the current status and policies of development and the current status and policies of the investment environment
- Collection and analysis of detailed information on macroeconomic and key sectoral status and issues
- Identify sectors and issues to focus on and measures to address to achieve sustainable development and economic growth.

Since 1997, PALM has been held every three years between Japan and the Pacific nations, bringing together the heads of state and government to seek solutions to various issues. PALM9 was held in July 2021, and five priority areas of cooperation were identified: “COVID-19 Response and Recovery”, “Sustainable Oceans based on the Rule of Law”, “Climate Change and Disaster Resilience”, “Strengthening Foundation for Sustainable and Resilient Economic Development”, and “People-to-People Exchanges and Human Resource Development”.

The five priority areas of cooperation expressed in PALM 8, namely, “Maritime Order based on the Rule of Law, and Sustainability of Ocean Resources”, “Strengthening the Basis for Resilient and Sustainable Development”, “Connecting Pacific Citizens”, and “Cooperation in the International Arena”, have much in common with the priority areas of PALM9. The policy and business development plan for development cooperation with the Marshall Islands, formulated in April 2019, sets out the direction of development cooperation as follows, which is fully consistent with PALM's priority areas.

Table 334 Japan's Development Cooperation Policy for the Marshall Islands

Goals	Medium Target	Subtarget	Cooperative Program Name	
Self-reliant and sustainable economic growth and improvement of people's living standards in consideration of the environment	1 Vulnerabilities conquest	1-1 Strengthening the foundation for economic growth	Strengthen capacity for economic and social infrastructure development and maintenance Industrial Promotion	
		1-2 Strengthen educational functions	Support for education in islands and remote areas	
		1-3 Improvement of health care services	Island-based health care improvement	
		1-4 Capacity building in the field of coast guard	Capacity building in coast guard and maritime security, including maritime law enforcement	
	2 Environment climate change	2-1 environmental conservation		Support for the formation of a recycling-oriented society on islands Conservation of the natural environment
			2-2 Climate change measures	Promotion of climate change measures

Source: Business Development Plan for the Marshall Islands

While considering these directions of Japan's cooperation, this section examines the future direction of JICA's cooperation with regard to the RMI, especially in line with the priority areas set forth in PALM 9 held in 2021, based on the current situation and issues identified through the above-mentioned information collection and analysis. However, due to the fact that the survey team was not able to travel to the RMIs and the difficulties in collecting questionnaires from the relevant organizations and conducting online interviews, it was not able to conduct sufficient analysis in some aspects of this study (IT and telecommunications, Energy, and Mining sectors).

## (2) COVID-19 Response and Recovery (PALM9 Priority Area 1)

Among the measures outlined in the first priority area of PALM 9, "COVID-19 Response and Recovery," the areas where JICA may be able to provide support include medical assistance in the area of strengthening the health and medical system, such as the development of medical facilities, provision of medical equipment, support for human resource development of health and medical personnel, and technical cooperation for countermeasures against lifestyle-related diseases. In addition, support for the promotion of tourism for the recovery of the tourism industry once the situation of the new corona has improved.

In the RMI, the initial medical care system has been established, but there is a lack of human resources to provide appropriate health and medical services, and improvements are needed in facilities, equipment and their maintenance. In particular, Majuro Hospital, which is a top referral hospital, needs to be renovated and its equipment needs to be upgraded. The Project for Improvement of the Majuro Hospital" (G/A 2003, JPY 600 million) was conducted by JICA in the past. Although the hospital has plans for further renovation, they have not been able to implement them due to lack of funds, so the need is high. In addition, the hospital is not equipped to provide advanced medical care, and there is a chronic shortage of doctors. In terms of how to ensure the health of the people, NCDs are becoming more serious due to the high consumption of imported canned and instant foods, lack of exercise, smoking, etc. Therefore, support for countermeasures including educational activities is required.

Japan's cooperation includes identifying the needs of Majuro Hospital and other core hospitals (e.g., Ebeye Hospital) for facility renovation and providing guidance to improve their maintenance and management capabilities. Another possibility is to provide ventilators, heart rate monitors, oxygen ventilators, portable X-ray equipment, etc. to enhance medical services. In addition, in order to compensate for the shortage of doctors, it would be worth considering the expansion of medical communication networks and the establishment of a system to provide telemedicine.

