Chapter 3 Project Evaluation

3. Project Evaluation

3-1 Preconditions for Project Implementation

The main actions that must be taken by the Seychelles side as preconditions for implementing this Project are as follows.

(i) Environmental and social consideration and acquisition of environmental authorization

Authorization concerning environmental issues must be acquired and EIA procedures carried out. Costs incurred by third-party bodies in preparing EIA reports must be borne. As this Project involves expanded works from Phase 1, it belongs to Class II in the Seychelles, but the state of progress must be explained to fishing port users and stakeholders.

(ii) Acquisition of construction permits

Permits thought necessary for construction work and equipment procurement should be acquired, and costs incurred by third-party bodies in verifying structural diagrams and inspecting quality management must be borne.

(iii) Removal of obstacles and land leveling in the construction site

Obstacles inside the Project site must be removed, the site must be leveled, and measures must be taken to prohibit unauthorized access to the site.

(iv) Measures to ensure the smooth progression of the Project

Bank arrangements and payment authorization must be promptly issued, permits for entering and staying in the Seychelles must be secured for Japanese and third country nationals involved in implementing this Project, as well as securing their safety during their stay. Measures must be taken to exempt all taxes imposed on Japanese individuals and corporations in the Seychelles when procuring construction works, materials and equipment and providing services.

(v) Works and others borne by the Seychelles side

Fences must be erected around the ice making building, and surrounding access roads must be developed wherever necessary.

(vi) All costs outside the scope of the grant aid from the Japanese government must be borne.

3-2 Major Undertakings by the Government of Seychelles

The major undertakings taken by the Seychelles side to express and sustain the effects of this Project are as shown in Table 3-1(1).

Table 3-1(1) Major Undertakings by the Government of Seychelles

	Time		Item	Deadline
1	Before Tender process	1	To obtain the approval of EIA (Environmental Authorization)	before G/A
		2	To ensure the budget for the project implementation	within one month after G/A
		3	To open the Bank Account	within one month after G/A
		4	To issue the A/P (for consultant contract)	within one month after GA
		5	Advising commission of A/P and payment commission need to be covered	Before PQ
		6	To secure the land necessary for project implementation. (Project sites and temporary stock yard for the construction near the project site)	Before PQ
		7	To clear, level and reclaim the Project sites 1) Demolition of unnecessary existing building 2) Removal of unnecessary existing trees 3) Leveling and reclaiming the site for the construction	Before PQ
		8	Construct temporary access road for the construction work.	before PQ
2	After the signing of the contract with contractor /supplier	1	To issue the A/P (for construction contract) Advising commission of A/P and payment commission need to be covered	within one month after the signing of contract
		2	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products. 1) Tax exemption of the products at the port of disembarkation 2) Customs clearance of the products at the port of disembarkation	within one month after the equipment/material /heavy machine are delivered to the port/airport.
		3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.	One month after the submission of required application.
		4	To exempt Japanese nationals from, without using the Grant, customs duties, internal taxes and other fiscal levies such as VAT(Value Added Tax), Trades Tax, Vehicle Levies, which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract	After contractor's contract
		5	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment	
		6	To provide facilities for distributing electricity, water supply and drainage, and other incidental facilities necessary for the implementation of the Project outside the site 1) Electricity a. The distribution power line to the site b. The main circuit breaker and transformer 2) Water Supply: the potable water distribution main to the site 3) Drainage: Central Drainage on the port	before the commencement of contraction
		7	To assign the required staffs for the implementation of Soft Component	before the completion of construction
		8	To submit Project Monitoring Report with the results of environmental monitoring to JICA on a quarterly To apply for the supplementary budget in the 3rd fiscal quarter (July to September) , if necessary	every three month
		9	To construct the gates and fences in and around the ice plan facility	After the

				completion of the contract
3	After the completion of the project	1	To ensure that facilities and the products be maintained and used properly and effectively for the implementation of the Project	
		2	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project	
		3	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance organization and staff 3) Routine check/periodical maintenance	
		4	To implement Environment Monitoring based on the Environmental monitoring plan	for a period based on EMP
		5	To cooperate the Ex-Post Evaluation survey implemented by JICA	

3-3 External Conditions

External conditions for the effects of the Project to be expressed and sustained after completion of the facilities are as shown below.

(a) Purchases of small and medium fishing boats by investors (fishery processors) proceed as planned.

(b) The necessary personnel for maintaining ice making facilities are appointed, and efficient facility operation is properly carried out.

(c) Ice sold by the SFA can be sold at prices based on market principles, and ice making facilities are operated in a stable fashion.

3-4 Project Evaluation

3-4-1 Relevance

For the following reasons, the implementation of this Project is judged to have relevance as a target of cooperation based on grant aid.

(1) Consistency with Over All Goals

This Project will contribute to meeting the over all goals targets cited in the Seychelles Fisheries Development Plan, namely “making sustainable use of resources”, “creating employment”, “earning foreign currency” and “food safety”.

(2) Operation and maintenance

The facilities and equipment in this Project can be operated and maintained with the host nation’s own capital, human resources and technology, and will not require excessively advanced levels of technology. This Project is to be operated by the SFA and will present no problems in terms of management or operation, and its profitability will be enough to expect the facilities and equipment to be operated and maintained smoothly.

(3) Environmental and social consideration

The implementation of this Project will merely involve expanding existing facilities and existing equipment, and no negative impact can be ascertained.

(4) Beneficial effects

The beneficiaries of this Project are the ordinary citizens of the Seychelles, including small and medium artisanal fishermen, retail traders, and fishery processors, the numbers of whom are sufficiently large.

Direct beneficiaries: Fishing port facility workers, fishery workers, fish market workers (several hundred)

Indirect beneficiaries: The whole population of the Seychelles (approx. 90,000)

(5) Consistency with Japan's policy and aims of aid to the Seychelles

This Project can be implemented without particular difficulty within Japan's grant aid system.

3-4-2 Effectiveness

(1) Quantitative effects

The following quantitative effects may be expected by implementing this Project.

1) **Optimization of quay congestion rate**

The quay congestion rate is the ratio of actually moored boats to the planned number of boats using a quay. A quay congestion rate of nearly 100% indicates that the facility is being used safely and properly. In the 2015 baseline survey, it was found that there were 23 moored boats compared to a planned number of 12 boats, revealing an extremely bad environment of use. At the start of this Project, the congestion rate inside the port will be lower than 100% due to an increase in the planned number of boats (to 39 boats) with the quay extension. After completion of the project, however, the target is for the rate to be approaching 100%.

2) **Fish landing volumes**

Catches by artisanal fishing boats in Mahe Island are mainly landed at Victoria, Providence and Bel Ombre fishing ports. Landing volumes are important in estimating fishing port functions, and are taken to indicate whether the demand required by the private sector can be satisfied. Based on the fact that planned moorings in the port are to be set to double in this Project, the landing volume in the 3rd year after project completion is set to double to 292 tons.

3) **Volume of ice sold to fishermen**

Artisanal fishing boats need a certain volume of ice in order to maintain the freshness of their fish catches. As such, the volume of ice sold in a fishing port is an indicator of improved ability for fishermen to be active. In this Project, 125 tons will be set as the

baseline volume for ice sales. Although planned moorings in this Project are approximately double, the ice sales volume will be set to triple the baseline volume at 375 tons. This is based on the fact that fishing boats themselves are increasing in size and the sale price is cheaper than in the private sector.

