

**Ex-Post Project Evaluation 2021  
Package IV-4 (Mauritania, Morocco, Palestine)  
Evaluation Reports**

**February 2023**

**JAPAN INTERNATIONAL COOPERATION AGENCY**

**SENSHU UNIVERSITY**

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FY2021 Simplified Ex-Post Evaluation Report of Japanese Grant Aid Project

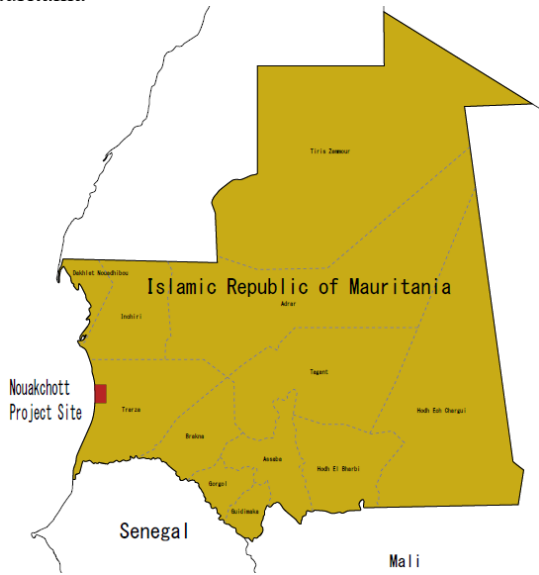
External Evaluator: Takeshi Daimon, Senshu University  
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Duration of the Study: April 2022–February 2023

Duration of the Field Study: 10 August 2022–28 August 2022

Country Name  
 Islamic Republic of  
 Mauritania

**Project for Extension and Equipment Provision for the National School of Public Health of Nouakchott**



Project Site (source: Sankakkei)

ENSSS School Building Exterior View (source: Evaluator)

**I. Project Outline**

Background	<p>In Mauritania, the mortality rate for children under 5 years of age was 90/1,000 live births and the maternal mortality rate was 320/100,000 live births (2015, WHO), both of which were lower than the Sub-Saharan African average (95/1,000 live births (2012, WHO) and 500/100,000 births (2013, WHO), respectively) but remained high. Thus, the Government of Mauritania formulated the <i>National Health Development Plan</i> (2012–2020) on the basis of the <i>Poverty Reduction Strategy Paper</i> (2011–2015) and listed the development of health human resources and the provision of health services as urgent issues.</p> <p>In addition, the <i>Strategic Plan for Health Human Resource Development</i> (2006–2015) was formulated, and specific goals were set for securing health human resources in each occupation, improving the capacity of health personnel, and increasing the ratio of health personnel allocation in each health facility. Five public health schools provided intermediate health personnel training in the country: the National School of Public Health at Nouakchott (current National School of Advanced Sciences of Health (ENSSS)), established in 1966; Kifa, established in 2009; Nema, Sélibaby, and Rosso, established in 2011. Particularly, ENSSS was the only school in the country to offer a training course for senior public health technicians and was expected to play a central role amongst the country's public health schools. However, ENSSS had not undergone full-scale expansion of its facilities since its construction in 1983 with French assistance. In 2015, the number of students enrolled at ENSSS was approximately 850, roughly 2.3 times the enrollment capacity of approximately 370, leading to the deterioration of the learning environment. In addition, public schools experienced a serious shortage of equipment and other learning materials, and courses corresponding to the curriculum could not be implemented; therefore, the educational environment must be improved by expanding ENSSS facilities and upgrading equipment.</p>			
Objectives of the Project	<p>This project aims to improve the training environment of high-quality health professionals by expanding school buildings and upgrading equipment at ENSSS, thereby contributing to the enhancement of the quality and quantity of health services in the country.</p>			
Contents of the Project	<ol style="list-style-type: none"> <li>1. Project Site: Nouakchott City (population: approximately 1 million)</li> <li>2. Japanese side: 1,182 million yen</li> <li>3. Mauritanian side: 23 million yen</li> </ol>			
Implementation Schedule	E/N Date	May 9, 2016		
	G/A Date	May 9, 2016	Completion Date	April 23, 2018 (facility construction completion and equipment delivery)
Project Cost	E/N Grant Limit / G/A Grant Limit: 1,182 million yen, Actual Grant Amount: 1,182 million yen			

Executing Agency	Human Resource Department, Ministry of Health (Supervising Agency) / National School of Public Health at Nouakchott (renamed National School of Advanced Sciences of Health (ENSSS) during the ex-post evaluation)
Contracted Agencies	Main Contractors: Iwata Chizaki Inc. and Nissei Trading Co., Ltd. Main Consultants: Koei Research and Consulting Inc. and Binko International Ltd.

## II. Result of the Evaluation

### Summary

The project was carried out to improve the training environment of high-quality health professionals by expanding school buildings and improving equipment at ENSSS, thereby contributing to the enhancement of the quality and quantity of health services in the country. The project is consistent with the Mauritanian government's *National Development Plan* and *Health Human Resources Strategic Plan*, whilst existing facilities were unable to adequately develop human resources meeting the needs of health human resources, including midwives and senior health technicians. The project is line with Japan's ODA policy, which focuses on poverty reduction in urban areas, and coordinates midwife training projects implemented by donors, such as the World Bank and France, so that they mutually contribute to the project's objectives. Therefore, the relevance and coherence are high. The effectiveness and impact of the project are high. The project has largely achieved the training environment development of high-quality health human resources and the improvement of the quality of medical services by trained health personnel, which are the expected outcome and impact by the implementation of the project. In addition, although the project period slightly exceeded the plan due to delays in domestic procedures in Mauritania, the efficiency of the project is high as the project cost was within the plan. In addition, the sustainability of the project owing to the following reasons: (1) policies and systems are generally improved despite some issues in effectiveness, (2) the organization and system are in place, (3) the technical level of the educational institution is maintained and training, manuals and so on are fully available, (4) the operation and maintenance budget is secured, and (5) the operation and maintenance of the introduced materials and equipment is generally kept in good condition.

In light of the above, this project is evaluated to be highly satisfactory.

<b>Overall Rating<sup>1</sup></b>	<b>A (Highly Satisfactory)</b>	<b>Relevance &amp; Coherence</b>	③ <sup>2</sup>	<b>Effectiveness &amp; Impacts</b>	③	<b>Efficiency</b>	③	<b>Sustainability</b>	③
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<Special Perspectives Considered in the Ex-Post Evaluation/Constraints of the Ex-post Evaluation>

Considering that the training system for medical professionals in Mauritania during the ex-post evaluation differs from that during the ex-ante evaluation, and it may be misleading to make a simple comparison of indicators at the times of ex-ante and ex-post evaluations, complementary information was used.

### 1 Relevance/Coherence

<Relevance>

- Consistency with the Development Policy of Mauritania at the Time of Ex-Ante Evaluation

The *National Health Development Plan* (2012–2020) listed eight priority areas in strengthening health systems (1. Geographical accessibility; 2. Development of health personnel; 3. Accessibility to quality medicines, vaccines and supplies, including nutritional treatment; 4. Reinvigoration of community approaches; 5. Qualitative and quantitative fiscal improvements; 6. Hospital reform; 7. Enhancement of institutional capacity; and 8. Improvement of environmental health), which included “development of health personnel.” It aimed to establish and strengthen health systems through interventions and achieve five strategic action policies (1. Reduction of maternal and neonatal mortality; 2. Reduction of infant mortality; 3. Control of major communicable diseases, including neglected tropical diseases; 4. Measures against non-communicable diseases, including traffic accidents; and 5. Enhancement of health systems to support universal access to the above four strategic action policies and essential health services.)

Furthermore, the *Strategic Plan for Health Human Resource Development* (2006–2015) aimed to 1. Secure the required number of health personnel for each job category each year; 2. Improve national training capacity in response to the quality and quantity of services; 3. Effectively and sustainably improve health human resource capacity; 4. Increase health staffing rates at each level of the health system; and 5. Establish sustainable and efficient methods for reviewing, monitoring, and evaluating strategic plans.

In light of the above, this project was consistent with Mauritania's development policy.

- Consistency with the Development Needs of Mauritania at the Time of Ex-Ante Evaluation

The health situation in Mauritania was amongst the poorest in Sub-Saharan Africa, with a mortality rate of 90/1000 live births for children under five years of age and a maternal mortality rate of 320/100,000 live births (2015, WHO). In addition, due to the country's vastness, the development of social infrastructure was lagging, and the achievement of the MDGs was in jeopardy. Under such circumstances, the number of trained health personnel was significantly lower than required, and the central institution, the National School of Public Health at Nouakchott (current ENSSS), had approximately 850 students enrolled, compared to its capacity of 370, and courses were offered to more than twice as many students as the capacity by dividing classes into morning and afternoon sessions and by staggering the periods of practical training, which made it difficult to provide adequate instruction. In addition, the school is expected to assume an important and wide-ranging pivotal role in the development of health human resources, including the training of senior health technologists, such as X-ray technicians, anesthesiologists, and clinical laboratory technicians however, it has not been able to play an adequate role due to the size of facilities.

In light of the above, this project was consistent with the development needs of creating an effective training environment for high-quality

<sup>1</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

<sup>2</sup> ④ : Very High ③: High, ②: Moderately low, ①: Low

health personnel at the times of ex-ante and ex-post evaluations.

#### <Coherence>

- Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation

*Japan's Country Assistance Policy to the Islamic Republic of Mauritania* (December 2012) set "poverty reduction in urban areas" as a priority area and intended to support infrastructure development that is directly linked to poverty reduction. This project aimed to expand public health schools in the capital city of Nouakchott, which would contribute to improving the quality and quantity of health services, and was in line with Japan's assistance policy.

In light of the above, the project objectives were consistent with Japan's ODA policy.

- Internal Coherence

This project is the only JICA assistance to Mauritania in health and medical fields, and no synergies or interconnections with other projects can be observed. Therefore, internal coherence cannot be confirmed.

- External Coherence

Spain had trained 25 teachers at ENSSS by 2012, and Italy (NGO) added three classrooms to ENSSS in 2013. The three classrooms built by the Italian NGO are part of the old school building, which is different from the school building completed by JICA. Spain's cooperation in materials and equipment (grant assistance) was also extended for the old school building; therefore, no duplication occurred.

In addition, the World Bank has implemented the Sahel Women's Empowerment Demographic Dividend (SWEDD) (2015–2024) as a budget support program to help secure the maintenance and operation costs of ENSSS. The French Development Agency (AFD) implemented the Maternal and Child Support Project (Temeyouz) (8 million euros) (2020–). More specifically, the AFD provided support to ENSSS for midwife training programs, mainly in the field of technical cooperation, and trained midwives. The AFD's support project contributed to the achievement of this project's objective (environment development for the training of high-quality health human professionals). This project is also consistent with SDG 3 (Health: Good Health and Well-Being), in particular "Sustainably Increase health financing and the recruitment, development, training and retention of the health workforce in developing countries." (Target 3c)

#### <Evaluation Result>

In light of the above, the relevance and coherence of the project are high.<sup>3</sup>

## 2 Effectiveness/Impacts<sup>4</sup>

#### <Effectiveness>

By reducing the shortage of ENSSS school building, classrooms and equipment, class hours held during normal operating hours (Monday through Friday from 8 a.m. to 4 p.m.) were expected to be secured, and more high-quality health professionals (nurses and senior health technicians) were expected to be trained. By providing medical services in the country's medical facilities, it was anticipated that these human resources would contribute to an increase in the quality and quantity of health services in Mauritania.

The logic is as follows: The expansion of school buildings and the improvement of equipment resolves the shortage of school buildings, classrooms, and equipment (output), and the development of high-quality health professionals (outcome) is achieved through the improvement of learning effectiveness and the provision of learning opportunities. Then, through the engagement of these professionals in medical services at medical facilities nationwide, they contribute to the improvement of the quality and quantity of health care services (impact).

Each aspect is examined below.

Firstly, as quantitative effect indicators regarding effectiveness, indicators based on the number of students and class hours secured through the expansion of ENSSS facilities were set. Of these, "hours of training per student in the Nurse Course during ENSSS normal operating hours" and "hours of training per student in the Senior Health Technician Course during ENSSS normal operating hours" (Indicators 2 and 4) were achieved or generally achieved. Due to its upgrade to a university status, ENSSS discontinued accepting applications for the Medical Social Nurse Course, which does not require applicants to have a high school graduate certificate (BAC) for admission (indicator 3) (FY2018-), and COVID-19 since 2020 has made it impossible to implement training programs (midwives and nurses) that require face-to-face classes at full capacity, the most recent total number of enrolled students (indicator 1) was treated as a reference value.

More concretely, for the Nurse Course, 2,145 hours were actually achieved at the time of the ex-post evaluation against the planned 1,956 hours, whereas for the Senior Public Health Technician Course, 1,350 hours were actually achieved at the time of the ex-post evaluation against the planned 1,463 hours, which means that the target was not achieved. Nonetheless, no substantial problems were observed because it was 0 hours before the implementation of the project and insufficient hours were covered by supplementary lectures and training outside normal operating hours. Thus, by reducing the shortage of ENSSS school building, classrooms, and equipment, intended class hours are secured, and senior health technicians, who were previously trained only irregularly (outside normal operating hours) due to classroom shortages, are now trained every year, which contribute to the stable supply of senior health technicians. In addition to this school, four other schools (vocational training schools) train nurses and midwives in Mauritania, namely, Kifa, Rosso, Sélibaby, and Nema; however, due to shortages of facilities, equipment, and human resources, senior health technician training courses are not provided.

The implementation of this project triggered a growing momentum for this school to assume a role as a higher education professional institution that provides more advanced nursing and health skills and knowledge in addition to the conventional development of health professionals, and in 2018 it was decided to upgrade the school to a university. With this upgrade, the admission requirements have become stricter, i.e. a high school graduate certificate (BAC) is now a prerequisite for admission, which now allows the school to admit and train

<sup>3</sup> Relevance: ③, Coherence: ③.

<sup>4</sup> When providing the sub-rating, Effectiveness and Impacts are to be considered together.

more qualified students. During the ex-post evaluation, the curriculum proposed by the World Health Organization (WHO) as a model curriculum (expansion of the overall number of years of education, including the clinical period) was being introduced as planned.

Through these improvements, this project can be said to have contributed to the ‘development of high-quality health human resources’.

#### <Impacts>

##### ▪ Intended Impacts

The impact envisaged at the time of planning was "improvement of the quality of health services by trained health personnel."

As shown in the following enrollment figures, approximately 500 midwives, nurses, and senior health technicians are trained every year and are assigned to hospitals nationwide to provide medical services to meet the medical needs of the time. Especially in 2020–2021, many medical professionals were in demand due to the outbreak of COVID-19, and many ENSSS graduates also engaged in related services.

	2014	2015	2016	2017	2018	2019	2020	2021
Midwives	156	152	120	118	112	259	218	110
Nurses	217	183	143	62	113	159	269	210
Medical social nurses	405	419	214	189	478	289	0	0
Senior health technicians	81	0	0	137	134	127	74	168
Total	859	754	477	506	837	954	561	488

To grasp the qualitative impact, the evaluators conducted interviews with approximately 20 ENSSS graduates, interns, and their colleagues at the National Central Hospital and the Obstetrics and Gynecology Hospital (Nouakchott). ENSSS graduates were generally well received, and interviews showed that ENSSS was highly evaluated especially in areas that ENSSS emphasized as its activities and where additional support was available from other donors, such as the development of midwives and nurses. However, for senior health technicians who must respond to the rapid development of medical technology, some opinions emerged that clinical education (National Central Hospital) was essential to learn how to use the equipment because ENSSS lacks the latest equipment in some fields (for example, anatomy). In addition, it was pointed out that the disparity between hospitals that have equipment and those that do not is a problem because it is directly linked to regional disparities in medical services.