As for Japan's cooperation, it is possible that Japan could help Majuro Hospital and other core hospitals (e.g., Ebeye Hospital) to understand the needs for facility renovation and provide guidance to improve their maintenance and management capabilities, while also providing ventilators, heart rate monitors, oxygen ventilators, portable X-ray equipment, and other equipment to enhance medical services. In addition, in order to compensate for the shortage of doctors, it would be worth considering the expansion of medical communication networks and the establishment of a system to provide remote medical services. As for the tourism industry, air access is practically limited to the route between Guam and Hawaii, and there is no sufficient tourism infrastructure in place, so it will be difficult to achieve significant growth. However, there are some attractive diving spots that can stimulate a certain level of demand, and by improving the tourism infrastructure (electricity, water, telecommunications (fiber-optic network), etc., in addition to transportation infrastructure), it is possible to position the island as a destination for long-stay work vacations, taking advantage of the fact that it is far from major markets and inaccessible. In terms of human resource development, it is necessary to dispatch experts and volunteers in the field of marketing and promotion to support capacity building in the areas of customer service, tour guiding, customer attraction, and tourism product development. It seems possible to promote tourism development on a small scale, taking advantage of the geographic disadvantages of the RMI.

### (3) Sustainable Oceans based on the Rule of Law (PALM9 Priority Area 2)

In the area of "Sustainable Oceans based on the Rule of Law," the three pillars are maritime security and safety, marine environment, and marine resources. In the area of maritime security, JICA could

provide assistance in some areas such as maritime security, surveillance and control. The safe movement and transportation of people and cargo on domestic and international shipping routes is of high importance, and it is important to develop human resources that can cope with digitalization. In the RMI, illegal operations have not been a major problem because of the geographical distance from other countries and the fact that there are not necessarily many foreign vessels operating in the RMI's waters.

The RMI is geographically separated from other countries and there are not many foreign vessels operating in the RMI's waters. On the other hand, there is a problem of not being able to accurately record the catches by the operating vessels and not being able to sufficiently manage the resources. In particular, there are many tuna transshipments in Majuro Lagoon, but the exact transshipment volume has not been recorded, and only an estimated volume has been calculated. Therefore, there is a need for support to improve the country's capacity for fisheries management, including resource management and understanding of the actual situation of transshipment in the vast economic exclusive zone.

In the RMI, the distance from the waste disposal site to the shoreline is very close, and proper management of the waste will lead to the conservation of the coastal environment. As in Fiji and FSM, the "Promotion of Regional Initiative on Solid Waste Management in Pacific Island Countries Phase 2 (J-PRISM2)" is underway as of early 2022. Through these collaborations, efforts have been made to improve waste collection, disposal, and recycling, and it is important to continue to support efforts to reduce waste disposal and plastic waste. Since the RMI is a low-lying atoll country with a very small land area, it is important to support efforts to reduce waste, and it is desirable to support the participation of Japanese private companies with efficient processing technologies.

#### (4) Climate Change and Disaster Resilience (PALM9 Priority Area 3)

The following are the main areas where JICA can provide assistance.

Mitigation: Introduction of renewable energy and development of power grid

Adaptation: Development of disaster resilient infrastructure, support for capacity building of meteorological agencies, and support for the deployment of Japanese disaster prevention technologies to Pacific island countries.

The RMI is a lowland atoll country, and sea level rise is considered a threat to the survival of the nation. Therefore, it is necessary to improve the resilience of infrastructure against disasters. In the energy sector, the main focus will be on the introduction of renewable energies that will contribute to reducing the environmental burden and achieving the NDCs, as well as support for capacity building for this purpose. It is desirable to gradually increase the share of renewable energy by continuing to cooperate in the development of necessary infrastructure and human resource development, based on the issues identified in the "The Project for Introduction of Hybrid Power Generation System in the Pacific Island Countries" and the results of the support provided so far.



With regard to natural disasters, although the risk of cyclones is not high, it is necessary to take measures against storm surges and floods caused by heavy rains in low-lying atolls, as well as tsunamis caused by earthquakes that have occurred in other countries. In this regard, the establishment and enhancement of information provision systems for storm surges, floods, tsunamis, and evacuation, as well as the development of a communication system (capacity building and infrastructure development) in the event of a disaster on remote islands, will be considered for assistance.

(5) Strengthening Foundation for Sustainable and Resilient Economic Development (PALM9 Priority Area 4)

The Strengthening Foundation for Sustainable and Resilient Economic Development, which is the most relevant priority area of cooperation in this study, has the following pillars: quality infrastructure development, fiscal resilience, fostering of local industries and promotion of trade and investment, and peace and stability as the basis for economic development.