Table 3-1(2) Quantitative effects

Indicator	Reference value (Actual figure for 2015)	Target value (2021) (Three years after Project completion)
Quay congestion rate* (%)	191	100
Fish catch landing volume (tons/year)	150	292
Ice sold at the fishing port (tons/month)	125	375

*Quay congestion rate (Target value)= Number of vessels using quay/ Designed number for mooring vessels.

The expected outcomes for quantitative effects arising from the input of this Project are as follows.

(i) The work efficiency of fishers is improved through the implementation of port regulations.

(ii) The safety of vessels and fishers at Providence/ Victoria ports are improved through reducing the congestion.

(iii) The optimum supply of ice for fishers is ensured through enhancing the operation and management of ice making facility.

(iv) The quality of fish product is improved through enhancing the port operation such as the use of ice making facility and landing shed.

Based on the above, this Project is judged to be highly relevant and also to promise ample effectiveness, since besides the contribution to fishery operators who use the fishing port, a knock-on effect to fisheries in the local community can also be expected.

APPENDICES

【Appendices】

1. Member List of the Study Team
2. Study Schedule
3. List of Parties Concerned in the Recipient Country
4. Minutes of Discussion (M/D)
5. Soft Component (Technical Assistance) Plan
6. Other Relevant Data

Appendices 1. Member List of the Survey Team

1-1 Preparatory Survey (1)

Name	Organization	Assignment title
Mr. Isao KOYA	JICA Rural Development Department	Team leader
Mr. Kenichi MATSUMOTO	JICA Rural Development Department	Project planning
Mr. Ryo ISHIMOTO	OAFIC Co., Ltd.	Chief Consultant / Operation and Management
Mr. Kenji KUROKI	ECOH CORPORATION	Civil Engineering Design/ Natural Condition Survey
Mr. Kazumi IIDA	OAFIC Co., Ltd.	Fisheries/ Fisheries Products distribution
Mr. Masanori NAKAMURA	OAFIC Co., Ltd.	Environmental and social considerations

1-2 Preparatory Survey (2)

Name	Organization	Assignment title
Mr. Isao KOYA	JICA Rural Development Department	Team leader
Mr. Shin MARUO	JICA Africa Department	Project planning
Mr. Ryo ISHIMOTO	OAFIC Co., Ltd.	Chief Consultant / Operation and Management
Mr. Kenji KUROKI	ECOH CORPORATION	Civil Engineering Design/ Natural Condition Survey
Mr. Takayoshi HANADA	OAFIC Co., Ltd	Architecture Plan
Mr. Junichiro MORI	OAFIC Co., Ltd.	Equipment Design /Procurement plan/Cost Estimation
Mr. Yuhei YAMAMOTO	ECOH CORPORATION	Construction Plan/ Cost Estimation

1-3 Explanation of Draft Report

Name	Organization	Assignment title
Mr. Isao KOYA	JICA Rural Development Department	Team leader
Mr. Kentaro NISHIYAMA	JICA /Financial Cooperation Implementation Department	Project planning
Mr. Ryo ISHIMOTO	OAFIC Co., Ltd.	Chief Consultant / Operation and Management
Mr. Kenji KUROKI	ECOH CORPORATION	Civil Engineering Design/ Natural Condition Survey

Appendices 2. Study Schedule

2-1 Preparatory Survey (March 7, 2015 - April 5, 2015)

No.	Date	Days	Official Members	Consultants Members
			① ②	③ ④ ⑦ ⑧
1	7-Mar	Sat	③④⑦Departure from Narita (EK319,EK707)	
2	8-Mar	Sun	③④⑦Arrive Mahé Island	
3	9-Mar	Mon	③④⑦ Courtesy visit SFA, Discussion of work plan	
4	10-Mar	Tue	③④⑦ Visit project site, confirmation of site condition, Survey of facilities(Providence fish port)	
5	11-Mar	Wed	③④⑦Ditto(Victoria fish port)	
6	12-Mar	Thu	③④⑦Ditto(Bel Ombre fish port)	
7	13-Mar	Fri	③④⑦ Fish distribution survey(Fish processing factory, Fishing Companies, Market)	
8	14-Mar	Sat	③④⑦Contract with sub-contractor, Base line survey(Natural condition, Base line survey)	
9	15-Mar	Sun	③⑦Team Discussion④Port utilization survey(Providence fish port)	
10	16-Mar	Mon	③Operation and Maintenance survey④Mooring boat survey(Providence)⑦Boat operator and fisherman survey	
11	17-Mar	Tue	③Ditto④Port utilization survey(Victoria)⑦Ditto ⑧Depart Narita	
12	18-Mar	Wed	③Ditto④National condition survey⑦Fish processing factory survey⑧Arrive Mahé Island	
13	19-Mar	Thu	③Ditto④Ditto⑦Ditto⑧Visit SFA, Discussion with C/P	
14	20-Mar	Fri	③Ditto④Meeting with Local constructor, request of estimate.⑦Study of Local market⑧Discussion with Ministry of Environment, collect information for EIA	
15	21-Mar	Sat	③④⑦⑧Preparation of repots	
16	22-Mar	Sun	③⑦⑧Ditto④Mooring boat survey(Victoria)	
17	23-Mar	Mon	①②Depart Haneda, Arrive Mahé③④⑦⑧Stakeholders meeting(Providence fish port)	
18	24-Mar	Tue	①②③Visit SFA, Discussion of project component④Marine civil survey⑦Base-line survey⑧Project site study	
19	25-Mar	Wed	①②③Project site survey, Stake holders meeting (Providence fish port)④⑦⑧Ditto	
20	26-Mar	Thu	①②③Project site survey④Marine sediment survey(with local divers)⑦⑧Ditto	
21	27-Mar	Fri	①②③Fisheries and distribution survey④Marine sediment survey⑦⑧Ditto	
22	28-Mar	Sat	①②③Preparation of M/D④Civil engineering survy⑦⑧Ditto	
23	29-Mar	Sun	①②③④⑦⑧Team meeting	
24	30-Mar	Mon	①②③④Discussion with SFA⑦Departure Mahé Island EK706, EK318⑧EIA survey	
25	31-Mar	Tue	①②③④Discussion with SFA⑦Arrive Narita⑧Ditto	
26	1-Apr	Wed	①②③Signing M/D④National condition survey⑧Ditto	
27	2-Apr	Thu	①②Depart from Mahé Island③Final discussion with SFA④⑧Ditto	
28	3-Apr	Fri	①②Arrive at Narita③④Discussion with SFA	
29	4-Apr	Sat	③④⑧Departure from Mahé Island EK706, EK318	
30	5-Apr	Sun	③④⑧Arrive Narita	

① Leader ② Project Planning ③ Chief Consultant/Operation and Management
④ Civil Engineering design/natural condition survey
⑦ Fisheries/Fisheries Products distribution
⑧ Environmental and social considerations

2-2 Preparatory Survey (May 19, 2015 — July 17, 2015)