As described above, it can be said that the trained health professionals have made a particular contribution to filling in the demand for health human resources in Mauritania overall. Meanwhile, the quality of health and medical services is contingent on the availability of medical equipment and cannot be determined solely by the number of health care professionals. Consequently, the impact of this project cannot be adequately assessed under the current circumstances.

##### ▪ Other Positive and Negative Impacts

Regarding environmental and social considerations, this project is classified as Category C under the *JICA Guidelines for Environmental and Social Considerations* (2010). This project involved the extension of a school building within the existing premises, and no environmental impact was observed during or after the construction period, including soil contamination, noise, and vibration. Similarly, no land acquisition or relocation of residents took place. However, given that the school building was not surrounded by a wall, people other than students or school personnel could enter freely, posing security concerns.

#### <Evaluation Result>

This project has generally achieved the intended outcome and impacts as planned, generating expected effects as planned. The project has created almost no negative impact in the long run in social, environmental and economic aspects. Therefore, the effectiveness and impacts of the project are high.

#### Quantitative Effects

Indicators	Baseline FY2013 Baseline Year	Target FY2020 3 Years after Completion	Actual FY2018 Completion Year	Actual FY2019 1 Years after Completion	Actual FY2020 2 Years after Completion	Actual FY2021 3 Years after Completion
Indicator 1 Total number of enrolled students (persons/ENSSS)	861	1223	837	954	561	488
Indicator 2 Hours of training per student in the Nurse Course during ENSSS normal operating hours (Note 1) (hours)	1564	1956	NA	NA	NA	2145
Indicator 3 Hours of training per student in the Medical Social Nurse Course during ENSSS normal operating hours (Note 1) (hours)	963	1376	abolished	abolished	abolished	abolished
Indicator 4 Hours of training per student in the Senior Health Technician Course during ENSSS normal operating hours (Note 1) (hours)	0	1463	NA	NA	NA	1350

Source: Baseline values and target values are from ex-ante and ex-post evaluation tables, and actual values are from answers to questionnaires.

Note 1: Regular operating hours refer to ENSSS's normal opening hours of 8 a.m. to 4 p.m. Monday through Friday. At the time of planning, due to the lack of practical training rooms, many practical training sessions were held outside normal operating hours and on Saturdays and Sundays, causing problems, such as low student attendance.

Note 2: In the plan for this project, FY2020 (September 2020 through August 2021), which is three years after the project completion, was the target year, but due to the delay of nearly half a year in the project completion, FY2021 (September 2021 through August 2022) is three years after the project completion.

### 3 Efficiency

The output of this project was generally in line with the plan (as described in the Contents of the Project of "I. Project Outline"). Although there were minor changes in the layout of the facility, none of the changes would affect the project effect.

The total project cost was planned to be 1,205 million yen (1,182 million yen for the Japanese side and 23 million yen for the Mauritanian side). Of this, the actual amount of cooperation by the Japanese side was 1,132 million yen compared to the planned amount of 1,182 million yen (96% of the plan), which was almost as planned. The actual amount of the cost borne by the Mauritanian side was 23 million yen compared to the planned 23 million yen.

The actual project period was 24 months (109% of the plan) compared to the planned 22 months, exceeding the plan. The start of the project was delayed by about seven months from the plan due to delays in domestic procedures in Mauritania, including obtaining construction permits, so the completion date was delayed by about six months from the original plan and was completed at the end of April 2018.

<Evaluation Result> Although the project cost was within the plan, the project period exceeded the plan. Therefore, the efficiency of the project is high.

### 4 Sustainability

#### • Policy and System

In the wake of COVID-19, the Mauritanian government continues to maintain its political commitment to "substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries." (Target 3c of SDG 3). Therefore, the aid effect generated is expected to be maintained.

In addition, with the upgrade of ENSSS to a university (implemented from FY2018) and the establishment of bachelor's, master's, and doctoral programs (scheduled to be implemented from FY2022), both the Ministry of Health and the Ministry of Higher Education will become supervising agencies. However, securing faculty personnel commensurate with the shift to higher education and further expanding utilization of information technology for advanced facilities and management remain challenges. For example, student enrollment management is not computerized, the reliability of data on student enrollment and graduation remains low, and efficient organizational management is not available.

From the above, it can be said that policies and systems are generally in place, although there are issues in terms of effectiveness.

#### • Institutional/Organizational Aspect

The school has an administrative structure led by the President and the director of the administrative and financial department, and the staff and managers in charge of the Academic Affairs Department, Continuing Education Department, Accounting Department and so on maintain the operation throughout the semester. The number of people assigned has not changed from the time of notice of project completion (2018) and is as follows (number of people in parentheses).

President (one), administrative managers (six), research director (one), librarians (two), academic affairs (one), intern (four), introductory education (two), continuing education (three, of which one director), administrative and finance director (one) administrative staff (five); facility maintenance (one); accounting (two); planning (one), external affairs (one), evaluation (one), other (kitchen, cleaning, security and so on; 34); a total of 66 (full time). As part-time lecturers, 60 doctors and nurses from the National Central Hospital are in charge of classes.

At present, it can be said that the organization and system are secured, but to upgrade to a university and introduce bachelor's, master's, and doctoral programs in earnest, the school must have full-time faculty members (professors, associate professors and so on) who teach courses. However, the current system is inadequate, which is a pressing issue that must be addressed in the future.

#### • Technical Aspect

Midwife education is maintained with technical assistance from France (AFD). Training, manuals and so on are also available. Therefore, although the technical level is maintained, continuous technical support from outside is effective in maintaining the technical level, and implementing Training of Trainers (TOT) through JICA's technical cooperation projects may also be effective.

#### • Financial Aspect

Budget for operation and maintenance is secured, whilst the World Bank's budget support (through SWEDD) supplements the budget. In addition to expenses related to the operation and management of the building and facilities, given the nature of educational facilities, personnel expenses for teachers and for holding seminars are also budgeted and disbursed. Budget was also secured for operation.

(Unit: Million MRO)

	2019	2020	2021
Budget (after adjustment)	40.9	34.8	34.9
Operating expenses	32.9	34.0	34.9
Of which: Facility maintenance	2.2	0.7	1.0

Source: ENSSS

Note: Facility maintenance costs include only expenses related to the operation and maintenance of the building and facilities.

- Social and Environmental Aspect

No negative impact was expected at the time of planning, and there was actually no negative impact.

- Preventative Measures to Risks

Given that Spain was to extend assistance for the construction of school buildings, some concerns about the overlap with this project emerged; nonetheless, Spanish aid was extended to support for the old school building and did not overlap with JICA's assistance for the new school building.

- Current Status of Operation and Maintenance

The operation and maintenance condition of materials and equipment is generally good. The school building is regularly cleaned and maintained, and all classrooms and storage rooms are properly maintained. In addition, laboratory equipment, such as mannequins and audiovisual equipment for classes, is well maintained, and there is no particular hindrance to daily educational activities.

However, minor maintenance and repair needs were recognized, such as the broken electric lights in the classrooms and some peeling paint in the school building.

<Evaluation Result>

In light of the above, the sustainability of the project effects is high.

### III. Recommendations & Lessons Learned

- Recommendations to Executing Agency

Student enrollment is managed only on the basis of a handwritten roster, making it difficult to count the number of students accurately. Therefore, by the start of the new semester of the 2023 academic year (October 2023), the ENSSS headquarters (IT staff) must prepare ENSSS computer servers, streamline and visualize the curriculum, and introduce IT systems for student management (enrollment, grades and so on).

In addition, the construction passage (West gate) used for the building construction with Chinese assistance is used as it is as a regular entrance to the school. Considering that there is no security check, there are concerns about safety because it is a structure that allows people to freely enter directly from the downtown area. The building funded by Chinese assistance was not part of the initial plan, and the entrance and gate of ENSSS are located on the side of the old school building. At present, only the old school building is surrounded by a wall, whereas the building constructed in this project is not surrounded by a wall. All of the buildings supported by Chinese assistance are surrounded by barbed wire fences. For this reason, by the start of the new semester of the 2023 academic year (October 2023), the ENSSS headquarters or the Ministry of Health, which is the supervising agency, must take measures, such as installing gates on the roadside or constructing fences around the new school building (built under this project).

- Recommendations to JICA

As part of the upgrade to a higher education institution (university), effective in FY2018, bachelor's, master's, and doctoral programs are scheduled to be introduced from FY2022; however, currently, no researcher can supervise research as full-time faculty staff, and medical doctors sent from the central hospital are in charge of lectures as part timers. There is also a shortage of medical equipment (such as precision equipment) for conducting research. In addition, the previously mentioned introduction of IT for organizational management is not implemented in a timely manner. As described above, ENSSS lacks the management capacity to operate as a university organization, such as securing human resources, especially researchers who play a central role in university education, establishing a new researcher training curriculum, and expanding the use of IT, including student management. Thus, as medium- to long-term measures, these problems must be addressed by conducting a needs survey and implementing JICA's cooperation in improving the university's operational management capacity (conducting surveys to identify issues related to university management, dispatching long-term experts on organizational management, finance, IT dissemination and so on, training in Japan and third countries, implementation of TOT and so on). Such assistance can contribute to the achievement of the project goals, higher goals, impact, and sustainability envisioned in this project, and synergy with this project is also expected.

- Lessons Learned

From 2020 to 2022, although there were strict border restrictions due to COVID-19, it is commendable that JICA visited the site multiple times. Given that project supervision and coordination between donors can be weak in countries with no JICA representative office, which is unavoidable during border restrictions, JICA's participation must be further increased through business trips or remotely. Currently, intentions of the Japanese are not always effectively communicated. For example, cases where a Chinese-assisted building was constructed on the ENSSS school site without prior consultation with the Japanese side and where other donors have had the impression that "Japan's face cannot be seen" (interview with the AFD). The reason is because although Japanese delegation sometimes participates as an observer at local donor meetings, Japan rarely expresses its policies and directions on the basis of its field experience as a donor other than its official views expressed in official documents (or draft policies) (and only few staff members can hold professional conversations in English and French on an equal footing with Western donors.).

China also dispatched doctors and nurses to the National Central Hospital and provided medical equipment (fundus examination machines and other Japan-made precision equipment). Subsequently, there was confusion at the National Central Hospital, as some individuals expressed gratitude to the Japanese side (the ex-post evaluation team) despite the fact that China had provided the assistance. This can be interpreted as a sign of appreciation for Japan's aid in general, but it can also be interpreted as evidence that the purpose of Japanese aid has not been communicated to the Mauritanian side.



China is in the process of constructing a new ward for the National Central Hospital, and given that it is recognized as a major donor by the Mauritanian side, some problems could have been avoided (i.e. concerns about the opening and abandonment of a construction vehicle passage for the construction of a building on the site by China and the deterioration of campus security due to the influx of people directly into the ENSSS campus from the downtown area) if information on Chinese aid had been collected officially and unofficially through diplomatic and private channels, and communication and information sharing with major donors, such as AFD, had been conducted even remotely. Considering that China is a non-OECD member country, information on Chinese aid is rarely disclosed. Consequently, Western donors and JICA struggle to establish a direct relationship with China. Meanwhile, Chinese assistance and investment in hospitals and medical care in Mauritania have grown to a scale that cannot be ignored and has a significant presence. Thus, Japan should develop new information-gathering routes, such as multifaceted information gathering through diplomacy and private channels.

In the future, when JICA formulates and implements projects in countries where it does not have an office, multifaceted information-gathering routes, including diplomatic and private channels, must be developed in addition to the conventional co-operation and information gathering amongst donors, by utilizing business trip and online communication.

#### **IV. Non-Score Criteria**

- Performance

In response to the COVID-19 crisis, ENSSS graduates worked as PCR test technicians or nurses at the National Central Hospital.

During the field survey (August 2022), four or five laboratory technicians, all from ENSSS, were on duty, and when PCR testing was a requirement for entry into and departure from Mauritania (until around March 2022), more than 10 laboratory technicians worked full time, many of whom are from ENSSS (including interns). As part of their education at ENSSS, interns were required to work in a hospital, and the hospital was so busy that it had to rely on its interns to complete tasks.

- Additionality

This project's facility expansion raised public awareness regarding the development of medical human resources, upgraded the vocational training school to a higher education institution, and bolstered the training program for medical professionals. As the quality of enrolled students tends to be higher now because they can no longer be admitted without a BAC (high school graduation certificate), the development of bachelor's, master's, and doctoral programs, as well as the securing of human resources and the strengthening of the curriculum, will be implemented for students entering in 2022 and beyond. However, comprehending the results of these efforts will take more time.



ENSSS School Building (Center) (source: Evaluator)



School Inauguration Memorial Plaque (School Entrance) (source: Evaluator)



Midwife Training Course (source: ENSSS)



Nurse Training Course (source: ENSSS)

FY2021 Simplified Ex-Post Evaluation Report of Japanese Grant Aid Project

External Evaluator: Takeshi Daimon, Senshu University

Duration of the Study: April 2022–February 2023

Duration of the Field Study: 28 August 2022–10 September 2022

Country Name  
Morocco

**The Project for Construction of Shellfish Aquaculture Technology Research Center**



Panoramic view of the project facility (source: Evaluator)

Mussels farmed in this project (source: Evaluator)

**I. Project Outline**

<p>Background</p>	<p>In 2009, the Moroccan government formulated a fisheries strategy (Plan Halieutis) with the aim of developing the fishery sector and ensure the stability of fishery resources. The plan positions aquaculture as one of the drivers of growth in the seafood sector and sets an ultimate policy target of 200,000 tons of aquaculture production, including fish (shellfish estimated at 110,000 tons), by 2020. To achieve this goal, the government has established the Aquaculture Promotion Organization (ANDA) and encouraged private companies to enter the aquaculture industry. However, along with the difficulty in collecting natural seedlings for shellfish aquaculture, aquaculture technology, including the production of artificial seedlings, remains underdeveloped, and only a few private companies import and cultivate oyster seedlings from overseas.</p>							
<p>Project Objectives</p>	<p>This project aims to improve the research and development capabilities of the National Institute of Fisheries (INRH) in aquaculture technology, including seedling production, by constructing an aquaculture technology research center for shellfish and equipping it with the necessary equipment for aquaculture technology research on the coast of Amsa Bay, Tetouan Province, thereby contributing to the establishment of shellfish aquaculture technology, including seedling production in the country.</p>							
<p>Project Contents</p>	<ol style="list-style-type: none"> <li>1. Project Site: Amsa Bay coast, Tetouan Province, Tangier Tetouan District (population: 2.47 million)</li> <li>2. Japanese side: 1.2 billion yen 1) Contents of civil engineering work, procurement equipment and so on, Facilities: Administration Building (567 m<sup>2</sup>), Breeding and Research Building (951.50 m<sup>2</sup>), Elevated Water Tank Tower (78.50 m<sup>2</sup>), Electrical Room Building (64.68 m<sup>2</sup>), Seawater Intake Facility (Intake Pipe Distance 372 m), Other Facilities (69.79 m<sup>2</sup>), Equipment: Breeding research equipment (44 items, including breeding tanks and so on), marine aquaculture testing equipment (60 items, including lantern nets, current meters and so on), experimental research equipment (64 items, including microscopes, spectrophotometers, and so on), feed culture equipment (122 items) and so on. 2) Contents of Consulting Services/Capacity Building Program (Soft Component) Detailed design, bidding assistance, construction supervision, guidance on epidemic prevention and hygiene management in the facility for researchers and so on, guidance on phytoplankton storage, cultivation, and proliferation.</li> <li>3. Moroccan side: 0.03 billion yen</li> </ol>							
<p>Implementation Schedule</p>	<table border="0"> <tr> <td>E/N Date</td> <td>June 16, 2016</td> <td rowspan="2">Completion Date</td> <td>November 25, 2018</td> </tr> <tr> <td>G/A Date</td> <td>June 16, 2016</td> <td>(completion of facility construction and equipment delivery)</td> </tr> </table>	E/N Date	June 16, 2016	Completion Date	November 25, 2018	G/A Date	June 16, 2016	(completion of facility construction and equipment delivery)
E/N Date	June 16, 2016	Completion Date	November 25, 2018					
G/A Date	June 16, 2016		(completion of facility construction and equipment delivery)					
<p>Project Cost Executing Agency</p>	<p>E/N Grant Limit / G/A Grant Limit: 1.2 billion yen, Institut National de Recherche Halieutique (INRH) Main Contractor: Iwata Chizaki Inc.</p>							
<p>Contracted Agencies</p>	<p>Main Consultant: OAFIC Co. Ltd.</p>							

## II. Result of the Evaluation

### Summary

This project was carried out to improve the research and development capabilities of the National Institute of Fisheries (INRH) in aquaculture technology, including seedling production, by constructing an aquaculture technology research center for shellfish and equipping it with the necessary equipment for aquaculture technology research on the coast of Amsa Bay, Tetouan Province, thereby contributing to the establishment of shellfish aquaculture technology, including seedling production in the country.