1) Infrastructure Development

Regarding infrastructure development, there are needs in various sectors as shown in the table below. A more detailed survey in each sector will reveal more needs, but the main needs for transportation infrastructure are aging and renovation needs due to the increase in the number and size of ships. Other than port facilities, needs for the maintenance of ports and roads in remote islands were identified, but it is important to consider cooperative measures from the perspective of what kind of maintenance is desirable in the long term, depending on actual demand and the capacity for maintenance and management. In the energy sector, the main focus will be on supporting the introduction of renewable energy and capacity building for this purpose, which will also contribute to reducing the environmental burden and achieving the NDC. It is desirable to continue to gradually increase the share of renewable energy, based on the issues identified in the "The Project for Introduction of Hybrid Power Generation System in the Pacific Island Countries" and the results of the support. As for water supply and sewage systems, it is not easy to establish water supply and sewage systems in the RMI with its small land area, but securing safe water and proper sewage treatment are urgent issues. Even after the implementation of "The Project for the Improvement of Water Reservoir at Majuro Atoll," the need for support to improve the water supply system as a whole is expected to continue to be great, both in terms of infrastructure development and capacity building support. In the field of IT and telecommunications, there were no major needs identified other than the need for support to strengthen cyber security. However, it is necessary to make better use of fiber-optic networks in Japan and to establish a stable Internet access environment with inexpensive rates, and these infrastructures are essential for tourists from overseas to stay for a long time.

Table 335 Needs for infrastructure development

Sector	Needs for infrastructure development
Airport	Airport Development in Remote Islands
Port	Development of jetties and docks in Majuro and Kwajalein
Road & Bridge	Paving of major roads in remote islands
ICT	Cyber security measures
Energy	Conversion to renewable energy (moving away from dependence on diesel fuel), capacity building for infrastructure development and maintenance
Water & Sewerage	Improvement of water contamination in water distribution pipes, water reuse and conservation, improvement of sewage treatment facilities, strategy, contract and asset management, non-revenue water improvement, support for capacity building on operation and maintenance

Source: National Strategic Plan, information provided from each sectoral authority

It has already been mentioned that there is a chronic shortage of skilled workers for infrastructure development and maintenance, and it will be essential for RMIs with small population sizes to continue to develop human resources through dispatching experts and accepting trainees. It would be realistic to support the improvement of maintenance and management capabilities not only in specific sectors, but also in different fields such as civil engineering and electrical engineering.

## 2) Economic Sector

The RMI is expected to focus on supporting the fisheries and tourism sectors mentioned above, but in addition to improving the distribution network of fish catches from remote islands to Majuro, there is a need to improve the transportation of copra from remote islands to Majuro in the agricultural sector. Although it is not realistic to provide direct support for cultivation in remote islands where access is very difficult, there is potential for promoting remote islands through the improvement of distribution networks.

## (6) People-to-People Exchanges and Human Resource Development (PALM9 Priority Area 5)

There are six pillars in the area of "People-to-People Exchanges and Human Resource Development". One of them is the continued implementation of JICA's technical cooperation, including the dispatch of volunteers and acceptance of trainees.

Regarding support for the education sector in the RMI, there is a need to improve the teaching skills of teachers at all levels, primary, secondary, and tertiary, and technical assistance is particularly needed in the areas of science and mathematics, IT, and engineering. In addition, the enrollment rate is low at the 70% level even in primary education, and drops to around 50% in secondary education. The secondary education enrollment rate is particularly low in remote islands, creating a gap with urban areas. In the RMI, where the population of each remote island is small and many islands are

scattered, it is not easy to achieve a high-speed Internet environment in all remote islands, but it is important to support distance education and digitalization, including the development of video-based curriculum, in order to provide equal educational opportunities. Another area of potential support is the development of school facilities, including in the urban areas of Majuro and Ebeye, the improvement of the Internet access environment, and the provision of vocational training to increase the possibility of employment at home and abroad.

Regarding the dispatch of volunteers, the RMI, which has a shortage of certified teachers, needs volunteer teachers for primary and secondary education, especially in science and mathematics. In the field of vocational training, volunteers could be dispatched in a variety of fields such as plumbing, electrical work, and automobile maintenance. It is also desirable to continue Japanese language education, considering the historical relationship with Japan. Other than the education sector, this survey found that support needs are particularly high in the areas of IT (including cyber security), operation and maintenance of infrastructure facilities (planning and technical guidance), waste management, health (NCD countermeasures, medical equipment), tourism promotion, and marine resource management. In addition to these areas, there are likely to be many other needs, so it would be beneficial to dispatch the necessary volunteers to provide effective support.

Participation of RMI officials in training programs in Japan and third countries is also an effective tool in these areas. In addition, Japan launched the Pacific-LEADS program for Pacific countries in 2016, accepting government officials, researchers, and others from Pacific countries as trainees in Japan. The program aims to develop human resources who can contribute to the deepening of relations with Japan as pro-Japanese and pro-intellectuals, and who possess the expertise necessary to solve development issues in the Pacific countries through education in master's programs at Japanese universities and other opportunities such as practical training. The target areas for acceptance include disaster prevention, climate change, environment, sustainable development, oceanic and maritime issues and fisheries, trade, investment and tourism, and economic policy, which are also development issues for the RMI, and it will be important to continue this kind of cooperation from a long-term perspective.