No.	Date	Days	Official Members	Consultants Members
			① ②	③ ④ ⑤ ⑥ ⑨
1	19-May	Tue	① Depart From Tokyo (EK319, EK707)	
2	20-May	Wed	③Arrive Mahé Islands	
3	21-May	Thu	③Visit SFA, discussion of IC/R	
4	22-May	Fri	③Ditto, Visit project site	
5	23-May	Sat	③Site condition survey, Consideration of project components	
6	24-May	Sun	③Ditto	
7	25-May	Mon	③Visit SFA and discussion of Project,④⑤⑥Depart from Tokyo	
8	26-May	Tue	③Discussion with SFA④⑤⑥Arrive Mahé Islands, Team meeting	
9	27-May	Wed	③Fish distribution survey (Supplemental)④⑤⑥Visit SFA, discussion of project components	
10	28-May	Thu	③Ditto④Supervising of Subcontractor for natural condition survey⑤⑥Site survey, determination of facilities	
11	29-May	Fri	③Ditto④Fish port survey⑤Determination and survey of Fishing facility⑥Survey of existing facilitates	
12	30-May	Sat	③④Central market survey, Survey of local subcontractor⑤Facility survey ⑥ Facility operation survey	
13	31-May	Sun	③④⑤⑥Project site survey, Team meeting	
14	1-Jun	Mon	③Discussion with SFA, Study of evaluation methods of the project④Survey on natural condition⑤Visit Public Utilities Agencies ⑥Procurement condition survey	
15	2-Jun	Tue	③Fish distribution survey (supplemental)④Mooring vessel study⑤Facility planning survey, ⑥Ditto	
16	3-Jun	Wed	③④⑤Stakeholders meeting, Distribution survey, Mooring vessel survey⑥ Equipment planning survey	
17	4-Jun	Thu	③Social Environment survey④Civil engineering Survey⑤⑥Ditto	
18	5-Jun	Fri	③④⑤⑥Ditto	
19	6-Jun	Sat	③④⑤⑥Team meeting, Documentation and report writing	
20	7-Jun	Sun	③④⑤⑥Ditto	
21	8-Jun	Mon	③Operation and management planning survey④Supervising subcontractor⑤ Facility planning survey⑥Equipment planning survey	
22	9-Jun	Tue	③④⑥Ditto⑤Visit PUC for infrastructural survey	
23	10-Jun	Wed	③④Ditto⑤Discussion at Fire station⑥Preparation of equipment Basic plan	
24	11-Jun	Thu	③⑥Discussion at SFA④Civil engineering survey⑤Constructor survey	
25	12-Jun	Fri	③Evaluation index study④Visit Land use department⑤Ditto⑥Depart from Seychelles	
26	13-Jun	Sat	③④⑤Market survey ,Documentation and report writing⑥Arrive Tokyo	
27	14-Jun	Sun	③④⑤Team meeting , Documentation and report writing	
28	15-Jun	Mon	③⑤Visit MFBE, Ministry of Inertia④Preparation of Basic plan for Civil engineering	
29	16-Jun	Tue	③⑤Discussion of Labor condition with SFA④Ditto	
30	17-Jun	Wed	③Discussion of Labor during construction④Ditto⑤Survey on safety and fire extinguish	
31	18-Jun	Thu	③Supervises on Baseline survey④Ditto⑤Documentation and report writing ⑨Depart From Tokyo	
32	19-Jun	Fri	③⑤Discussion and reporting with SFA④Ditto ⑨Arrive Mahé Islands	
33	20-Jun	Sat	③④⑤⑨Team meeting, Documentation and report writing	
34	21-Jun	Sun	③④⑤⑨Documentation and report writing, Project site survey	
35	22-Jun	Mon	③④Discussion with SFA ⑤Depart from Mahé Island⑨ Construction schedule planning, estimation of the project cost	
36	23-Jun	Tue	③④Preparation of mid term report ⑤arrive Dubai ⑨Construction schedule planning, estimation of the project cost	
37	24-Jun	Wed	①Depart From Tokyo, Arrive Mahé Islands③④Team meeting ⑤Ditto ⑨Ditto	
38	25-Jun	Thu	①③④Courtesy visit to SFA, Discussion of the Project component⑤Ditto ⑨Ditto	
39	26-Jun	Fri	①③④Discussion of the Project component with SFA⑤Ditto ⑨Ditto	

40	27-Jun	Sat	①③④Project site survey⑤Depart from Dubai, Arrive Tokyo ⑨Documentation and report writing
41	28-Jun	Sun	②Depart From Tokyo①③④Project site survey, Documentation and report writing ⑨Documentation and report writing
42	29-Jun	Mon	②Arrive Mahé Island①③Preparation of M/D④Documentation ⑨Procurement condition survey
43	30-Jun	Tue	①②③Team meeting ,Project site survey④Discussion with SFA ⑨Procurement condition survey
44	1-Jul	Wed	①②③Courtesy visit to MAA, discussion with Minister, Discussion with SFA, Meeting with MFBE, Meeting and discussion with DG of IOTC ④Discussion with SFA ⑨Procurement condition survey
45	2-Jul	Thu	①②③Discussion with SFA, Visit project site and relating facilities, Courtesy visit to Ministry of Finance and Blue economy (MFBE), Signing M/D④Depart from Mahé (EK706,EK318) ⑨Procurement condition survey
46	3-Jul	Fri	①③Discussion with SFA②Depart from Seychelles④Arrive Tokyo ⑨Procurement condition survey
47	4-Jul	Sat	① ③ Discussion with SFA, Project site confirmation ② Arrive Tokyo ⑨Documentation and report writing
48	5-Jul	Sun	①③Depart from Seychelles(KQ251) Arrive Nairobi, Kenya ⑨Documentation and report writing
49	6-Jul	Mon	①③Courtesy visit to Embassy of Japan, JICA office, Depart from Nairobi (EK722, EK312) ⑨Procurement condition survey
50	7-Jul	Tue	①③Arrive Tokyo ⑨Procurement condition survey
51	8-Jul	Wed	⑨Procurement condition survey
52	9-Jul	Thu	⑨Ditto
53	10-Jul	Fri	⑨Procurement condition survey
54	11-Jul	Sat	⑨Documentation and report writing
55	12-Jul	Sun	⑨Ditto
56	13-Jul	Mon	⑨Supplemental survey
57	14-Jul	Tue	**⑨Ditto**
58	15-Jul	Wed	⑨Reporting survey result to SFA
59	16-Jul	Thu	⑨Depart from Seychelles (EK706,EK318)
60	17-Jul	Fri	⑨Arrive Tokyo

2-3 Preparatory Survey (November 25, 2015 — December 5, 2015)

No.	Date	Days	Official Members	Consultants Members
			① ②	③ ④
1	25-Nov	Wed	①②③④Depart From Tokyo (EK319,EK707)	
2	26-Nov	Thu	①②③④Arrive Mahé Islands	
3	27-Nov	Fri	①②③④Courtesy visit to SFA, Discussion and meeting of DF/R	
4	28-Nov	Sat	①②③Preparation of M/D ④Documentation and report writing	
5	29-Nov	Sun	③④Supplememt survey ①②③④Documentation and report writing	
6	30-Nov	Mon	①②③④Preparation of M/D, Courtesy visit to MAA④Ditto	
7	1-Dec	Tue	①②③④Prepartion of M/D	
8	2-Dec	Wed	①②③④Signing of M/D	
9	3-Dec	Thu	①②③④Depart from Seychelles (KQ251), Arrive Nairobi, Kenya	
10	4-Dec	Fri	①②③④Courtesy visit to JICA Kenya office and Embassy of Japan, Depart from Nairobi (EK706,EK318)	
11	5-Dec	Sat	①②③④Arrive Tokyo	