The relevance and coherence of this project are high. The project is consistent with the Moroccan government's *Fisheries Strategy (2010–2020)* and with the needs of shellfish farming. Furthermore, the project is also consistent with the agriculture and fisheries industries that are emphasized in the *Japan's Country Assistance Policy for the Kingdom of Morocco (May, 2012)*. It complements Japan's existing fishery assistance to the INRH, the executing agency, and is consistent with the SDGs (Goal 14). In addition, although aquaculture technology has not yet been commercialized and marketed, this project has improved the research and development capabilities of shellfish aquaculture technology, increased the interest of aquaculture researchers in the INRH and shellfish aquaculture, and contributed to research and education on aquaculture. The implementation of this project has not caused any particular environmental issues. Therefore, the project's effectiveness and impacts are high. However, although the project cost was within the plan, the project period exceeded the plan due to the time required for domestic procedures on the Moroccan side. Therefore, the efficiency of the project is moderately low. No issues were identified in the policy/system, institutional/organizational, and financial aspects. However, some minor issues were observed in the current operation and maintenance, which are not expected to be improved/resolved. Therefore, sustainability of the project effects is moderately low.

In light of the above, this project is evaluated to be satisfactory.

<b>Overall Rating<sup>1</sup></b>	<b>B (Satisfactory)</b>	<b>Relevance &amp; Coherence</b>	③ <sup>2</sup>	<b>Effectiveness &amp; Impacts</b>	③	<b>Efficiency</b>	②	<b>Sustainability</b>	②
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<Special Perspectives Considered in the Ex-Post Evaluation/Constraints of the Ex-post Evaluation>

The target value is set for FY2022, six years after the project completion (assumed to be completed in 2016), but the actual project completion (2018) is roughly two years later than the assumed year and during the ex-post evaluation, the ex-post evaluation takes place less than four years after the project completion. Although the evaluation will be conducted before six years have passed since the project's completion as originally envisioned, the initial target indicators will be used because no special adjustments are necessary in the target indicators related to effectiveness (cumulative number of established shellfish farming technologies (papers and research reports)).

### 1 Relevance/Coherence

<Relevance>

- Consistency with the Development Policy of Morocco at the Time of Ex-Ante Evaluation

The *Fisheries Strategy (2010–2020)* suggests the production and distribution of seedlings, development and dissemination of aquaculture technology, and development of legal systems on the aquaculture industry. This project is expected to significantly contribute to the technical aspects of 'production and distribution of seedlings' and 'development and dissemination of aquaculture technology.' This project was consistent with Morocco's development policy.

- Consistency with the Development Needs of Morocco at the Time of Ex-Ante Evaluation

In Morocco, the promotion of offshore fisheries and the development of fisheries infrastructure since the 1970s substantially developed the country's fisheries industry; however, the country's catch has plateaued since the 1990s. Consequently, the aquaculture industry has been positioned as a driver of growth in the fisheries sector. Regarding fish, although sea bass farming was successful, domestic procurement of oysters, clams, and other natural juvenile shellfish was difficult for shellfish cultivation. The production technology for artificial seedlings for mussels was not developed, particularly, all oyster seedlings were imported from foreign countries, such as France. Regarding imported seedlings, the occurrence of diseases and the stable supply have become issues that have hindered the development of shellfish cultivation. Thus, the Moroccan government had to ensure a stable supply of artificial seedlings of shellfish (especially bivalves). In light of the above, the purpose of this project was consistent with the development needs.

- Appropriateness of Project Design/Approach\*

Since the importance of detailed planning design according to the needs of users was pointed out from the post-evaluation of similar projects in the past, it was confirmed that JICA experts actually provided appropriate advice on the preparation of this project, such as conducting preparatory surveys and coordinating with the INRH (INRH expressed its gratitude for this). Thus, it was determined that the business plan was appropriate.

<Coherence>

- Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation

*Japan's Country Assistance Policy to the Kingdom of Morocco (May 2012)* places agriculture and fishery development issues under the priority area of 'strengthening economic competitiveness and sustainable economic growth.' In addition, the *JICA Country Analytical Paper of the Kingdom of Morocco* identifies the 'stability and high added value in the agricultural and fisheries industries' as a priority issue, and this project was in line with the assistance policies of Japan and JICA. In light of the above, the project objectives were consistent with Japan's development cooperation policy.

<sup>1</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

<sup>2</sup> ④ : Very High ③: High, ②: Moderately low, ①: Low

- Internal Coherence

Although no direct relationship was found between past projects in the fisheries and aquaculture sectors, such as the JICA grant aid "The Project for Construction of the Central Research Institute of the National Institute of Fisheries (2007-2009)," there was indirect cooperation, such as exchanges of opinions with the INRH between "Fisheries Industry Promotion Experts" and "Aquaculture Promotion Experts." It can be said that these past projects are consistent in the sense that they are contributing to raising the level of research with a view to demonstration and commercialization in the fisheries sector.

- External Coherence

This project received no intervention (assistance) from other donors. Nonetheless, the Ministry of Fisheries, the INRH's supervisory body, is primarily responsible for donor coordination, preventing an overlap in fishery sector projects funded by other donors. Furthermore, shellfish aquaculture research conducted by this project is consistent with the SDGs (Goal 14: Life below water) because it prevents mussel overfishing in the Mediterranean Sea and contributes to marine ecosystem preservation.

<Evaluation Result>

In light of the above, the relevance and coherence of the project are high.<sup>3</sup>

## 2 Effectiveness/Impacts<sup>4</sup>

<Effectiveness>

As quantitative indicators, this project listed the "(1) cumulative number of established shellfish aquaculture technologies (papers and research reports), (2) cumulative number of commissioned research projects on shellfish cultivation, (3) cumulative number of species studied in shellfish aquaculture, and (4) cumulative annual number of days of facility use related to intermediate breeding" and "growing interest in the INRH and shellfish aquaculture in aquaculture industry circle" as a qualitative indicator.

The field survey revealed that the number of papers was 21 (bulletins and domestic journals) and three (international journals) (at the time of ex-post evaluation, the same hereinafter) against the target value of 10 (six years after the project completion). There were two commissioned studies against four goals. Three species were studied against four targets. The cumulative annual number of days of facility use related to intermediate breeding was roughly 100 days compared to the target of 120 days. Resultantly, the effect indicators were largely achieved, and academic contributions were obtained through joint research with Tetouan University and the acceptance of graduate students. Considering that the project has not yet reached six years of completion during the ex-post evaluation, it is judged that the project is expected to achieve its target if the achievement rate is between 60%–70%, as it is four years after completion (4/6 years ≈ approx. 67%) as of 2022.

In addition, the executives of the Amsa Fisheries Union (union president and former union president) and M'diq Fisheries Union (deputy union president and secretary general) (four people in total, all men) expressed the opinion that the establishment of this project increased interest in the INRH and shellfish farming. Moreover, interviews with eight professors of the Faculty of Biology at Tetouan University, which have exchange with the project, showed that graduate students were conducting research and interning in this project, and an average of four master's theses are written jointly with the INRH per year, and that of during the ex-post evaluation, the interns (two master's students, all women) have acquired aquaculture techniques and research knowledge from watering and caring for seedlings. It was confirmed that there was a growing academic interest in shellfish cultivation. The soft components were generally highly evaluated by the participants (INRH staff), but there was an opinion that continuous support was necessary for the accumulation of organizational knowledge and the realization of effects

<Impacts>

- Intended Impacts

The impact envisaged during the planning was "to contribute to the establishment of shellfish farming technology, including seedling production in Morocco." More than 200 fish farms were established as a result of INRH initiatives, and attempts are being made to commercialize INRH research results. It was temporarily suspended due to the influence of the economic lockdown (2020–2021) caused by COVID-19. Nonetheless, it is expected to materialize in the future. Field surveys have also shown that attempts have been made to commercialize mussels, such as culturing mussels at fish farms near the INRH. In addition, by accepting interns primarily from Tetouan University (an average of four interns per year), the INRH has become a human resource development center in the field of marine biology.

- Other Positive and Negative Impacts

In terms of environmental and social considerations, this project is classified as Category B under the *Japan International Cooperation Agency Environmental and Social Consideration Guidelines* (promulgated in April 2010). Since the INRH leased public marine land owned by the (then) Ministry of Equipment, Transport, Logistics, and Water, there was no land acquisition or relocation. The Environmental Impact Assessment (EIA) report was approved in 2016. No problem was identified with the scenery because the facilities are unified in white and light blue to match the surrounding landscape. In addition, based on the current situation survey (including a diving survey), it was confirmed that appropriate monitoring measures were taken for air quality, water quality, and noise during construction, and for water quality after the facility went into operation (one year). Although quantitative water quality surveys were not conducted by INRH at the time of ex-post evaluation, no particular problems were reported in terms of noise, vibration, and odor as a result of the current situation survey and interviews with nearby residents during the ex-post evaluation; thus, no significant environmental and social impacts were observed. No negative impact on gender and other issues was found, and more than half of the researchers at the Shellfish Research Institute were women.

<sup>3</sup> Relevance: ③, Coherence:②

<sup>4</sup> When providing the sub-rating, Effectiveness and Impacts are to be considered together.

### <Evaluation Result>

This project has improved the research and development capabilities of shellfish aquaculture technology, increased interest of aquaculture researchers INRH and shellfish aquaculture, and contributed to research and education on aquaculture although aquaculture technology has not yet been commercialized and marketed. No particular problems have been confirmed in the surrounding environment due to the implementation of this project. Therefore, the effectiveness and impacts of the project are high.

### Quantitative Effects

Indicators	Baseline 2014 Baseline Year	Target 2022 6 Years after Completion	Actual 2019 1 Year after Completion	Actual 2020 2 Years after Completion	Actual 2021 3 Years after Completion	Actual 2022 3 Years after Completion
Indicator 1 Cumulative number of established shellfish aquaculture technologies (papers and research reports)	0	10	0	NA	NA	24
Indicator 2 Cumulative number of commissioned research projects on shellfish aquaculture	0	4	0	NA	NA	2
Indicator 3 Cumulative number of species studied in shellfish aquaculture	0	3	0	NA	NA	3
Indicator 4 Cumulative annual number of days of facility use related to intermediate breeding	0	120	0	NA	NA	100

Source: Baseline values and target values are from pre- and post-evaluation tables, and actual values are answers to questionnaires.

Note: In 2020–2021, normal business operations were suspended due to lockdowns caused by COVID-19; hence, no effect indicators were obtained.

### 3 Efficiency

The output of this project was generally in line with the plan (as described in the Contents of the Project of "I. Project Overview").

Although minor changes were made in the layout of the facility, none of the changes would affect the project effect.

The total project cost was planned to be 1,230 million yen (1,200 million yen for the Japanese side and 30 million yen for the Moroccan side). Of this, the actual amount of cooperation by the Japanese side was 1,183 million yen compared to the planned amount of 1,200 million yen (99% of the plan), which was almost as planned. Morocco's actual expenses were 30 million yen compared to the planned 30 million yen.

The actual project period was 41 months (178% of the plan) compared to the planned 23 months, exceeding the plan. It took time from the consulting contract in July 2015 to the bidding in February 2017 for construction permits and other procedures on the Moroccan side, but the construction was completed in July 2018. The soft component of the project took slightly longer than originally planned as it was implemented over a two-month period starting in September due to vacation in August, but there was no impact on efficiency.

<Evaluation Result> Although the project cost was within the plan, the project period exceeded the plan. Therefore, the efficiency of the project is moderately low.

### 4 Sustainability

#### • Policy and System

No problems were found in terms of policy and system. The INRH has three levels of organization: headquarters (Casablanca), regional centers or specialized centers (Nador, Tangier, M'diq and so on.), and stations, laboratories and research support service (Amsa and so on). Of the functions of the INRH headquarters, budget execution is delegated to the M'diq Specialized Center. However, decisions on the budget exceeding 300 million MAD are referred to INRH headquarters. Day-to-day operations have been delegated to the M'diq Specialized Center.

In addition, the Ministry of Fisheries, which is the supervisory body of INRH, continues to place importance on the development, dissemination, and commercialization of shellfish aquaculture technology, and it is highly likely that the effects of this project will continue.

#### • Institutional/Organizational Aspect

No problems were found in terms of institutional/organizational aspect. The center consists of one director, four researchers, one office manager, one electrician, one secretary, one staff member in charge of general affairs, one treasurer, one driver, five security guards, and four cleaners. In addition, engineers from M'diq's research center are also available to support INRH in Amsa as needed. Although there are some changes in the number of employees from the original plan, there is no hindrance to the operation of the organization. In addition, academic exchanges are conducted on a daily basis, with graduate students from Tetouan University choosing INRH (Amsa) as their internship site and INRH researchers serving as thesis advisors.

#### • Technical Aspect

The operational techniques are well established, and operation manuals are also maintained. In addition, efforts are being made to educate

staff by conducting on-the-job training. In this way, operational techniques are well equipped, but maintenance and repair techniques (programming skills required for system maintenance) are not fully developed in some areas. It has also been pointed out that the Japanese side (manufacturer) cannot respond quickly to failures that occur outside the warranty period because there is no distributor in Morocco.

▪ Financial Aspect

No special problems were identified. Although INRH is an independent administrative agency, it is currently operated with government subsidies (roughly 170–180 million MAD per year). The Independent Accounting Division also sells research results but earns only a small amount of profit. Meanwhile, the INRH M'diq Specialized Center has secured sufficient funds to conduct research, inclusive of maintenance, repair, and utility expenses, within its budget. Budgets for academic and basic research fields are also a concern in Morocco, but the INRH is actively applying for funds for externally commissioned research and scientific research to secure funds and maintain the level of research.

Operating expenses for this project (under the jurisdiction of the M'diq Specialized Center)

Unit: Million MAD

	2019	2020	2021
Operating expenses	1. 401	1. 609	1. 368
Of which: Utility bills	0.511	0.350	0.350
Of which: Facility maintenance and repair costs	0.502	0.670	0.670
INRH Budget (overall)	n.a.	170.5	182.5

Source: INRH, Moroccan Ministry of Finance

Note: Labor costs are not included.

▪ Environmental and Social Aspect

No environmental or landscape problems have occurred.

As described in the Impact section, no special agreement with JICA has been made to conduct a water quality survey during the operation of this project after one year of provision, and thus no survey has been conducted.

▪ Preventative Measures to Risks

To date, there have been no outbreaks of potentially hazardous shellfish diseases. Even if such a situation were to occur, the problem can be solved by cooperating with neighboring fisheries associations (Amsa and M'diq) and procuring seeds from centers nationwide where INRH has research stations.

▪ Current Status of Operation and Maintenance

Some issues remain. The rationale for this is as follows.