① Leader ② Project Planning ③ Chief Consultant/Operation and Management
④ Civil Engineering design/natural condition survey
⑤ Architecture Plan
⑥ Equipment Design /Procurement plan/Cost Estimation
⑦ Fisheries/Fisheries Products distribution
⑧ Environmental and social considerations
⑨ Construction Plan/ Cost Estimation

Appendices 3. List of Parties Concerned in The Recipient Country

Ministry of Fisheries & Agriculture	
Hon. Wallace Cosgrow	Minister
Mr. Michael Nalletamby	Principal Secretary
Mr. Finley Racombo	Special Advisor to the Minister
Mr. Norlis Rose-Hoareau	Personal Assistant to Minister
Board of Directors of Seychelles Fishing Authority(SFA)	
Mr. Philippe Michaud	Chairman
Seychelles Fishing Authority	
Mr. Vincent Lucas	Ag. Chief Executive Officer
Mr. Roy Clarisse	Deputy Chief Executive Officer
Mr. Clifford Toussaint	Project Manager
Mr. Joan Marimba	S. Project Officer
Mr. Michele A Marguerite	Chief Economist
Ms. Cindy Assan	Statistician
Ms. Christianne Sultan	Ass. Port Administer
Ms. Dora Lesperance	Fisheries Development Management
Mrs. Rona Arrisol	Quality Control Officer
Mr. Aubrey Lesperance	Principal Aquaculture Officer
Miss Elisa Socrate	Principal Fisheries Officer
Ms. Juliette Lucas	Consultant data, Management & Statistics
Mr. Dave Azemia	Port Manager
Ministry of Environment, Energy and Climate Change	
Ms. Nantte Laure	Director Environment Assessment & Permits section
Ministry of Home Affairs	
Immigration and civil status Department	
Mr. Michel T. Marie	
Mr. Ronald Fock-Tave	Director General of Immigration
Mr. Paul Dilon	
Ministry of Finace and Blue Economy	
Mr. Patric Payet	Principal Secretary for Finance
Mr. Philippe Michaud	Special Advisor
Ms. Brenda Bastinne	Policy and strategy division
Seychelles Planning Authority	
Mrs. Fanette Albert	Deputy CEO
National Bureau of Statistics	
Mr. Michel Mellie	Principal Statician
Seychelles Bureau of Standard	
Mrs. Sreekala Nair	Manager
Ministry of Land use & Housing	
Mr. Ronald Fock-Tave	Director General of Immigration
Mr. Patrick Lablache	Project Planning & Implementation

Fishing Boat Owners Association	
Mr. Keith Andre	Chairman
Mr. Paul Morin	Vice chairman (Morin Group)
Ms. Virginie Lagarde	Project Manager
IOTC	
Mr. Rondolph Payet	Executive Secretary
Mr. Koihi Sakonjy	IOTC-OFCF project Manager
SEAHARVEST	
David Bentley	Managing Director
Oceana Fisheries	
Mr. Danny Dominic Lowlam	Managing Director
Mr. Pavel Puzakov	Advisor
Embassy of Japan (Kenya)	
Mr. Satoshi ENDO	Second Secretary
Mr. Shouhei SAKAI	Second Secretary

Appendices 4. Minutes of Discussion

MINUTES OF DISCUSSIONS
ON
THE PREPARATORY SURVEY
ON
THE PROJECT FOR THE CONSTRUCTION OF FISHERIES FACILITIES AT PROVIDENCE, ZONE 6
IN
THE REPUBLIC OF SEYCHELLES

In response to a request from the Government of the Republic of Seychelles (hereinafter referred to as "GOS"), the Government of Japan (hereinafter referred to as "GOJ") decided to conduct the Preparatory Survey on the Project for The Construction of Fisheries Facilities at Providence, Zone 6 (hereinafter referred to as "the Project") and entrusted the survey to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to the Republic of Seychelles (hereinafter referred to as "Seychelles") the Preparatory Survey Team (hereinafter referred to as "the Team") headed by Mr. Isao Koya, Senior Advisor to the Director General, JICA and is scheduled to stay in the country from 23March to 2 April, 2015.

The Team held discussions with the officials concerned of GOS and conducted a field survey at the survey area.

As a result of discussions and field survey, both parties confirmed the main points described in the attached minutes sheets. The Team will proceed with further works and prepare the Preparatory Survey Report.

Victoria, 1 April, 2015

甲谷伊佐雄

Mr. Isao Koya
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan

Mr. Vincent Lucas
Chief Executive Officer
Seychelles Fishing Authority
Seychelles

ATTACHMENT

1. **Inception Report**
The Team explained the objective of the Project and procedure of the Survey to be conducted in accordance with the Inception Report. After a series of discussions, the Team and GOS side (hereinafter referred to as "the both parties") agreed on the contents of the Inception Report in principle.

2. **Objective of the Project**
The objective of the Project is to expand and improve the facilities of Providence fishing port, intending safety mooring of fishing boats, smooth landing of fish and improvement of quality of fishery products.

3. **Project Site**
The site of the Project is located at Providence on Mahe Island of Seychelles as shown in Annex-1.

4. **Responsible and Implementing Agency**
4-1. The responsible organization is the Ministry of Fisheries and Agriculture.
4-2. The implementing organization is the Seychelles Fishing Authority (SFA).
4-3. The organization chart of SFA is shown in Annex 2.

5. **Facilities and Equipment requested by GOS**
5-1. After discussions between both parties, the facilities and equipment contents requested by GOS were prioritized as shown in Annex 3.
5-2. Both parties agreed that components of the Project will be decided through further examination in Japan.

6. **Japan's Grant Aid Scheme**
6-1. GOS side understood the Japan's Grant Aid Scheme explained by the Team, as described in Annex-4.
6-2. The Team explained major undertakings to be taken by each government as described in Annex-5, for smooth implementation of the Project, as a condition for the Japan's Grant Aid to be implemented. Both parties agreed that liabilities of taxes, duties and levies with respect to the Project will remain further discussion.

7. **Environmental and Social Considerations**
7-1. GOS side agreed to take necessary procedures for due environmental and social considerations for the implementation of the Project. Detailed procedures (items, responsible agencies, deadlines) will be clarified through the Preparatory Survey.
7-2. The Team explained that Initial Environmental Examination (IEE) needs to be done since the Project is classified into category B according to the JICA Guidelines for Environmental and Social Consideration (April, 2010). Both parties confirmed that IEE would be conducted according to Seychelle's law and regulation, and JICA's guideline above.
7-3. Both parties confirmed that land registration of Project site as presented in Annex-1 certifies exclusive land use and occupation by the SFA and the land plot is secured for the Project.

8. **Stakeholder Meeting**
8-1. SFA hold a stakeholder meeting on 25th March 2015, attended by representative of Fish Boat Owners Association, owners of processing company, fishermen and relevant government representatives, and explained outline and schedule of the

survey.

8-2. The team announced next stakeholder meeting will be held in middle of June, 2015.

9. Schedule of the Preparatory Survey

9-1. The Team will proceed with further surveys in Seychelles until 3rd April, 2015.

9-2. JICA will prepare the Draft Final Report in English and dispatch a mission in order to explain its contents in November 2015 at the earliest.

9-3. In case the contents of the report are accepted in principle by GOS side, JICA will finalize it as Final Report and send it to GOS.

10. Other Relevant Issues

10-1. Support for the Team

The Team explained the importance of security for persons concerned with the Project in order to implement the Preparatory Survey and the Project. GOS side understood that and agreed to take necessary measures for the subsequent surveys.

10-2. Permissions necessary for the Project

GOS side agreed to issue or to arrange permissions from relevant organizations necessary for the Project implementation prior to the construction of the proposed facilities.

10-3. Coordination with local authorities and others concerned

GOS side agreed that, with thorough understanding on the Project, activities and information of the Team would be appropriately disseminated to the relevant local authorities and communities, and meetings with stakeholders would be organized as required.

10-4. Maintenance of Facilities and Equipment

GOS side understood that operation and maintenance cost would have to be borne by GOS along with other responsibilities explained by the Team, if construction of facilities and procurement of equipment would be implemented under the Project. GOS committed to secure budget and personnel for proper maintenance of the facilities and equipment, if they would be proposed as a result of Preparatory Survey.

10-5. Soft Component

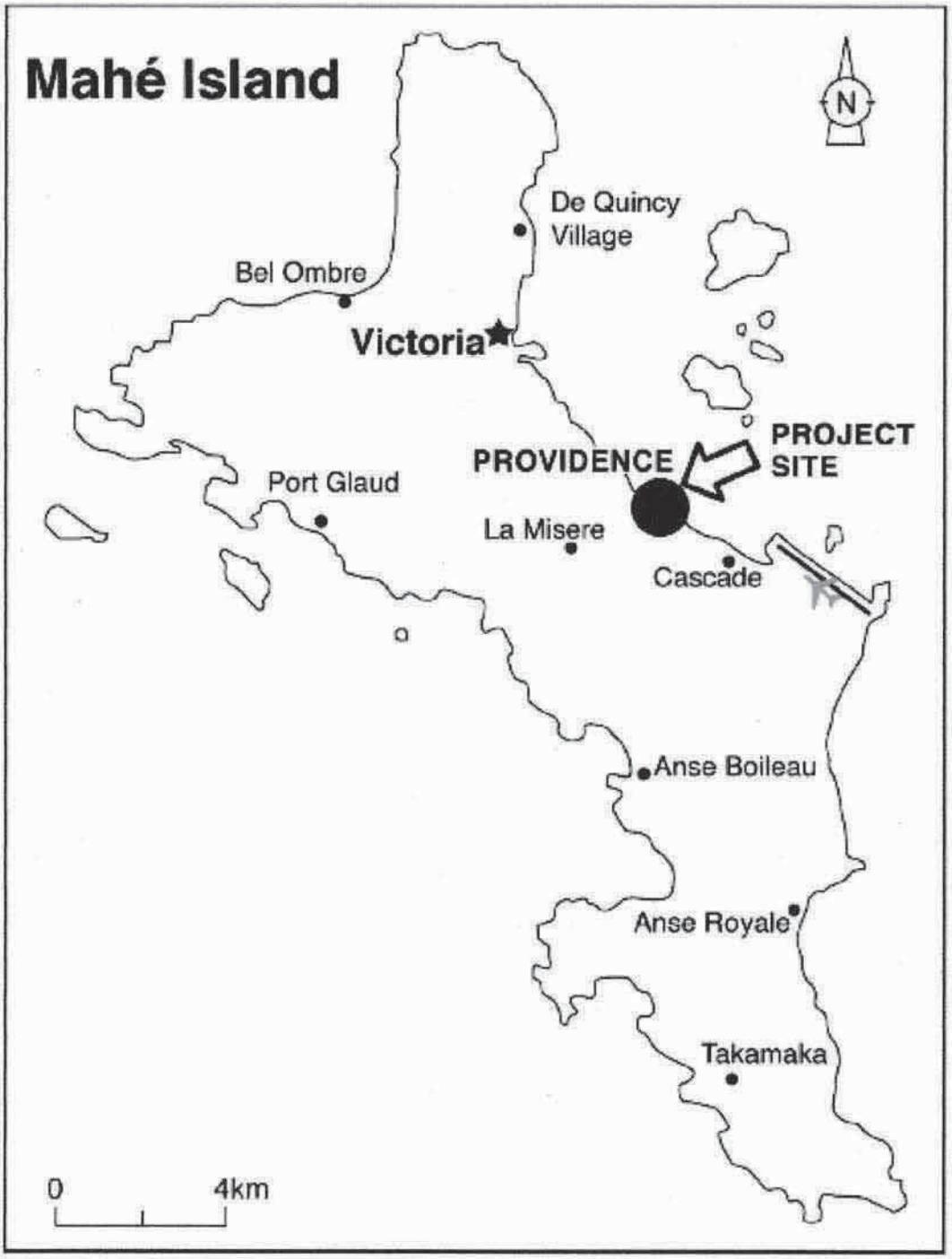
GOS requested technical service as a soft component for initial operation and maintenance of facilities and equipment to be procured under the Project. The Team would convey the request to the GOJ and GOS side agreed to make efforts for providing their staff for necessary arrangements, if the soft component would be proposed.

10-6. Approval of the Project

The both sides confirmed that the approval of the Project would be depended on the decision by the GOJ.