(1) Seawater filtration pump malfunction: Due to "dry operation" that occurred during normal operation, the pump was not operating normally when there was no seawater, so the filtration pump was replaced in November 2020.<sup>5</sup> At the time of the ex-post evaluation, the automatic operation function is malfunctioning, so the pump must be manually operated and stopped. Consequently, personnel who would not be required if the automatic control function were functioning must be assigned for a period of time to check the operation status. This problem was not reported during the defect inspection (2019), because the problem was not yet detected. In addition, JICA conducted a field survey (monitoring) in February 2022, but no issues were pointed out at that time. To accurately grasp the situation, prompt confirmation of the facts and technical scrutiny are crucial.

The impact on facility operations is severe, and repairs are required immediately. The reason is because a stable supply of high-quality seawater must be secure for the research activities of shellfish cultivation, and its failure can disrupt the center's operation. Due to the current issue, when the water level in the filtration system is extremely low, the function that can be switched on and off automatically cannot be used, and personnel must be assigned to manually switch it on and off. The average seawater intake time is approximately 3 hours, during which the motor's operational status must be inspected.<sup>6</sup>

(2) Damage to aquarium nets: Similar or the same type of nets cannot be procured in Morocco and must be imported from Japan, which is problematic from a sustainability standpoint. However, Morocco's self-help efforts is reflected in the fact that it has responded to this issue by using local materials and ingenuity to create more reinforced aquarium nets. Moreover, considering that there is no local distributor in Morocco, the support from the Japanese manufacturer is insufficient.

(3) Inability to use some experimental machines: Precision instruments, such as spectrofluorometers, cannot be used (lack of availability of reagents for important analysis: pigments, proteins, carbohydrates, and so on). Although there are some local distributors in Morocco, the service for obtaining reagents and conducting manipulations is readily not available or difficult to obtain, and the Japanese manufacturer do not provide sufficient support.

<Evaluation Result>

On the basis of the above, no problems with the policy/system, institutional/organizational, and financial aspects were identified. However, some minor issues were observed in the current status of operation and maintenance, which are not expected to be improved/resolved. Therefore, the sustainability of the project effects is moderately low.

<sup>5</sup> This malfunction may be due to the damaged equipment (impeller and casing) inside the pump caused by dry operation (interview with INRH Amsa Director), but the details have not been confirmed.

<sup>6</sup> Results of the interview with INRH Amsa.

### III. Recommendations and Lessons Learned

- Recommendations to Executing Agency

Due to a malfunction of the seawater filter pump (it does not stop automatically when there is no seawater), as described in the section on sustainability, the motor must be manually switched on and off. Therefore, the executing agency must proactively identify the problem in co-operation with related organisations and encourage the manufacturer to investigate the cause of the pump malfunction (provide on-site or remote support) and repair or replace the pump immediately. This will contribute to enhancing the project's sustainability.

If the investigation reveals that the malfunction is caused by human error, the executing agency must retrain the operation technique.

- Recommendations to JICA

The malfunction described above had already occurred in 2020, immediately following the procurement, prompting the manufacturer to replace the entire motor, and the same malfunction was confirmed again during the ex-post evaluation. Given that JICA could have detected the problem in advance if it had been appropriately monitoring during that time, in the future, to promptly detect any malfunctions that may occur even if the executing agency does not proactively raise issues, JICA must take the necessary steps, such as enhancing its on-site and online monitoring system and supporting the measures outlined in the section titled Recommendations to Executing Agency. This is expected to contribute to the achievement of sustainability of this project.

Furthermore, to increase the effectiveness and impacts envisioned in this project, technical support must be provided for the commercialisation of aquaculture technology.

- Lessons Learned

Regular dialogues with the local fisheries union have taken place since the project's inception, resulting in a greater awareness of the research facility. Specifically, in selecting the site, three sites were listed as candidates during the preparation stage, but when finally deciding on this site, various opinions were exchanged, such as whether there would be any impact on fisheries and whether there would be any hindrance to the scenery, as a basis for the selection. In addition, co-operation with local fisheries associations and divers (chartering of boats and diving) is essential for mussel farm management, which was established for marketability experiments in daily research activities, and these co-operative efforts have led to the promotion of understanding.

### IV. Non-Score Criteria

- Performance

Regarding epidemic prevention and sanitation management plans and feed research plans, the soft components on facility operation and research activities in shellfish aquaculture were provided to approximately 20 INRH staff (administrative and research staff), thereby improving the technical level in Morocco. The teaching materials and curriculum used in this project are stored in INRH. Participants who received guidance in the soft components are engaged in facility management and research activities at INRH headquarters and throughout the country, and have contributed to the enhancement of the research and technical level of shellfish aquaculture in Morocco beyond the scope of this project.

- Additionality

In addition to advancing academic research, educating graduate students, and organizing international research conferences, the project has contributed to the development of shellfish aquaculture technology. Specifically, the promotion of research on shellfish aquaculture, the contribution of international journals, and the implementation of commissioned research contributed to the promotion of academic research. In terms of the education of graduate students, the project played a role by regularly accepting graduate students, mainly from nearby Tetouan University, and assigning project-affiliated researchers as master's and doctoral dissertation advisors. In addition, the research results of this project were presented at international research conferences, and it can be said that they have significantly advanced marine biology research.





Shellfish Seedling Experiment Facility (Nursery) (source: Evaluator)



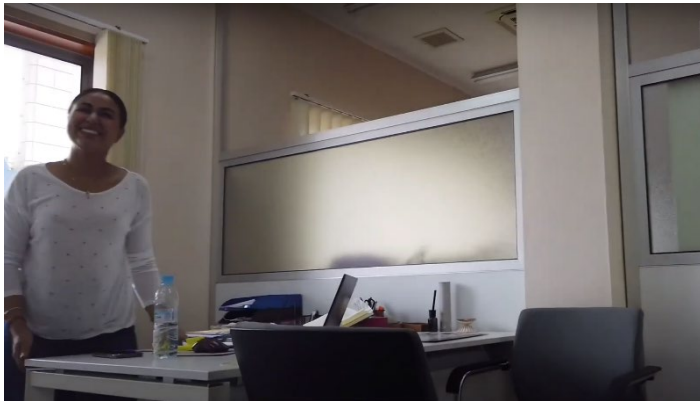
Shellfish Seedling Experiment Facility (Filtration)  
(source: Evaluator)



Shellfish Seedling Experiment Facility (breeding) (source: Evaluator)



Shellfish Seedling Experiment Facility (Refrigeration)  
(source: Evaluator)



Researcher's waiting room (source: Evaluator)



Main entrance of the facility built under the project  
(source: Evaluator)

Palestine

FY2021 Ex-post Evaluation Report of Grant Aid Project

“The Project for Support for the Public Activities of the Communities in Jordan Valley in the  
Palestinian Authority”

External Evaluator: Juichi Inada, Senshu University

## **0. Summary**

The objective of this project is to “improve access to public services at the community level by comprehensively improving various social infrastructures that support the livelihoods of Palestinian residents in Jericho and the Jordan Valley communities where there are many poor farming villages, thereby contributing to the improvement of the living environment for residents.”

The project is highly consistent with Palestinian policies and needs. Although the feasibility of some of the subprojects (e.g. well-related project using residual funds) may have not been fully considered at the time of planning, the project plans and approaches for most of the subprojects are appropriate and suggestive of other projects, and their relevance is recognized. The project is consistent with the development cooperation policy of the Government of Japan and JICA, and has been linked and coordinated with the preceding project. In addition, the project is significant as a precedent case in which villages in the supported area have gained experience in receiving support from international donors. Therefore, its relevance and coherence are high.

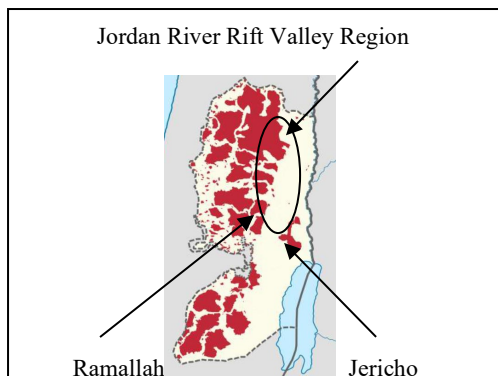
Although the project cost was as planned (100%), the project period was approximately 135% of the plan for the main project (23 subprojects) and 482% of the plan for the residual project (one project), resulting in an overall project period performance of 413% of the plan. Therefore, the efficiency of the project is moderately low.

The three indicators (health, education, and community facilities) set at the time of planning as quantitative effects of effectiveness were generally achieved as planned. Although there are some differences depending on the facility, in the evaluation of benefits, satisfaction, and service improvement of healthcare, educational facilities, roads, electricity and so on of the project, it can be inferred that the expected effects and impacts for most of the subprojects were generally achieved. Therefore, the effectiveness and impact of the project are high.

Regarding sustainability, although subprojects are generally being properly maintained and managed at present, some minor issues were observed in terms of finances (such as securing budgets for operation and maintenance), and it is not expected to be improved. Therefore, sustainability of the project effects is moderately low.

In light of the above, this project is evaluated to be satisfactory.

## 1. Project Description



Project Location<sup>1</sup>



New Girls' School in Al Nassariya (one of 24 subprojects)

### 1.1 Background of the Project

In Palestine, the intensification of the conflict with Israel triggered by the Intifada that broke out in September 2000, the accompanying Israeli blockade of the autonomous region, and measures to restrict movement and access have severely restricted the economic activities of Palestinians and worsened their living conditions. Under these circumstances, many hospitals, educational facilities, community meeting halls, and roads were not repaired or renovated regularly, and facilities and equipment became obsolete, making it impossible to provide adequate public services.

Furthermore, since the inauguration of the Hamas-led cabinet in March 2006, people's living conditions have become more restricted than before, such as 1) land use restrictions have prevented the development of sufficient infrastructure necessary for communities, such as meeting places; 2) restrictions on movement have greatly hindered economic activities, school commuting, and daily life; and 3) the development of intra-village roads and intra-village electricity distribution networks used by Palestinians has been delayed. This situation was particularly evident in Jordan Valley, where access to land and movements were severely restricted, and supporting public service activities through the development of roads, clinics, schools, and other public facilities in the region was an urgent issue.

### 1.2 Project Outline

The objective of this project is to improve access to public services at the community level by comprehensively improving various social infrastructures that support the livelihoods of Palestinian residents in Jericho and the Jordan Valley communities, where there are many poor farming villages,

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<sup>1</sup> The dark-colored areas on the map are where the Palestinian Authority holds administrative and security control (Area-A). Area-B is where the Palestinian Authority has administrative authority, but Israel has security control, and Area-C is where Israel has both administrative and security control, which is majority of the Jordan River Valley region.

thereby contributing to the improvement of the living environment for residents.

Grant Limit/Actual Grant Amount	1,176 million yen/ 1,176 million yen
Exchange of Notes Date /Grant Agreement Date	March 2010 / March 2010
Executing Agencies	Several government agencies, such as the Ministry of Local Government (hereafter referred to as MoLG), Ministry of Health, Ministry of Education, Ministry of Agriculture, etc., as relevant agencies.
Project Completion	June 2018
Target Area	Multiple villages under the jurisdiction of three governorates and four JCs in the Jordan Valley Region (Joint Councils: North JC, South JC, Mid-West JC and Mid-East JC in Tubas Governorate, Nablus Governorate, and Jericho Governorate)
Contractors/ Consultants	Contractors (construction) Building facilities: Safwa Building and Contracting Co., Jwad Engineering Office for Contracting, Brothers Engineers for Contracting Company Road facilities: Brothers Co. for General Contracting Company, Dar Al Bina'a Co. Power facilities: Sartaba Trade & Contracting Co.
	Contractors (equipment) Furniture: Ma'ayeh Manufacturing Co. Vehicles: United Motor Trade, Tower Mechanical Equipment Company PC and media equipment: Baddawi information System, Mashreq Trading Co. Appliances/kitchen: Harb Technology and General Trading, Medical: Lemix Co. Ltd, Sharq International Technology for Trading & Contracting (SITTCO), Medical Supplies and Services Co. Science lab equipment: ESSCO Educational Scientific Supplies Co., Techno-line Medical & Lab Equipment, Scientific Supplies Co. Supplies Co. Well-related equipment and facility construction: Hinnawai Contracting Co.
	Consultant Koei Research Institute, Mohri Architect & Associates Inc.
	Procurement Agency JICS (Japan International Cooperation System)
Preparatory Survey	May 2009-Nov. 2009 *Residuals: Basic information gathering and confirmation study (on Al Auja village well development project) (March 2012)
Related Projects	1) Technical cooperation projects The Project for Improvement of Local Governance System (2005-2010), The Project for Improvement of Local Governance System (Phase 2) (2012-2014), The Project for Improvement of Local Finance System (2012-2016), The Project for Capacity Improvement of Solid Waste Management in Jericho and the Jordan Valley (2005-2010) and Phase 2 (2014-2017). (2) Grant aid The Project for Establishment of New Schools in the West Bank (2009-2012) (3) Other international organizations World Bank "Municipal Development Program Phase 1" (2009-2013), MDLF "Area-C Development Programme in the West Bank" (2015-2022)

## 2. Outline of the Evaluation Survey

### 2.1 External Evaluator

Juichi Inada, Senshu University

### 2.2 Duration of Evaluation Study

This ex-post evaluation study was conducted with the following schedule.

Duration of the Study: March 2022-March 2023

Duration of Field Study: May 31-June 17, 2022 and August 8-August 26, 2022

### 2.3 Constraints during the Evaluation Study

Ten years had passed since the original project period of 2010-2012, making it difficult to collect information on the 23 major subprojects during planning. In addition, one project using residual funds (Al Auja water project) was completed in 2018; however, when the evaluation of the 23 subprojects completed in 2012, which accounted for most of the projects, and the evaluation of the project using residual funds differed from the evaluation of the former, careful judgment was needed on how to comprehensively judge both projects when evaluating them.

## 3. Results of the Evaluation (Overall Rating: B<sup>2</sup> )

### 3.1 Relevance/Coherence (Rating: ③<sup>3</sup> )

#### 3.1.1 Relevance (Rating: ③)

##### 3.1.1.1 Consistency with the Development Plan of Palestine

At the time of planning, the *Palestinian Reform and Development Plan (2008-2010)* and the *National Development Plan (NDP) (2011-2013)* identified social development, such as health and schools, and various public infrastructure developments, such as electricity and transportation, as urgent issues. This Project provides facilities and equipment for health, schools, electricity and so on, which are in line with these development plans. The *Palestine Development Plan (PDP) 2014-16* focused on the provision of public administration services and emphasized the provision of specific services in the local administration. The *National Policy Agenda 2017-2022* is also consistent, at the time of the ex-post evaluation, with priorities such as "quality of education, quality of health care, and strong communities".

The *Strategic Plan for Education (2009-2014)* at the time of planning and the most recent *Strategic Plan for Education (2019-2022)* also describe goals, such as improving the curriculum (e.g. by installing science labs) and reducing the number of students per class, and this project is consistent with these education policies. The *National Health Strategy 2011-2013* listed "access

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<sup>2</sup> A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

<sup>3</sup> ④: Very High, ③: High, ②: Moderately Low, ①: Low

to health services" as one of its eight strategic objectives. In addition, the *National Health Strategy 2014-2016* and the most recent *National Health Strategy 2021-2023* include the provision of comprehensive health services as a goal; this project is consistent with these health policies.

Therefore, the project is fully consistent with Palestinian development policies at the time of planning and project completion.