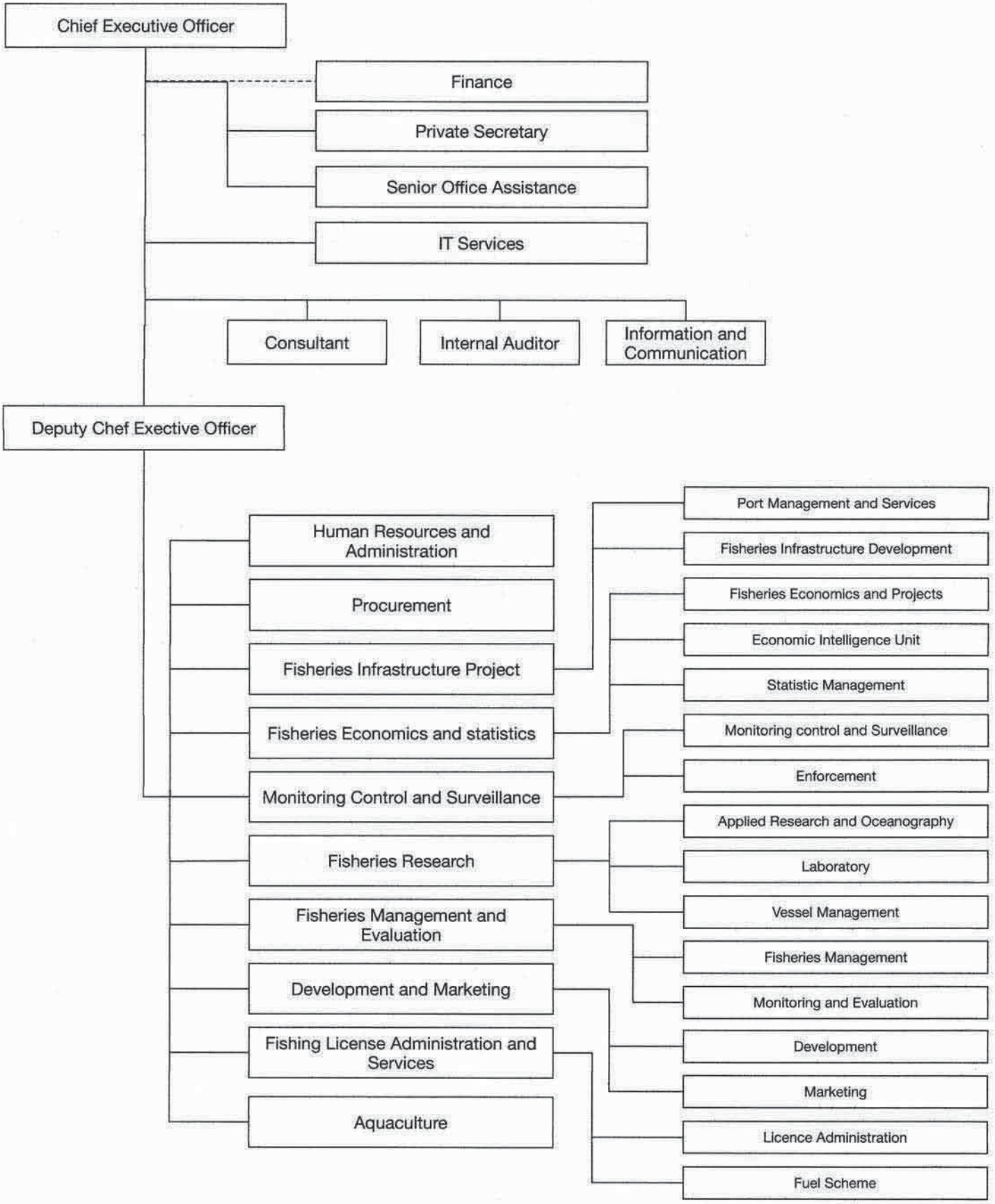
END

Annex 1 Map of Project Sites
Annex 2 Organization Chart
Annex 3 Contents Requested by GOS
Annex 4 Japan's Grant Aid Scheme
Annex 5 Major Undertakings to be taken by each Government


Mahé Island
N
De Quincy
Village
Bel Ombre
Victoria
PROJECT
SITE
PROVIDENCE
Port Glaud
La Misere
Cascade
Anse Boileau
Anse Royale
Takamaka
0
4km

Organization Chart (Seychelles Fisheries Authority)

Annex 2



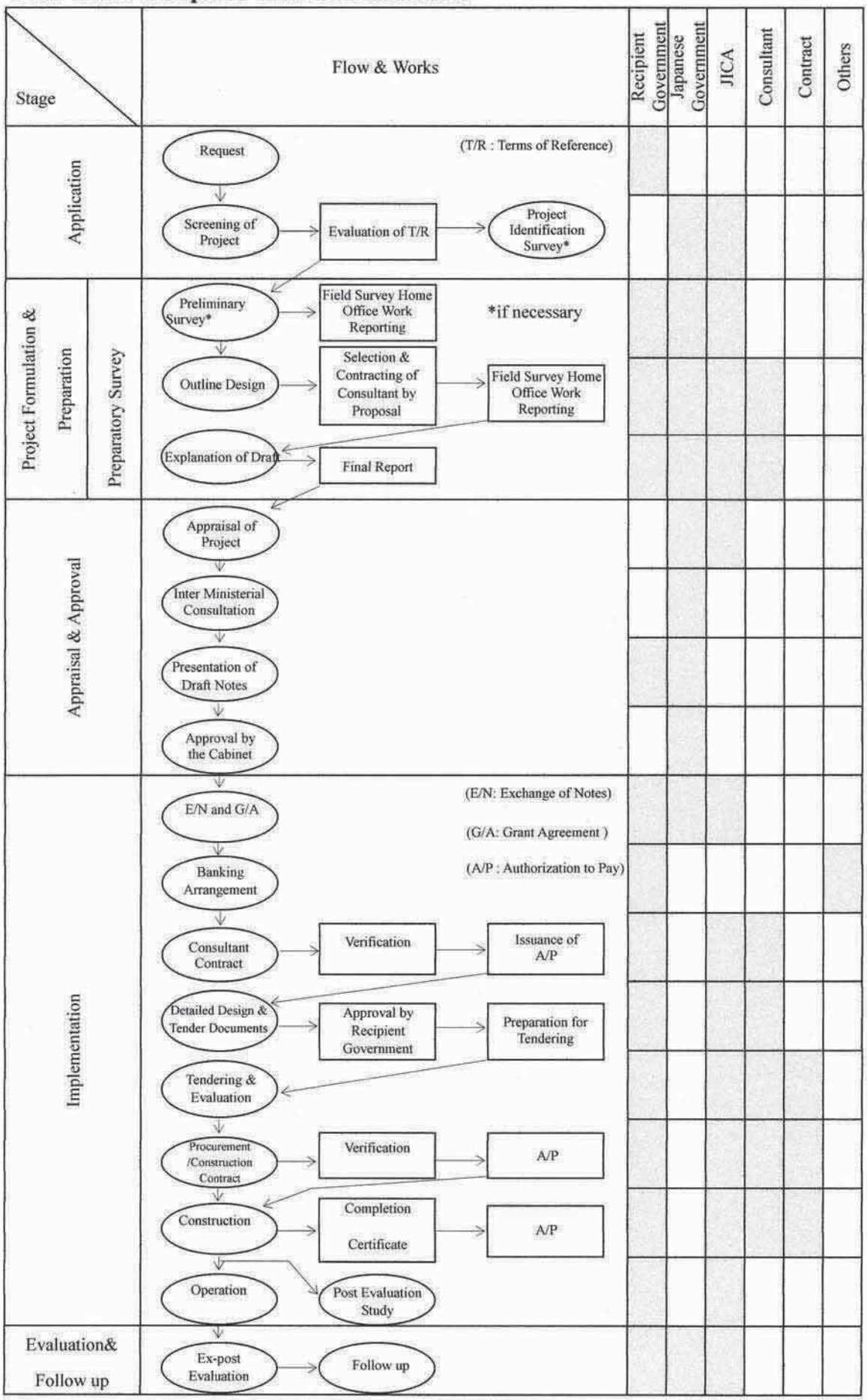
Annex 3

Contents Requested by GOS

No.	Requested Component	Detail of Component	Priorities
1	Quay No.1, No. 2 and No. 3	Quay No.1	A^+
		Quay No.2	A^+
		Quay No.3	A
2	Quay No.4 , Breakwater, Back filling	Quay No.4	A
		Breakwater	A
		Back filling	A
3	Quay surfacing behind Quay No.1	Quay Surfacing (Interlocking Block)	A^+
4	Electrical installation and lightning, water and rainwater collection, and drainage.	Water supply	A^+
		Electric socket	A^+
		Electric Lights	A^+
		Water drainage	A^+
5	Landing shed on Quay No.1	Landing shed	A^+
6	Ice plants	Ice plant	A^+
7	Mooring buoys	Anchoring Buoys	A^+
8	Soft component	Technical assistance	A^+