#### 3.1.1.2 Consistency with Development Needs of Palestine

In 2008, many applications were submitted for specific pilot projects of the preceding project for "Improvement of Local Governance System" (2005-2010), and the projects that could not be covered by the pilot projects of the Community Empowerment Component (hereinafter referred to as CEC), began planning to be supported through Community Development Grant Aid. In the process of selecting pilot projects for the CEC, 15 of the 92 applications were selected as pilot projects, and 24 of the other applications were supported through the Community Development Grant Aid (including well-related facilities in Al Auja that were added using residual funds). For this support to be consistent with the goal of the preceding projects of strengthening the Joint Councils (hereafter referred to as JC) of local governments, the implementation procedures were also made using the framework of JC, but the Village Councils (hereafter referred to as VC) were used as the recipients of the individual sub-projects.

Most of the projects are in Area-A/B and only one is in Area-C (school buses in Kardala), but the entire region is under strong Israeli influence, with restricted economic activities, relative poverty, and little support from international donors. This project targets the Jordan River Valley region, which is one of the most marginalized areas in the West Bank, and it can be said that the project has selected an area with high development needs. Furthermore, due to the 2020-22 Corona spread, the economy is stagnant in this area, and the need for basic infrastructure necessary to improve the lives of the residents, such as schools, clinics, and electricity, remain constant.

Therefore, the project meets Palestinian development not only at the time of planning but also at the time of project completion.

#### 3.1.1.3 Appropriateness of the Project Plan and Approach

Of the 23 subprojects completed in 2012, subprojects, such as clinics (4), schools (5), electricity (3), and roads (3), were generally implemented and utilized as planned. The only project that provided two water supply trucks (PS-03) was discontinued (approximately five years after the provision), but the fact that the trucks were used for the first five years suggests that the provision of water tank trucks met these needs. The main reason for the disuse was that the VC lacked funds for maintenance and operation (e.g. driver allowance), and financial sustainability should have

been considered.

The construction of well-related facilities in Al Auja, a project using residual funds, was completed and transferred to the Palestinian Water Authority (PWA) in 2018, but even at the time of conducting the ex-post evaluation, the facilities were not functioning as originally planned. The primary reason is that the water pumped from the well does not meet the Palestinian government's drinking water standards; the PWA plans to use the facility for agricultural purposes instead of drinking water until the water quality improves, at which point it will be converted to drinking water use. The project is based on the proposal of Al Auja Municipality and PWA, but the site selection and feasibility study may have been inadequate at the time of planning.

Nevertheless, this project was implemented on the basis of the experience of the preceding CEC project, and 24 projects were formed on the basis of the lessons learnt from the difficulties of construction of buildings in Area-C and problems, such as project applications by some influential persons, which is a community development project with resident participation that provides suggestions for other similar projects. In addition, JICA has implemented several grant aid and technical cooperation projects in Jericho and the Jordan Valley area, which are considered an effective approach in terms of promoting Japanese assistance in the region and raising the overall development impact of the region.

### 3.1.2 Coherence (Rating: ②)

#### 3.1.2.1 Consistency with Japan's ODA Policy

At the "Japan-Palestine High-Level Consultations" in July 2010, it was agreed that the seven priority areas (SME support and trade promotion, agriculture, tourism, local government, finance, water and sewage, and health) would be the focus for the next three years on the basis of the Palestinian Authority's development plan, which is generally consistent with this agreement.

The 2009 and 2012 editions of the *Country Assistance Policy for the Palestinian Authority* set "stabilizing and improving people's life" as one of the three "priority areas (mid-term goals)" and stated that "we will support the development of basic infrastructure such as water, sewage, health, and education, and also support refugees, women, children and other socially vulnerable groups, and make efforts for stabilizing and improving people's life." The project was consistent with these goals.

In addition, JICA's *Project Deployment Plan* at the time set "improvement of livelihood infrastructure" as a "development issue (sub-target)" and listed "improvement of health services," "improvement of education services," and "improvement of water and sewage services" as cooperation programs for this purpose, and this project is consistent with these plans.

### 3.1.2.2 Internal Coherence

In the project Ex-ante Evaluation Table, "Clean Energy Introduction Project Using Solar Energy" (grant aid, 2009-2012) and "Maternal and Child Reproductive Health Improvement Project Phase 2" (technical cooperation, 2008-2012) are listed as related projects, but direct synergistic effects cannot be verified. Meanwhile, these projects were implemented mainly in Jericho, and this project is complementary to them in that it aimed to expand electricity supply and maternal and child health services in small LGUs in Jordan Valley that were not covered by these projects. For example, with regard to maternal and child healthcare, the project has expanded services for pregnant and nursing mothers at four clinics.

On the other hand, this project can be considered the successor to the "Project for Improvement of Local Governance System" (technical cooperation, 2005-2010), especially as continuity persists between the CEC of this earlier project and this project, and the collaboration/coordination that was originally envisioned.

The "Solid Waste Management and Disposal Capacity Improvement Project in Jericho and the Jordan Valley (2005-2010) and its Phase 2 (2014-2017)" are a regional project that includes the Jordan Valley region and are complementary to this project, although in different sectors. As an area of public service for JC and VC, synergies exist in terms of contributing to the capacity building of JC and VC as well as increasing the presence of JICA assistance in the region.

In addition, seven schools (six new schools and one expansion) were constructed in the West Bank (Jericho, Tubas, and Nablus) under the "Project for Establishment of New Schools in the West Bank" (2009-2012, approximately 900 million yen), which is complementary to the construction of schools under this project.

Internal coherence is recognized, as coordination was made between the above related projects during the project formation, and concrete results can be identified in expanding public services and raising the overall level of public services in the Jordan Valley region.

### 3.1.2.3 External Coherence

The World Bank implemented the Municipal Development Program Phase 1 (2009-2013), which was a framework to support "municipalities" and was limited to Jericho, Nablus, Tubas, and other cities in the Jordan Valley region, and small Local Government Units (hereafter abbreviated as LGU) were not covered. In the planning, JICA was aware of the existence of the "Municipal Development Program" and shared some information, but it was a multi-donor trust fund, and there were no specific collaborative discussions with the World Bank, the main donor. Moreover, it was assumed that JICA's support of the Jordan Valley region, which was not supported by such a fund, would have complementary significance in promoting development in marginalized areas by following its preceding project.



In addition, the World Bank launched the Local Government Social Infrastructure Improvement Program (LDSIP) in 2016. The Municipal Development and Lending Fund (MDLF), with support mainly from European donors, launched in 2015 the "Area-C Development Programme in the West Bank", a project to support small-scale infrastructure development at the community level in the Jordan Valley region. This is a multi-donor fund, with major donors, including the EU, France (AFD), the UK (DfID), and Switzerland (SDC). The implementation of the project is entrusted to the MDLF, which will develop livelihood-related infrastructure, such as schools, roads, electricity, water, and parks in Area-C.<sup>4</sup> This project is similar in nature to the JICA project, but it was not coordinated with JICA and can be positioned as an extension of JICA's support on a larger scale from 2015 to date, after most of the JICA project ended in 2012, through the independent initiatives of European donors, such as the EU and the AFD.

As aforementioned, all of the above have been addressed with respect to relevance to the development plans and development needs of the partner country and the appropriateness of the project plan and approach. Although may be a possibility of inappropriateness in part of the project, that is, insufficient consideration of the sustainability of the use of two water trucks, and the plan for the construction of well-related equipment and facilities using the residual funds, this project supports vulnerable communities with the participation of residents, has implications for other projects, and is highly appropriate.

The project is consistent with the development cooperation policies of the Japanese government and JICA, and is closely linked to JICA's earlier project (Improvement of Local Governance System). This project supported 24 subprojects, which could not be covered by the preceding CEC, amongst more than 90 subprojects applied by the Palestinian side, and has also achieved concrete results in terms of improving public services in areas that tend to be left behind. In addition, the project has not been closely linked or coordinated between JICA and other aid agencies and international frameworks, although they are complementary to each other, and external coherence is difficult to recognize.

Therefore, its relevance and coherence are high.

### 3.2 Efficiency (Rating: ②)

#### 3.2.1 Project Outputs

The project covered several villages under the jurisdiction of four JCs (North JC, South JC, Mid-West JC, and Mid-East JC) in three governorates (Tubas, Nablus, and Jericho) and provided

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<sup>4</sup> Considering that Area-C requires Israeli approval for the construction of the facility, the establishment of this support fund is based on an Israeli agreement to ensure that Israeli approval is obtained for the construction. The initial size of the fund was 2 million euros, and since 2015 to date, four support packages have been granted. The evaluation report, including the subprojects, is available.

24 subprojects (22 facilities, water trucks, and school buses), equipment, and furniture for use in these facilities (see Figure 1).

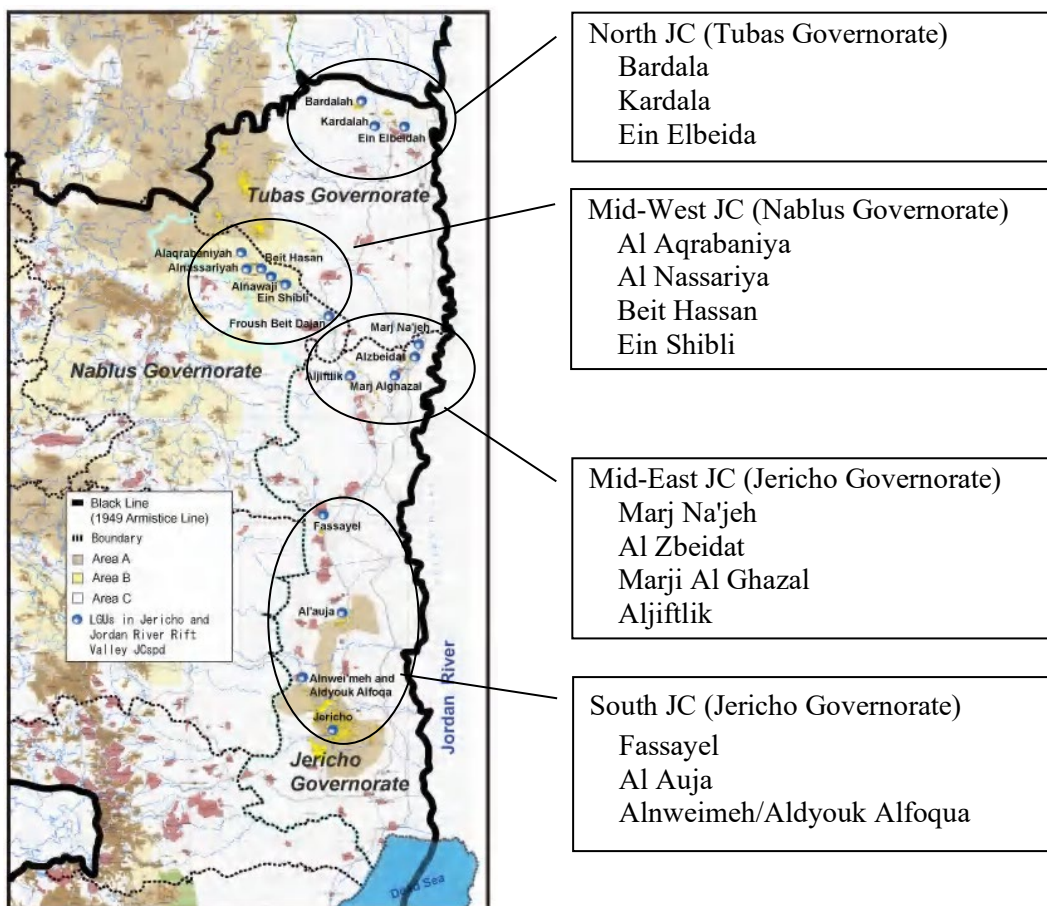


Figure.1. Target area of the project and the four JCs and 14 local governments' location  
 (Note) Prepared by the author on the basis of the materials provided by JICA. The names of the local governments (villages) that comprise the four JCs are indicated on the right.

The final requested subprojects include (1) renovation of medical facilities, (2) construction and expansion of educational facilities, (3) construction of community facilities, (4) agriculture, and (5) construction of other basic infrastructure facilities and procurement of equipment and furniture. A more detailed list is provided below:

- (1) Health care: Construction of four primary medical clinics, provision of equipment, ambulances, and vehicles for vaccinations.
- (2) Education: Construction of schools (33 classrooms in five schools), provision of educational equipment, and school buses.
- (3) Community: Construction of five multipurpose community centers (one cancelled)
- (4) Agriculture: Construction of a livestock disease prevention center and provision of vehicles for vaccination.

(5) Others: Road improvement in the village, improvement of the existing electricity network, maintenance of facilities due to increase in electric power, provision of water trucks

For the additional subproject, the construction of well-related equipment and facilities in Al Auja using residual funds and the design changes were approved in June 2017 and completed and handed over to the PWA in June 2018.

Of the original 24 projects, excluding the well-related project in Al Auja, PS-15 (Nwei'mey office building) was not built, although it was on the planning list. The Completion Report stated that this had been cancelled. The reason was that the deed for the land ownership of the construction site was not submitted by the final deadline (p. 17).

Other equipment provision and facility construction were generally provided and constructed as planned, with only changes in specifications and other items listed in the Completion Report. The major changes are as follows:

(1) Health: Mobile medical examination vehicles that were supposed to be provided to the clinics in Al Auja and Marji Naje were received by the Ministry of Health and operated by the Ministry of Health branch in Jericho. The ambulance provided to Ein Elbeida was destroyed in an accident in February 2021 and a new ambulance was obtained with Swedish assistance.

(2) Community: As mentioned above, the multi-purpose community center in Nwei'mey was not built. The village hall building, which was originally applied for, was eventually completed in 2017 with funding from the MoLG.

### 3.2.2 Project Inputs

#### 3.2.2.1 Project Cost

As this is a grant aid through the procurement agency, the actual amount is the contracted amount (including the contract with the procurement agent), which remains unchanged (1.176 billion yen for the original plan and the actual amount). Owing to exchange rate fluctuations (yen appreciation) during the project period, a residual amount of 13,668,932 Japanese yen (US\$161,740) was generated, which was used to construct well-related equipment and facilities in Al Auja as an additional project.

Thus, the project cost was within the original plan.

#### 3.2.2.2 Project Period

Except for the additional project in Al Auja, 23 subprojects were completed in September 2012. In terms of the calculation of the project period, if the starting point was G/A and completion was the month of construction completion and handover, the originally planned period was "March 2010 to January 2012 (23 months)," but the actual period was "March 2010 to September 2012 (31 months)," an extension of eight months compared to the plan, or approximately 135% of the

plan.

For the additional project of Al Auja using the residual funds, if the first detailed design of the additional procurement is considered as the plan, the plan is "January 2014-November 2014 (total 11 months, including bidding period)" (from the documents provided by JICA). However, due to design changes (installation of pump was difficult as originally planned) and further additional procurement (of spare pump) and so on, the actual project period was "January 2014-June 2018 (54 months)", taking the completion and handover of the additional project listed in the completion report as the end point. This is an extension of 42 months or approximately 482% of the planned period. The overall project period was "March 2010-June 2018" (100 months in total), which is 413% of the plan.

Thus, the project period significantly exceeded than plan.

Therefore, efficiency of the project is moderately low.

### 3.3 Effectiveness and Impacts<sup>5</sup> (Rating: ③)

#### 3.3.1 Effectiveness

##### 3.3.1.1 Quantitative Effects (Operation and Effect Indicators)

The following were assumed to be the direct effects of basic public infrastructure improvements on communities in the Jordan Valley region. The operation and effect indicators listed in the Ex-ante Evaluation Table are listed in Table 1.

Table 1: Operation and effect indicators listed in the Ex-ante Evaluation Table

Sector	Indicator name	Baseline (2009)	Target* (2015)
Health	Number of residents with access to level III medical services (X-ray, laboratory test, dental care and so on) in the Jordan Valley (persons)	0	27,000
Education	Number of students using combined classes or using facilities converted from other facilities (students)	635	0
Community facilities	Sites for community activities in the Jordan Valley (locations)	11	15

(Note) 'Ex-ante Evaluation Table', pp. 3-4. \*Target was set at three years after project completion.

(1) Health: In the Jordan Valley region, where only Level II or lower facilities exist, one existing Level II PHC from each of the four JCs will be selected and upgraded to Level III so that approximately 27,000 residents of the Jordan Valley will receive Level III medical care (X-ray, laboratory test, dental care and so on).

(2) Education: In Jordan Valley, 635 students who have been taking classes in combined classes

<sup>5</sup> The impact is also considered in determining the effectiveness of the rating.

or other facilities, such as village halls, will be able to attend classes in an appropriate educational environment. In addition, a girls' school will be constructed in each of the four JCs, enabling 1,172 girls to attend a girls' school, up from 572 as of 2009 (an increase of 600 students) (not included in the "Ex-ante Evaluation Table" above, but listed in the "Preparatory Survey" (p.4-1).

(3) Community facilities: All 15 local government units (LGUs) throughout Jordan Valley have dedicated facilities where community activities can be activated.

The following results were verified at the time of the ex-post evaluation.

#### (1) Health

The basis for the target value of 27,000 is the number of residents with access to medical services, mainly in the supported villages, and it is assumed that the total beneficiary population of this area in 2015 was 27,000 as of 2010 at the time of planning. The population data for each VC in 2015 are shown in Table 2.

Table 2: Population trends in supported areas

LGU Name	2010	2015	2022 (forecast)
Marj Na'ja	768	881	899
Az Zubeidat	1,526	1,751	1,823
Marj al Ghazal	218	250	264
Al Jiftlik	3,987	4,577	3,366
Fasayil	1,157	1,329	1,777
Al 'Auja	4,423	5,077	5,672
An Nuwei'ma	1,337	1,534	1,948
Ad Duyuk al Fauqa	881	1,012	961
Bardala	1,784	2,108	1,776
Ein Albeida	1,267	1,498	1,258
Kardala	335	395	224
Ein Almalih	403	476	391
Al Nasariya	1,680	1,882	2,060
Al Aqrabania	1,061	1,189	1,024
Beit Hassan	1,188	1,331	1,744
Ein Shibli	355	398	341
Total amount	22,370	25,688	25,528

(Notes) (1) The 2010 and 2015 figures are from the Palestinian Central Bureau of Statistics (PCBS), *Population Statistics 2000-2016*; 2022 figures are from the PCBS, *Projected Mid-Year Population by Locality 2017-2026*.

(2) Actual demographics are most recent for 2016, and only projections as of 2017 are available after 2017. The most recent population for 2022 is actually larger than the projections in Table 2 based on the interviews with the village heads of each LGU during the ex-post evaluation.

As of 2015, the overall population of the region was 25,688, which is not a significant numerical deviation from the target set at the time of planning and has largely been met, as clinics with access to Level III medical care (X-ray, laboratory test, dental care and so on) have been constructed in the four JCs.

It is assumed that this figure is the total number of residents in all surrounding villages other than the target village where the clinic is to be built, but it is likely that residents of villages far from the village where the clinic is built will continue to use hospitals in Jericho and Nablus.

Table 3 shows the annual number of general medical treatments, laboratory tests, dental care, and X-ray examinations at the four clinics newly established or expanded under the project, indicating that laboratory and dental examinations that could not be handled in 2009 are now possible in 2015. As of 2021, the number of patients receiving examinations is somewhat stagnant because of the impact of the corona spread. The total number of annual users (total number of people) of the four clinics in 2015 was 20,803, which decreased to 17,557 in 2021, partly due to the COVID-19 impact, according to data provided by the Ministry of Health (which are different from the data listed in Table-3).

Table 3: Annual number of patients seen at the four clinics (persons)

	Al Nassariya			Ein Elbeida			Al Auja		Marj Naje	
	2009	2015	2021	2009	2015	2021	2015	2021	2015	2021
General medical treatment	1,537	1,558	1,310	1,612	3,143	3,599	5,385	3,389	2,553	2,057
Laboratory test	0	602	807	0	505	651	3,497	2,939	887	787
Dental treatment	0	219	100	0	350	79	165	49	334	45
X-ray examination	0	0	20	0	256	759	0	0	0	0
Pregnancy/ maternity Care	140	476	1,030	250	370	439	n.a.	n.a.	n.a.	n.a.

(Source) Data provided by Ministry of Health.

(Notes) (1) The clinics in Al Auja and Marj Naje were newly established; hence, no statistics were available for 2009. In addition, the X-ray equipment installed in both clinics was relocated to Hebron and other heavily used locations, so the number of recipients remained at zero. (2) The decrease in the number of dental patients in 2021 at both clinics is partly due to the COVID-19 outbreak, but also due to the failure of dental equipment.

## (2) Education

The number of classrooms newly built or expanded by the project was 14 in Ein Elbeida (9 in the old school building, an increase of 5), 12 in Al Nassariya, 10 in Ein Shibli, 3 in Al Zbeidad, and 2 in Al Auja, a total increase of 32 classrooms (excluding library, science lab, and so on). Given that the target number of students per classroom is 20, it can be assumed that the "number of students using combined classes or facilities converted from other facilities" before the project was 635 and that the increase in 32 classrooms through the construction of five new and additional schools eliminated these problems. On-site interviews also reported that an increase in the number of classrooms eliminated the number of combined classes in the supported schools.

Table 4 summarizes the number of students and classrooms in the five schools that were newly established (three schools) or expanded (two schools) under the project from 2009 to 2022. In 2009, the total number of female students in the two schools was 557; in 2015, the total number of female students in the three schools was 965; and in 2022, the total number of female students

in the three schools was 1,094. Separately, through the project for “Establishment of New Schools in the West Bank” (2009-2012), Marj Al Ghazal girls' middle school was constructed in 2012, with 12 classrooms and approximately 240 more girls. Thus, the target that a girls' school was built in each of the four JCs, enabling 1,172 girls to attend a girls' school, up from 572 in 2009 (an increase of 600) ("Preparatory Survey," p.4-1), is considered to have been largely achieved.

Table 4: Number of students/classrooms in the five schools newly established or expanded under the project

(A) No. of students, (B) No. of classrooms, (C) Commuting distance (km)

School's name	(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)	(C)
	2009		2012		2015		2018		Year 2022		
Ein Elbeida girls' school (with old school)	223	9	242	14	196	14	210	14	211	14	1
Al Nassariya girls' school	0	0	256	12	401	15	417	16	433	16	1-4
Ein Shibli coed school	0	0	131	10	145	10	179	12	179	12	1-6
Al Zbeidat boys' school (extension)	226	11	254	14	219	14	259	14	246	14	1-3
Al Auja girls' school (extension)	334	13	356	15	368	15	367	16	450	16	3-5
(Total number of classrooms)		33		65		68		72		72	

(Note) Prepared: Data provided by the Ministry of Education. The figures provided by the Ministry of Education have been used, although some discrepancies exist with the figures in the "Completion Report".

### (3) Community Facilities

Prior to this project, there were 11 community facilities in LGUs in the Jordan Valley region, and four community facilities (including two women's centers) were constructed by this project, bringing a total of 15 as of 2012 when the project was completed; thus, the target was met. Of the community facilities that existed as of 2010, five community centers, multi-purpose halls, and women's centers were newly constructed, and one was renovated under the prior project.<sup>6</sup>

The multi-purpose hall in Nwei'mey was in the original plans but has been cancelled; hence, this building is not included in the numbers in the Ex-ante Evaluation Table. The village hall building was completed in 2017 with funding from the Ministry of Local Government; thus, the total number of community facilities was 16 at this time.

#### 3.3.1.2 Qualitative Effects (Other Effects)

The "Qualitative Effects" of the project are described as "access to healthcare and educational facilities will be improved through the development of basic public infrastructure at the Jordan Valley community level, thereby contributing to the improvement of socio-economic conditions" (Ex-ante Evaluation Table, p.4), of which "contribution to the improvement of socio-economic

<sup>6</sup> Amongst them, the community center in Al Nassariya was built in 2010 by the CEC, but was closed in 2018 without much use as the JC was not functioning.

conditions" is considered as "impact" and will be described in the next section.

Regarding to what extent and how the individual facilities, equipment and so on that have been constructed (new or expanded) are actually being utilized, see Table 5 "Status and List of subprojects' situations". The majority of facilities and equipment (18 in total) are being effectively utilized, but there exist some issues with three facilities (PN-09, PW-07, and PW-09). Two more facilities and equipment (PW-15 and PS-03) were initially being effectively utilized but are not currently being fully utilized, and an additional project, Al Auja's well-related facilities, has not yet achieved its original objective.

Table 5: List of subprojects' situations (organized by JC, by project code number)

code	subprojects name	Status at the time of ex-post evaluation
PN-01	PHC, extension (Ein Elbeida)	Until then, travelling to Tubas was necessary (23 km). It became very convenient after it was built in the village. The surrounding villages and Bedouin also use the center. Many vaccinations, maternal and child health care for 20–30 people/day, medical care for 30 people/day, and a doctor on duty every day. The facility is small but effectively utilized, and new equipment (X-ray monitor, PC and so on) has been introduced.
PN02	Girls' school, newly built, 14 classrooms (Ein Elbeida)	130 girls, 32 teachers, and other staff. No maintenance problems. A kindergarten was added with donations, and air conditioning was installed in classrooms in cooperation with the Ministry of Education (none before). Boys use an old school building (built in 1970s).
PN-05	Rehabilitation of existing electricity network in the village (Bardalah)	The city used to suffer from power shortages and frequent power outages, but the voltage was improved, and the electric grid was expanded. Population expanded from 1,700 10 years ago to 2,800 today. The amount of electricity used per household has also expanded.
PN-06	Rehabilitation of existing electricity network in the village (Ein Elbeida)	Previously, many power outages, leaks, wire breaks, and insufficient voltage transpired. Currently stable, sufficient voltage, reduced power outages.
PN-09	New construction of a civic organization center (Bardalah)	It houses offices of seven ministries and agencies and is used as a base for public services, especially the issuance of official documents, such as IDs and passports by the Office of the Ministry of Interior. It is also used for ceremonies, meetings, seminars and so on. It used to have sewing and cooking labs that have been removed since.
PN-10	2 school buses (Kardalah)	Village with a population of 300-450, 70-75 students (boys and girls), school buses granted in 2012 for commuting to a school in neighboring Baldalah (5-10 minutes commute).
PW-01	PHC, extension (Al Nassariya)	Building is fine. One doctor is there every day (8 am-2 pm); X-ray is available once a week (out of order for several months). The doctor (female) is also in charge of pregnant women and newborns. Medicines are adequate. Generator tested once and not used for 10 years.
PW-03	Girls' school, new construction, 12 classrooms (Al Nassariya)	Previously only UNRWA school (1500 students), distant (4 km) and crowded. New school reduced congestion, 500 students in 2012-now 700 (commute from surrounding villages). Grades 4-12 were supported, and the distance to school was reduced. Electricity was not available until 2015.
PW-04	Co-educational school, extension, 10 classrooms (Ein Shibli)	Originally built in 2004 with UNDP support, expanded from Grades 1-7 to Grades 1-12 with additional classrooms in 2012. Reduced congestion. Shortened distance to school for students in Grades 8-12 (previously 4-5 km), reduced accidents and violence. Currently has 220 students (120 in 2012); students from surrounding villages are also accepted. Improved educational environment and good management, high level of education, many graduates go to university.
PW-07	Increased power (Midwest JC, Al Nassariya, Al Aqrabaniya, Ein Shibli)	Low voltage electricity has been available since 1986, but only in some areas. The project provided electricity to the whole region; stable voltage; negotiated with Israel Electricity Company in 2017; previously JC, now MoLG pays in bulk and bills each village; VC collects royalties from each village.
PW-09	Village road 7.46 km (Al Aqrabanisye & Beit Hassan)	Contributing to the livelihood of residents. Road connecting both villages, contributing to community interaction. Severe damage in some areas.



PW-10	Village road 5.64 km (Al Nassariya)	Contributing to the livelihood of the residents. The number of accidents reduced. Partially damaged, but no major problems.
PW-12	Multipurpose center, new construction (Ein Shibli)	Important contribution to social life with various events and meetings. Also used as a medical service center (4-year contract with the Ministry of Health and the Red Crescent Society, twice a week, now terminated).
PW-13	Women's center, new construction (Al Aqrabaniya)	Training facilities available for sewing machines, hairdressers, etc. Used for meetings and training education. Useful as a base for activities of nearby villagers.
PW-15	Livestock disease prevention center, new construction (Al Nassariya)	Provided for livestock diseases and vaccinations. The establishment in Al Nassariya, an area under the jurisdiction of the Nablus branch, expanded the coverage area, made it possible to respond in a shorter distance, and improved services in terms of both quality and quantity. It was utilized for the first 2-3 years. Subsequently, after the retirement of the veterinarian in charge, the center was not staffed and is understaffed, effectively limiting its utilization as a regional center.
PE-01	PHC, new construction (Marj Na'je)	Contributed to community health care by serving as a vaccination site for COVID-19 control; made it convenient for treatment and checkups without having to travel to Al Jiflic. The mobile clinic vehicle on the plan was utilized by the Jericho branch of the Ministry of Health as a transfer vehicle for staff members.
PE-03	Boys' school, extension, 3 classrooms (Al Zbeidat)	A boys-only primary and secondary school built with Norwegian aid in 2002; classrooms were expanded with JICA assistance, and no problems were identified in the expanded area.
PE-05	Village road (Al Jiflic)	Road condition is relatively good (some cracks and shoulder collapse); 5m wide road paved 2-3 years ago with support from MDLF (AFD funds). The road is no longer muddy and dusty, which is a significant change and contributes to the livelihood of the residents.
PS-01	PHC, new construction (Al Auja)	There used to be only a container clinic and a waiting list for medical care under the blazing sun. Now there are 30-40 people a day on Thursdays when a female doctor comes in. There is also a lab service on Wednesdays and Sundays with 30-40 people using it. The health situation has improved (medical care, medicine, pregnancy tests, vaccinations and so on) by opening 5 days a week. Mobile medical examination vehicle received by the Ministry of Health and operated by the Ministry of Health branch in Jericho for staff transportation; no X-rays (moved to Hebron). Dental service was not available due to equipment failure, and the Ministry of Health was requested to repair it.
PS-02	Girls' school, extension, 2 classrooms (Al Auja)	More classrooms and larger space. The school has now one shift of 8 am-1 pm instead of two shifts of morning and afternoon. The number of female students (primary and secondary) increased from 400 in 2012 to 640. Many go on to university after graduation.
PS-03	2 water supply vehicles (South JC)	Both vehicles are currently unused and broken, one in Aldyouk and the other in Al Auja. They were utilized for the first 5 years, but because then they have not been utilized due to the cost of maintenance and operating expenses, such as drivers.
PS-04	Village road 13.6 km (Alnweimeh-Aldyouk Alfoqua)	Very useful. Within budget, narrower (3m wide) and longer distance. Some of the shoulders are damaged, but the overall condition is good.
PS-10	Women's center, new construction (Fasayel)	Contributes to raising awareness and educating women. Necessary cost for activities mainly depends on the contributions from the members. The organization War Child provides support (e.g. employment of young staff). Some residents claim that the number of users is limited to a few people.
Additional problem	Well-related facilities (Al Auja)	No problems with pump station facilities, currently shut down. There are issues with water quality, and the PWA recommends that the water be used for agricultural purposes rather than drinking for the time being. Management is handled by PWA, with a caretaker on site, and PWA also handles electricity and other maintenance costs.