(Note) A^+; Urgently needed, A; Needed

Flow Chart of Japan's Gant Aid Procedures



Annex 5

Major Undertakings to be taken by Each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	To secure lots of land necessary for the implementation of the Project and to clear the sites;		●
2	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products		
	1) Marine (Air) transportation of the Products from Japan to the recipient country	●	
	2) Internal transportation from the port of disembarkation to the project site	(●)	(●)
3	To construct the following facilities		
	1) The building	●	
	2) The gates and fences in and around the site		●
	3) The parking lot	●	
	4) The road within the site	●	
	5) The road outside the site		●
4	To provide facilities for distribution of electricity, water supply and drainage and other incidental facilities necessary for the implementation of the Project outside the sites.		
	1) Electricity		
	a. The distributing power line to the site		●
	b. The drop wiring and internal wiring within the site	●	
	c. The main circuit breaker and transformer	●	
	2) Water Supply		
	a. The city water distribution main to the site		●
	b. The supply system within the site (receiving and elevated tanks)	●	
	3) Drainage		
	a. The city drainage main (for storm sewer and others to the site)		●
	b. The drainage system (for toilet sewer, common waste, storm drainage and others) within the site	●	
	4) Telephone System		
	a. The telephone trunk line to the main distribution frame/panel (MDF) of the building		●
	b. The MDF and the extension after the frame/panel	●	
	5) Furniture and Equipment		
	a. General furniture		●
	b. Project equipment	●	
5	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the purchase of the products and the services be exempted.		●
6	To accord Japanese physical persons and / or physical persons of third countries whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●
7	To ensure that the Facilities and the products be maintained and used properly and effectively for the implementation of the Project		●
8	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●
9	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
10	To give due environmental and social consideration in the implementation of the Project.		●

MINUTES OF DISCUSSIONS
ON
THE PREPARATORY SURVEY
ON
THE PROJECT FOR THE CONSTRUCTION OF FISHERIES FACILITIES AT PROVIDENCE, ZONE 6
IN
THE REPUBLIC OF SEYCHELLES

In response to a request from the Government of the Republic of Seychelles (hereinafter referred to as "Seychelles"), the Government of Japan decided to conduct a Preparatory Survey on the Project for The Construction of Fisheries Facilities at Providence, Zone 6 (hereinafter referred to as "the Project") and entrusted the survey to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent a study mission to the Republic of Seychelles (hereinafter referred to as "Seychelles") from March to April, 2015 to have preliminary discussions with relevant authorities of the Government of Seychelles. For holding further discussions and collecting necessary information for the preparation of outline design, cost estimation and so forth, JICA dispatched Preparatory Survey Team (hereinafter referred to as "the Team") headed by Mr. Isao Koya, Senior Advisor to the Director General, Rural Development Department, JICA, and the Team is scheduled to stay in the country from 20 May to 16 July, 2015.

The Team held a series of discussions with the officials concerned of the Government of Seychelles and conducted a field survey at the proposed project site and other relevant areas.

As a result of discussions and field survey, both parties confirmed the main points described in the attached sheets. The Team will proceed with further works and prepare a Preparatory Survey Report.

Victoria, 2 July, 2015

甲谷伊佐雄

Mr. Isao Koya
Leader
Preparatory Survey Team
Japan International Cooperation Agency

Mr. Vincent Lucas
Chief Executive Officer
Seychelles Fishing Authority
The Republic of Seychelles

Mr. Michael Nalletamby
Principal Secretary
Ministry of Fisheries and Agriculture
The Republic of Seychelles

Mr. Patrick Payet
Principal Secretary for Finance and Trade
Ministry of Finance, Trade and The Blue Economy
The Republic of Seychelles

ATTACHMENT

1. Items requested by the Government of Seychelles

1-1. The Team explained the result of examination in Japan on requested facilities and equipment for the Project which were confirmed between JICA mission and the Government of Seychelles in April, 2015. As a result of discussions, both sides agreed that the items requested by the Government of Seychelles are as shown in the table below.

Items Requested by the Government of Seychelles

No.	Requested Component	Remarks
1	Quay	Quay No.1
		Quay No.2
2	Quay surfacing behind Quay No.1	Quay Surfacing (Interlocking Block, Apron and Access Road)
3	Ancillary works	Water supply system within the Project site
		Power supply system within the Project site
		Lamppost in the Project site
		Water drainage system within the Project site
4	Landing shed on Quay No.1	Landing shed
5	Ice plant	Ice making machine (Plate ice) and Ice storage
6	Mooring buoys	Anchoring Buoys
7	Soft component	Indicated in 5-3 below

1-2. JICA will further assess the appropriateness of the above requested items through the survey and will report findings to the Government of Japan. The final components of the Project would be decided by the Government of Japan

2. Japanese Grant Scheme

2-1. The Team explained about the Japanese Grant Scheme and its procedures as described in **Annex-1**, **Annex-2** and **Annex-3.** The Seychelles side understood the explanation by the Team including necessary measures to be taken by the Government of Seychelles.

2-2. The Seychelles side understood major undertakings by both parties as described in **Annex-4** and agreed to take necessary majors for smooth implementation of the Project.

The contents of **Annex-4** will be used to determine the following:

(1) The scope of the Project.
(2) The timing of the Project implementation.
(3) Timing and possibility of budget allocation.

Contents of **Annex-4** will be updated as the Preparatory Survey progresses, and will finally be the Attachment to the Grant Agreement.

3. Schedule of the Survey

3-1. The Team will proceed with further survey in Seychelles until 16 July, 2015.
3-2. JICA will prepare a draft Preparatory Survey Report in English and dispatch a mission to Seychelles in order to explain its contents in November, 2015.
3-3. If the contents of the draft Preparatory Survey Report is accepted in principle and the undertakings are fully agreed by the Seychelles side, JICA will complete the final report in English and send it to Seychelles in March, 2016.
3-4. The above schedule is tentative and subject to change.

4. Environmental and Social Consideration

4-1. The Seychelles side explained about the process and progress of EIA approval procedure as follows:
(1) Seychelles Fishing Authority (SFA) communicates with Environment Assessment and Permit Section, Ministry of Environment, Climate Change and Energy (MECCE) (done in April, 2015).
(2) SFA signs on contract agreement with a consultant firm which conducts EIA Class II survey for the Project (the survey is expected to start in July, 2015 and be completed by November, 2015).
(3) SFA submits EIA Class II survey report to MECCE for their review and comments (expected in November, 2015).
(4) MECCE issues EIA Authorization (expected by December, 2015).

4-2. Both sides confirmed that there is no PAP (Project Affected People) residing in the Project site.

5. Other Relevant Issues

5-1. Lease agreement of Land adjacent to the Project Site

The Seychelles side explained that some lands adjacent to the Project site are leased out to private entities. The Team expressed concern on the explanation by the Seychelles side that this might hinder construction works and/or increase construction cost for the Project.