### 3.3.2 Impacts

#### 3.3.2.1 Intended Impacts

Table 6 exhibits the results of the questionnaire survey of the residents of the 22 subprojects (excluding two projects with no beneficiaries). The table also shows the following four items: "benefits perceived by residents," "satisfaction with facilities and equipment," "perceived degree of improvement in services," and "perceived improvement in living conditions over 10 years

(from 2012). The questionnaire was answered on a four-point scale, with very good, good, fair, and poor, with '4' being the highest score and '1' being the lowest. The average score of the responses for each item for each subproject is given (2.5 is the middle value). The "recognition of the target project supported by the JICA" is given as a percentage.

Table 6: Survey results of residents' questionnaires on support subprojects

(4-point scale, right end only %)

Project No. (Right: evaluation)	Subproject Description (The number on the far right is the number of survey samples)	Benefits	Degree of satisfaction	Service Improvement	10 Years of Life Improvement	JICA Recognition
PN-01 A+	Primary health care facility (PHC), extension (Ein Elbeida)-15	3.59	3.13	3.40	2.33	53.3
PW-01 A	Primary health care facility (PHC), extension (Al Nassariya)-15	3.33	3.01	3.20	2.20	6.7
PE-01 A	Primary health care facility (PHC), new construction (Marj Na'je)-15	3.22	2.61	3.33	2.13	53.3
PS-01 A	Primary health care facility (PHC), new construction (Al Auja)-15	3.23	3.08	3.07	2.20	0
PN02 A	Girls' school, new construction, 14 classrooms (Ein Elbeida)-15	3.21	3.05	3.47	2.27	66.7
PW-03 A	Girls' school, new construction, 12 classrooms (Al Nassariya)-15	3.02	2.72	3.07	2.33	20.0
PW-04 A+	Co-educational school, new construction, 10 classrooms (Ein Shibli)-15	3.49	2.83	3.47	1.53	66.7
PE-03 A	Boys' school, extension, 3 classrooms (Al Zbeidat)-15	3.06	3.06	3.40	2.20	53.3
PS-02 A	Girls' school, extension, 2 classrooms (Al Auja)-15	3.27	2.93	3.33	1.80	26.7
PN-10 A+	2 school buses (Kardalah)-10	3.45	2.76	3.70	2.50	60.0
PN-09 B	Civic organization center, new construction (Bardalah)-15	3.16	2.28	3.07	2.40	25.7
PW-12 A+	Multipurpose center, new construction (Ein Shibli)-15	3.44	2.88	3.53	1.53	33.3
PW-13 A	Women's center, new construction (Al Aqrabaniya)-15	3.17	2.97	3.13	1.93	33.3
PS-10 B	Women's center, new construction (Fasayel)-15	3.11	2.48	3.07	2.00	40.0
PN-05 B	Rehabilitation of existing wire network in village (Bardalah)-15	2.57	2.11	2.80	2.00	40.0
PN-06 A	Rehabilitation of existing wire network in village (Ein Elbeida)-15	3.02	2.99	3.33	2.27	33.3
PW-07 A	Increase in electric power (installation of pylons, electric lines and poles) (Mid-west JC, Nassariya, Aqrabaniya, Ein Shibli)-46	3.10	2.63	3.20	2.17	13.0
PW-09 B	Village road 7.46 km (Al-Aqrabanisych & Beit Hassan)-20	2.74	2.33	2.70	1.90	0
PW-10 B	Village road 5.64 km (Al Nassariya)-15	2.52	2.45	3.00	1.93	20.0
PE-05 A	Village road (Al Jiftlic)-15	3.02	2.72	3.27	1.60	33.3
PS-04 A+	Village road 13.6 km (Alnweimeh- AldyoukAlfoqua)-15	3.54	2.83	3.20	2.20	20.0
PW-15 C	Livestock disease prevention center, new construction (Nassariya)-15	2.21	1.82	2.00	1.87	53.3
PS-03 C	2 water supply vehicles (Nanbu JC)	No beneficiaries, as both units are currently unused				
Additional Business C	Well-related facilities (Al Auja)	No beneficiaries, as not yet functioning				

(Note) 'A+/A/B/C' on the far left is a rough evaluation rating based on the level of benefits, satisfaction, and service improvement. A+ was judged to be extremely high in terms of benefits and satisfaction, A is high, B is moderate, and C is low. The last number in the 'Subproject Description' column indicates the number of survey responses. Considering that the questions asked in each sector differ, comparisons can be made between subprojects in the same sector (e.g. clinics, schools), but not simple comparisons between projects in different sectors.

The following is a summary of what was learnt from the questionnaire survey.

(1) The overall perception of "benefits" and "service improvement" for the four clinics was high (all above 3), and the high evaluation of the clinic in Ein Elbeida was because a doctor is present every day, whereas the slightly lower satisfaction level in Marj Naje was because the doctor is working with Al Zbeidat and can only come twice a week. Although the effect of improvement in the health and sanitation situation could not be quantitatively ascertained, the residents' questionnaire indicated some improvement in terms of benefits and services, as perceived by the residents.

(2) With regard to the construction and expansion of five schools, perceptions of "benefits" and "service improvement" are generally high (all above 3), but the coed school in Ein Shibli is particularly high. This school was originally built in 2004 with UNDP support, and additional classrooms were added in 2012. Its good reputation can be attributed to its high level of education due to the improved educational environment and good management. Overall, the increase in the number of classrooms has led to an improvement in the number of students per classroom, and new schools have reduced their distance to school.

(3) Regarding the four community centers and women's centers, Ein Shibli in particular was highly recognized for its "level of benefit" and "improvement of services". The reason is because the facility has made an important contribution to social life in this village through various events and meetings and has also been used as a medical service center.

(4) The three power projects were rated highly overall, but Bardalah's satisfaction rating was slightly lower. This may be due to the background factor that the village is already in a state of power shortage due to the rapid increase in power demand caused by subsequent population growth and increased economic activity in the village.

(5) A considerable difference exists in the "benefit level" and "satisfaction level" for the four road projects. This difference between villages where the roads are already quite damaged and those where the roads are properly maintained and managed reflects the maintenance status of the roads.

(6) Residents' assessment of the livestock disease prevention center in Al Nassariya was extremely low. This facility was intended to expand the coverage area, enable short-range response, and improve services in terms of quality and quantity by constructing a district center in the area under the jurisdiction of the Nablus branch to deal with livestock diseases and vaccinations. However, although the center was utilized for the first 2-3 years, it has since been virtually unutilized as a regional center due to a lack of staffing after the retirement of the veterinarian in charge.

(7) Regarding the 'degree of improvement in living conditions over the past 10 years,' only Kardala has an average of 2.5, and all others are below the average (i.e. unchanged), suggesting that the responses reflect the impoverished living conditions caused by the recent downturn in

economic activity due to the COVID-19 outbreak.

(8) Residents' awareness of the fact that the support project was funded by JICA was low. The reason for this is thought to be that 10 years have already passed since the completion of the project, as well as the fact that clinics and schools are under the jurisdiction of the Ministry of Health and the Ministry of Education, respectively, and are perceived as support provided by the central government.

### 3.3.2.2 Other Positive and Negative Impacts

#### (1) Impacts on the Natural Environment

This Project was considered to fall under Category C of the *Guidelines for Environmental and Social Considerations of the Japan International Cooperation Agency* (formulated in 2004) and was considered to be a small-scale project involving schools, health facilities and so on, with little undesirable impact on the natural environment ("Preparatory Survey Report").

In addition, the MoLG, the C/P of the project, responded that no Environmental Impact Assessment (EIA) or Initial Environmental Examination (IEE) was conducted for the implementation of the 24 subprojects of the project, as they are small-scale projects to be implemented on public lands in the VCs. In addition, for the well-related facilities in Al Auja, which were implemented using the residual funds, no application was made to the office in charge of the EIA in Jericho by the Municipality of Al Auja or the PWA to conduct an EIA for the well facilities and pipeline construction (for the 2014-2018 period), and no such EIA was carried out.

#### (2) Resettlement and Land Acquisition

Schools, health centers, community centers, and other facilities were constructed, but as all of these facilities were originally publicly owned by LGUs, no problems of land acquisition or resettlement have emerged. In addition, from the viewpoint of facilitating the project, projects involving construction in Area C have been avoided in principle.

#### (3) Gender Equality

The project focuses on the construction or expansion of girls' schools (three subprojects) and women's centers (two subprojects), with an emphasis on women's empowerment. The construction of girls' schools has led to improved access to education for girls, and women's centers have become hubs for local women's activities.

#### (4) Socially Vulnerable Groups and Human Rights.

The Jordan Valley region, of which Area-C is the majority in the West Bank, is an area where economic activities and livelihoods are particularly constrained and aims to improve the livelihoods of the 'socially vulnerable' in these marginalized areas.

Meanwhile, there are Bedouin communities in the area, but they are not directly supported by the project

and continue to be marginalized.<sup>7</sup> Nonetheless, some Bedouin residents have been able to benefit to some extent, for example, by using new schools and clinics built by the project.

#### (5) Social Systems and Norms, Human Well-being and Human Rights

In many cases, LGUs supported by this project are headed by traditional leaders, although they are elected by elections. For village leaders, the project proposed and implemented in each village is an opportunity to demonstrate their political power to the villagers. Meanwhile, the selection process for this project employed a participatory project-making process involving villagers from various positions and relevant ministries and agencies as much as possible. This is believed to have led to a high reputation for the project amongst the residents.

Thus, this project has mostly achieved its objectives. Therefore, effectiveness and impacts of the project are high.

### 3.4 Sustainability (Rating: ②)

#### 3.4.1 Policy and System

Whilst the *Palestinian National Development Plan (2011-2013)* called for improvements in health, education, administrative services, and others, the latest *National Policy Agenda (2017-2022)* more explicitly targeted these improvements.

The sector strategy for the local government sector, the *Strategic Framework of Cross-Sector Plan (2011-2013)*, and the strategy of the MoLG, the *Strategic Framework of the MoLG (2010-2014)*, called for the restructuring of local governments and the strengthening of JCs. Since then, these basic strategies have remained the same, but the direction of JCs' restructuring has been reviewed in light of reality, as JCs do not always function well in some areas.

During the project implementation, the South JC functions as a framework for addressing common issues (e.g. through frequent meetings), whilst the Mid-west and North JCs only have joint meetings when necessary, and the Mid-east JC is practically non-existent as each LGU is disparate. However, the autonomous function of each LGU continues to be emphasized.

#### 3.4.2 Institutional/Organizational Aspect

There have been no major changes in the organizational structure of the MoLG, and the Joint Council for Services, Planning, and Development (JCspd) in 2010 has since become the Joint Service Council (JSC), which continues to be responsible for the VCs of the Jordan Valley region and the JC that unites them<sup>8</sup>.

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<sup>7</sup> Interviews with a Bedouin community indicated that water trucks, mobile medical vehicles, and school buses were needed. Although these were also in the project, the first two were not utilized as planned.

<sup>8</sup> Mr. Sleiman, who was in charge of this project in 2010-2012, is the current Director General of JSC.

The Ministry of Health for the clinics in this project, the Ministry of Education for the schools, and the Ministry of Agriculture for the livestock disease prevention center continue to have jurisdiction. These authorities are primarily responsible for the maintenance and management of facilities, such as schools and clinics, and are responsible for allocating the necessary budget for relatively major repairs, but as described below, the budget is insufficient. Routine maintenance and minor repairs are handled by the Village Committee (hereinafter referred to as VC) of each LGU in close action with the competent ministries mentioned above.

Every four years, VC leaders and nine VC executives are elected, making VC leaders and executives essentially one body. In some villages, the election is held without competition, whereas in others, the election is held between competing candidates, reflecting the strong politics within the village.

In the following sections, the O&M systems for facilities and equipment in individual sectors are summarized.

(1) Clinics: The VC is responsible for daily maintenance, whereas the Ministry of Health is responsible for the procurement of medicines and management of equipment. Minor repairs to the building's water supply are handled by VC. The facilities are managed by the Ministry of Health, and if repairs are needed, the Ministry of Health staff are contacted to handle the situation. Doctors are not always present in the clinics (only for 2–3 hours half a week in some villages), and major illnesses are referred to larger hospitals in the core cities of Jericho and Nablus. The clinic in Ein Elbeida is staffed by a daily doctor at the request of the village leader; hence, the operation of the clinic seems to have a village-by-village element.

(2) Schools: The VC is in charge of daily maintenance and the Ministry of Education is responsible for major repairs. There have also been periodic inspections by the Ministry of Education. However, the number of teachers and staff seems to be appropriate for the number of students and classrooms. For example, Ein Elbeida girls' school has 130 female students and 32 teachers, whereas Al Auja girls' school has 640 students, 27 teachers, and six administrative staff. In recent years, the number of teachers in charge of specific subjects (e.g. music and science experiments) has increased in response to the curriculum improvement policy of the Ministry of Education.

(3) Electricity: In Bardalah, the private electricity company (North Palestinian Electricity Co.) is responsible for operation and maintenance; In the case of Ein Elbeida, Tubas Electric Co. is responsible for operation and maintenance. In the Mid-west JC (Al Nassariya, Al Aqrabaniya, Ein Shibli), the JC is responsible for the maintenance of the electricity network, has one engineer and two electricians, and handles minor repairs and hires private engineers when necessary.

(4) Roads: In principle, VCs are responsible for their maintenance and management. Maintenance and management responses differ by village.

(5) Community facilities: VCs are responsible for operations and maintenance. Major repairs, such as walls and building perimeters, were handled by contacting the MoLG.

(6) Livestock disease prevention center: The Nablus branch of the Ministry of Agriculture has jurisdiction over this center. The livestock disease prevention center is understaffed (only one veterinarian and one assistant, previously there were two each, but they are vacant), and for roughly seven or eight years, there has been no mobile vehicle driver or security guard at the livestock disease prevention center.

(7) Well-related facilities (Al Auja): Maintenance of the facilities is handled by the Palestinian Water Authority (hereinafter referred to as PWA), with a caretaker on site. PWA also handles electricity and other maintenance costs.

Overall, no major problems exist with the organization and structure of the ministries and agencies responsible for each of these sectors, such as clinics, schools, electric power, roads, and community facilities, but the reality is that due to budgetary constraints, which will be discussed below, appropriate action is not being taken.

### 3.4.3 Technical Aspect

The basic situation did not change significantly from the time of planning (ex-ante evaluation). The following is a summary of key sectors.

#### (1) Health care:

The skill level of medical personnel is generally high, with physicians educated mainly in Europe and the United States, as well as in neighboring Jordan and Egypt. Dentists, laboratory technicians, and X-ray technicians are also of high standards and have been educated at national and international specialized institutions. The doctors in the four clinics are medical personnel appointed by the Ministry of Health, who usually live in neighboring cities and commute to work at the local clinic. Nurses are appointed by the Ministry of Health, and some live in the city and commute to work, whereas others are stationed at the local clinic. The nurses in charge of pregnant women and newborns come to the clinic only on specific days, and resident nurses do not necessarily provide medical care.

#### (2) Education:

The bureaus of the Ministry of Education related to this project include the Building Bureau, Equipment Bureau, Finance Bureau, and Textbook Printing Bureau, each of which is responsible for monitoring the situation of schools in their respective areas and compiling information amongst the personnel of these departments. Meanwhile, schoolteachers are qualified teachers employed by the Ministry of Education and dispatched from other regions by the appointment of the Ministry of Education for a fixed term of office. In the target schools supported by this project, the percentage of teachers who were local or came from their schools was relatively high.

Overall, there are no major problems with regard to human resources or technical aspects of the ministries that have jurisdiction over various sectors.

#### 3.4.4 Financial Aspect

Although the Palestinian side is considered responsible for the maintenance of the constructed facilities and the equipment provided and for bearing the costs, the Palestinian Authority's financial balance is always in the red (see Figure 2).

Furthermore, since 2018 (since the advent of the Trump administration), U.S. aid (including financial assistance) to the Palestinian Authority has been reduced or suspended, and the budgets of Palestinian Authority ministries and agencies have decreased. In 2022, due to the economic downturn caused by the COVID-19 pandemic, employees, including professional staff and technicians of the MoLG, Ministry of Health, Ministry of Education, and PWA, are facing a situation of delayed salary payments.

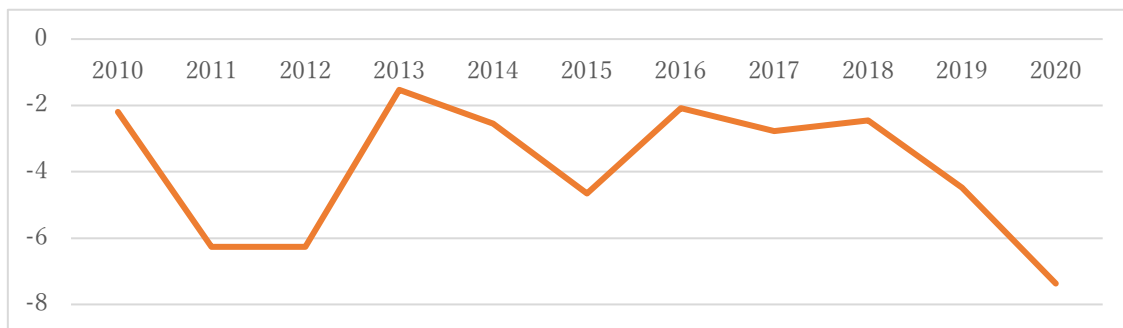


Figure 2: Palestinian authority fiscal balance (% of GDP) 2010-2020

(Note) Compiled from data in IMF, *World Economic Outlook Databases*, 2022.

The MoLG grants a "transportation fee" to each LGU. This budget is incorporated into the LGU's budget and can be used for any purpose needed by the LGUs. The 2009 allocation was made and suspended. It was decided to resume in 2014, but not allocated for a whilst, then allocated in FY2018, and the budget was approved but not allocated. This situation continues to persist.

On the other hand, the budgets and expenditures required for the maintenance and management of on-site clinics, schools, roads, and electricity networks are as follows. In all these facilities, payment of water and electricity bills, which should be handled by the budget of the competent ministries, has been delayed and in arrears, resulting in a situation of replacement payment by the VCs.

(1) Clinics: In addition to the payment of water and electricity bills for each clinic, the repair and renewal of broken medical equipment has been delayed owing to budgetary constraints imposed



by the Ministry of Health.

(2) Schools: Although the budget for the maintenance and renewal of school facilities and equipment has been appropriated and approved by the Ministry of Education, the amount actually spent is small due to budget shortfalls. The VC is responsible for day-to-day maintenance and management, but the budget is small and largely covered by donations from residents and private organizations. A specific amount of student contribution is allotted to daily maintenance costs.

(3) Electricity: In Bardala, the electricity bill was supposed to be supplemented by the Palestinian Authority (Council of Energy), but the policy was not realized due to budget shortfalls and the VC paid for the money. In the case of Ein Elbeida, residents pay the electricity company on a prepaid basis. The contract with the MoLG was supposed to provide electricity at a low price, but it was terminated after one year (2019).

(4) Roads: Although for some time after construction, not much money was spent on routine simple repairs, in some villages, the roads are damaged in some areas. The VC is responsible for daily maintenance, but the budget is insufficient, and donations are used when necessary.

(5) Community facilities: The VC is in charge of operation and maintenance, but the cost of maintenance and management is insufficient, with remaining challenges.

(6) School buses (Kardala): No maintenance was required for a whilst after the buses were provided, but after 10 years, they were in need of repair and maintenance. The VC is responsible for this cost, and expensive repairs are requested by the Ministry of Education. JC hires the driver, the VC pays his salary, and the students pay half of the cost (\$8/month per student).

Overall, due to budget constraints of the competent ministries for the maintenance of facilities and equipment, VCs are still facing financial difficulties, although the facilities and equipment are still generally being maintained properly through the efforts of each VC. This JICA project and also the "Area-C Development Programme in the West Bank", which European donors have supported since 2015, basically do not include support for maintenance budgets for facilities and equipment after they are provided. Therefore, for example, the Agence Française de Développement (AFD) reportedly uses separate support for maintenance and management, and it is believed that support for repair, renewal, or expansion of facilities and equipment following the completion of a project is sometimes required.

#### 3.4.5 Environmental and Social Aspect

Although emphasis was placed on the construction of schools, clinics, community centers and so on, given that all of these facilities were on public land owned by LGUs, no land acquisition or resettlement issues have emerged. The maintenance and management of facilities after construction has no negative impact on the environment or lives of the residents.

#### 3.4.6 Preventive Measures to Risk

During the implementation period of the project's 23 subprojects, 2010-2012, there were no interruptions in construction due to the rapid deterioration of the security situation in Palestine.

Meanwhile, the Al Auja well project involved the construction of a 2-km water supply pipeline, which needed to cross under Area-C road and required negotiations to obtain approval from Israeli authorities. Although approval was granted and construction was eventually completed, some disruptions were reported during the actual construction, including instructions from Israeli authorities to suspend construction at the site.

In addition, the construction of the electricity network in the Mid-west JC (Al Nassariya) was completed in 2012, but the Israeli authorities did not approve the electricity supply, and the electricity was not connected until 2015. In Area-C, due to the risk of difficulty in obtaining Israeli approvals and permits, construction of new facilities was avoided, but the Palestinian side had to deal with the above-mentioned unexpected obstacle (given that it was after the completion of the subproject, the Palestinian side had to deal with the situation), and negotiated with the Israeli Electricity Company. Previously, the JC paid; now, the MoLG pays in a lump sum and bills each village; and the VC has adopted a method for collecting usage fees from each village.

#### 3.4.7 Status of Operation and Maintenance

For the status of operation and maintenance of the project's 24 subprojects, see Table 5, "List of subprojects' situations."

From the above, some minor financial issues have been observed, and they are not expected to be improved/settled. Therefore, sustainability of the project effects is moderately low.

## **4. Conclusion, Lessons Learned and Recommendations**

### 4.1 Conclusion

The objective of this project is to improve access to public services at the community level by comprehensively improving various social infrastructures that support the livelihoods of Palestinian residents in Jericho and the Jordan Valley communities, where there are many poor farming villages, thereby contributing to the improvement of the living environment for residents.

The project is highly consistent with Palestinian policies and needs. Although the feasibility of some of the subprojects (e.g. well-related projects using residual funds) may have not been fully considered at the time of planning, the project plans and approaches for most of the subprojects are appropriate and suggestive of other projects, and their relevance is recognized. The project is consistent with the development cooperation policy of the Government of Japan and JICA, and has been linked and coordinated with the preceding project. In addition, the project is significant

as a precedent case in which villages in the supported area have gained experience in receiving support from international donors. Therefore, its relevance and coherence are high.

Although the project cost was as planned (100%), the project period was approximately 135% of the plan for the main project (23 subprojects) and 482% of the plan for the residual project (one project), resulting in an overall project period performance of 413% of the plan. Therefore, the efficiency of the project is moderately low.

The three indicators (health, education, and community facilities) set at the time of planning as quantitative effects of effectiveness were generally achieved as planned. Although some differences exist depending on the facility, in the evaluation of benefits, satisfaction, and service improvement of healthcare, educational facilities, roads, electricity and so on of the project, it can be inferred that the expected effects and impacts for most of the subprojects were generally achieved. Therefore, the effectiveness and impact of the project are high.

With regard to sustainability, although subprojects are generally being properly maintained and managed at present, some minor issues have been observed in terms of finances (such as securing budgets for operation and maintenance), and it is not expected to be improved. Therefore, sustainability of the project effects is moderately low.

In light of the above, this project is evaluated to be satisfactory.

## 4.2 Recommendations

### 4.2.1 Recommendations to Executing Agencies

In all cases, whether health care, schools, roads, or livestock disease prevention center, the factors that determine the benefits and quality of services are the budget for subsequent maintenance and adequate staffing. Where this is inadequate, it is a major factor in reducing residents' perceptions of the benefits and satisfaction with the project.

(1) Ministry of Local Government, Ministry of Health, and Ministry of Education.

The maintenance and management of facilities and equipment that have been constructed or expanded, which should be handled by the central ministries (e.g. MoLG, Ministry of Health, Ministry of Education), should be budgeted as much as possible.

(2) Ministry of Agriculture.

As the local need for livestock disease prevention is extremely high, the Ministry of Agriculture should deploy the necessary personnel, even if minimal, to the livestock disease prevention center in Al Nassariya.

### 4.2.2 Recommendations to JICA

(1) As no community development projects have been implemented by the JICA in the area since 2012, when the main subproject of this project was completed, additional individual projects

should be considered to improve the livelihood of residents in each LGU. Based on JICA's experience in planning and implementing projects to improve the livelihoods of people in vulnerable areas, future projects should be considered, as there is still a great need for support.

(2) One approach to consider is to implement JICA projects in conjunction with the MDLF Area-C Development Programme in the West Bank and LDSIP projects. It is desirable to work in some way with organizations such as MDLF that have experienced personnel in implementing projects in the field, as this may save time and effort in the implementation of community development projects.

(3) In addition to monitoring after completion of the project, JICA should implement small-scale follow-up projects (e.g. renovation of the facility, updating of PCs, installation of air conditioners) to ensure effective long-term use of the facilities.

#### 4.3 Lessons Learned

##### (1) Importance of information sharing and consensus building with all stakeholders at the planning stage

This was a multi-sectoral project, and many ministries were involved. Although close consultations with the Ministries of Education, Health, and Agriculture were conducted during the planning, there was no information sharing with the relevant agencies regarding the electricity project, reaching a consensus took time. In multi-sector community development projects, it is useful to include all relevant stakeholders, share information, and make efforts to build consensus at the stage from project formation to implementation.

##### (2) The need for careful consideration of the feasibility and sustainability of the proposed projects

Although the project adopted a participatory project formation process that included local residents, some of the subprojects were not without challenges (e.g. the sustainability of two water trucks may not have been adequately considered, and the construction plan for well-related equipment and facilities using residual funds may not have been appropriate). Even the VC proposes a project as a priority after a consensus is reached through a participatory approach, careful consideration must be given to feasibility and sustainability (especially financial sustainability) from an objective and professional standpoint.

##### (3) Significance of consultations with relevant donors with a view to information sharing and complementarity

At the time of planning, JICA was aware of the existence of the "Municipal Development Program" funded by the World Bank to the MDLF, and shared some information with the World Bank, but no specific discussions were held on the collaboration with the World Bank, which was a multi-donor fund and the major donor. Meanwhile, JICA's support for the Jordan Valley region, which was not supported by such funds, was expected to have complementary significance in

promoting development in marginalized areas by following up on its prior project. Consultations with other donors supporting similar areas and sectors, including information sharing, are desirable to maximize complementarity and synergy.

## 5. Non-Score Criteria

### 5.1 Performance

#### 5.1.1 Objective Perspective

The Jordan Valley area of the West Bank in Palestine, which is dotted with small LGUs, is mostly Area-C, making it difficult to construct new facilities. Until then, it had received little support from the international community, making this project a new and ambitious attempt.

Following the implementation of 15 pilot projects in the CEC of the preceding project ("Project for Improvement of Local Governance System" (2005-2010)), JICA implemented 24 subprojects to 14 small-scale communities, including health (clinics), education (schools), electricity network, road improvement, livestock disease prevention, and water supply. The implementation of projects directly linked to improving the livelihoods of the population was a new challenge and significant initiative.

In fact, a number of subprojects have been implemented, albeit on a small scale, and most of them have shown the expected results and impact. Not only was the project well-received by the project's counterpart, the MoLG, and the LGUs (VCs) supported by the project, but many of those who participated in the discussions of the participatory project-making process at the time also praised the effort.

#### 5.1.2 Subjective Perspectives: retrospective (summary of "Detailed Analysis")

In this analysis, the roles and contributions of project stakeholders, including JICA, in realizing participatory community development projects were analyzed mainly through interviews with project stakeholders in Japan.<sup>9</sup>

(1) This project was a case of incorporating the needs of the residents, and the emphasis was on a learning process in which the residents themselves would make an effort and build the capacity of the VCs through the implementation of the project. The needs of each LGU were absorbed on the basis of the wishes of the residents of each village, and compiled by the MoLG. Residents' meetings were not required to consolidate needs, and the compilation process differed from village to village. In some cases, VC executives had a great deal of influence in consolidating opinions, whereas in other cases, residents participated in meetings and proposed priority projects

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<sup>9</sup> Interviews were conducted with the respective personnel of the then JICA office, consultants, and JICS (Japan International Cooperation System). As a complementary source of information, interviews were conducted on the local side with local government officials involved in the formation, planning, and implementation of the project, several VC executives, and JICA local staff.

after discussions.

(2) In the process of project formation, the planning and research staff and consultants on the Japanese side made efforts to formulate the subprojects, including frequent visits to each LGU, following the preceding project. On the Palestinian side, MoLG officials made efforts to organize the project. Their efforts made it possible to establish close ties between the field and the Japanese side and to provide detailed responses through this project; however, there remained some elements that belonged to the individual.

(3) The JICA office did not unilaterally decide on the projects proposed by the Palestinian side to be supported, but selected them on the basis of the needs and difficulty of implementation, whilst considering the budget ceiling amount. 21 projects had already been decided on the basis of the preceding CECs before the 'Preparatory Survey' started in 2009, and three projects in the electricity sector were added to the list.

(4) The consulting company (M) awarded the consulting work, was familiar with the local situation as it had separately implemented a school construction project in Palestine, and was involved in the formation and implementation of this project, together with a consulting company (K), which had implemented a preceding project. As it was difficult for a single company to organize a project covering a number of sectors, they devised and arranged the composition of the survey team by hiring experts in each sector, such as health, agriculture, and electricity.

(5) The project involved many government ministries and required time and effort to organize the process of project formation and implementation. Japanese experts, together with representatives of the MoLG and the C/P of this project, visited each ministry and agency frequently to explain the procedures of this project. JICS, which acted as the procurement agency for the implementation of the project, also responded by setting up a local office and utilizing local staff.

(6) An additional project using the remaining funds, the Al Auja well facility, included a plan to lay a water supply pipeline, and because the pipeline would also cross Area-C on the way, obtaining a permit from the Israeli side was necessary. During the construction work, there were times when the Israeli local police stopped the work, but the Palestinian side could not proceed with negotiations with the Israeli side alone. Thus, the Japanese side (embassy and JICS field office) negotiated with the Israeli side each time for permission to resume work, and the work was able to proceed.

## 5.2 Additionality

In forming the 24 subprojects of the project, JICA and MoLG adopted a "participatory" project formation process that included various stakeholders. Thus, the subprojects were selected and formed from the bottom up in accordance with the needs of the field by collecting the opinions of not only the executives of the LGUs to be supported (village heads and VC executives), but also

many local residents, with the participation of officials from the central government ministries (Ministry of Health, Ministry of Education and so on).

Forming such a participatory project involving a large number of stakeholders is a time-consuming and labor-intensive process, and the efforts of the many experts and officials involved on the Japanese and Palestinian sides when carrying out such a challenge should be highly appreciated.

Although JICA itself has not implemented any similar community development projects in this area since the implementation and completion of most of the subprojects of the project in 2012, a multi-donor fund "Area-C Development Programme in the West Bank" has been formed since 2015, mainly by European donors, and the project aims to improve and enhance the livelihoods of the residents in this area by improving infrastructure in the sectors of schools, electricity, roads, water access, parks and so on.

Although the European donors did not use the JICA project as a reference on their side, the implementation of the preceding projects (15 projects of the CEC under the "Project for Improvement of Local Governance System" (2005-2010) and 23 subprojects of this project in 2010-2012) has led to an improvement in the capacity of the VC side in examining, planning, and implementation of development projects. The project was positioned to have had an indirect impact as a leading project.