Since securing enough space for construction works is essentially important for smooth implementation of the Project, the Government of Seychelles has already taken necessary measures to obtain basic consent from all the private entities (lessees) not to proceed with any further development/construction in the allotted parcel adjacent to the Project site until the port extension project to be completed.

The Team appreciated the effort made by the Seychelles side and further requested SFA to inform all the private entities (lessees) of probable construction schedule and obtain consensus from them on tentative suspension of further development during the construction period, if the Government of Japan approve the Project. The Seychelles side understood and agreed on the request made by the Team.

5-2. Necessary Approval of Construction of Facilities

The Seychelles side explained necessary procedures for obtaining approval for the construction of facilities in the Project as follows;

(1) SFA submits draft outline design to Project Planning and Implementation Department (PPID), Ministry of Land Use and Habitat and MECCE for their review and recommendations (expected in November, 2015).

(2) SFA submits detailed design (detailed drawings of architecture and engineering) to PPID for final approval (expected in July, 2016).

(3) Final approval of construction of facilities (expected one month after submission of detailed design to PPID).

The Seychelles side agreed to obtain all the necessary approval required under the laws and regulations of Seychelles from relevant authorities prior to the signing of the contract agreement for construction of the Project facilities.

5-3. Operation and Maintenance of Facilities and Equipment

The Seychelles side agreed to submit revised utilization plan of Providence fishing port, which includes structural and financial plan to JICA Kenya Office by October 2015.

The Seychelles side requested the Team to include technical assistance for operation and maintenance of ice plant as a "Soft-Component" of the Project. The Team took note of the request made by the Seychelles side.

5-4. Securing of Budget by the Government of Seychelles for the Project

Seychelles side shall secure necessary budget to cover the cost for taking necessary major undertakings to be covered by Seychelles side for the Project as per Annex-4.

5-5. Tax exemption

The Government of Seychelles shall exempt from all taxes (including import duty, Gainful Occupation Permit (GOP), Value Added Tax (VAT) on imported goods, concerning construction materials, machineries and services exclusively used for the Project). The Government of Seychelles shall make available through the budget to pay any VAT on domestic goods and services and levies.

5-6. Site Clearance

It was agreed that site clearance shall be undertaken by the Seychelles side, which includes removal of base structure of building and temporary quay in the Project site. The temporary quay located in the Project site was erected by one of the lessees of parcel adjacent to the Project site. The Seychelles side explained that the lessee had already agreed to remove the quay at his own expense.

5-7. Ice Plant at the Project Site

The Team observed an ice plant installed in the Providence Fishing Port and asked the utilization plan of the ice plant to the Seychelles side. The Seychelles side explained that the ice plant was temporarily installed at the site to meet the increasing demand of ice for fisheries activities at the Providence Fishing Port and it would be relocated to its original intended location (southern part of Mahe Island) after completion of the Project.

END

Annex-1 Japanese Grant
Annex-2 Flow Chart of Japanese Grant Procedures
Annex-3 Financial Flow of Japanese Grant
Annex-4 Major Undertakings to be taken by Each Government
Annex-5 Project Monitoring Report

JAPANESE GRANT

Based on a JICA law which was entered into effect on October 1, 2008 and the decision of the GOJ, JICA has become the executing agency of the Japanese Grant for Projects for construction of facilities, purchase of equipment, etc.

The Japanese Grant (hereinafter referred to as the "Grant") is non-reimbursable fund provided to a recipient country to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for its economic and social development in accordance with the relevant laws and regulations of Japan. The Grant is not supplied through the donation of materials as such.

1. Grant Procedures

The Grant is supplied through following procedures :

- Preparatory Survey
  - The Survey conducted by JICA
- Appraisal &Approval
  - -Appraisal by the GOJ and JICA, and Approval by the Japanese Cabinet
- Authority for Determining Implementation
  - -The Notes exchanged between the GOJ and a recipient country
- Grant Agreement (hereinafter referred to as "the G/A")
  - -Agreement concluded between JICA and a recipient country
- Implementation
  - -Implementation of the Project on the basis of the G/A

2. Preparatory Survey

(1) Contents of the Survey

The aim of the preparatory Survey is to provide a basic document necessary for the appraisal of the Project made by the GOJ and JICA. The contents of the Survey are as follows:

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of relevant agencies of the recipient country necessary for the implementation of the Project.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Scheme

from a technical, financial, social and economic point of view.

- Confirmation of items agreed between both parties concerning the basic concept of the Project.
- Preparation of a outline design of the Project.
- Estimation of costs of the Project.

The contents of the original request by the recipient country are not necessarily approved in their initial form as the contents of the Grant project. The Outline Design of the Project is confirmed based on the guidelines of the Japanese Grant scheme.

JICA requests the Government of the recipient country to take whatever measures necessary to achieve its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization of the recipient country which actually implements the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA employs (a) consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms.

(3) Result of the Survey

JICA reviews the Report on the results of the Survey and recommends the GOJ to appraise the implementation of the Project after confirming the appropriateness of the Project.

3. Japanese Grant Scheme

(1) The E/N and the G/A

After the Project is approved by the Cabinet of Japan, the Exchange of Notes(hereinafter referred to as "the E/N") will be singed between the GOJ and the Government of the recipient country to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Government of the recipient country to define the necessary articles, in accordance with the E/N, to implement the Project, such as payment conditions, responsibilities of the Government of the recipient country, and procurement conditions.

(2) Selection of Consultants

In order to maintain technical consistency, the consulting firm(s) which conducted the Survey will be recommended by JICA to the recipient country to continue to work on the Project's implementation after the E/N and G/A.

(3) Eligible source country

Under the Grant, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. The Grant may be used for the purchase of the products or services of a third country, if necessary, taking into account the quality, competitiveness and economic rationality of products and services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm are limited to "Japanese nationals", in principle.

(4) Necessity of "Verification"

The Government of the recipient country or its designated authority will conclude contracts denominated in Japanese yen with Japanese nationals, in principle. Those contracts shall be verified by JICA. This "Verification" is deemed necessary to fulfill accountability to Japanese taxpayers.

(5) Major undertakings to be taken by the Government of the Recipient Country

In the implementation of the Grant Project, the recipient country is required to undertake such necessary measures as Annex. The Japanese Government requests the Government of the recipient country to exempt all customs duties, internal taxes and other fiscal levies such as VAT, commercial tax, income tax, corporate tax, resident tax, fuel tax which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract, since the Grant fund comes from the Japanese taxpayers.

(6) "Proper Use"

The Government of the recipient country is required to maintain and use properly and effectively the facilities constructed and the equipment purchased under the Grant, to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Grant.

(7) "Export and Re-export"

The products purchased under the Grant should not be exported or re-exported from the recipient country.

Annex-1

(8) Banking Arrangements (B/A)

a) The Government of the recipient country or its designated authority should open an account under the name of the Government of the recipient country in a bank in Japan (hereinafter referred to as "the Bank"), in principle. JICA will execute the Grant by making payments in Japanese yen, in principle, to cover the obligations incurred by the Government of the recipient country or its designated authority under the Verified Contracts.

b) The payments will be made when payment requests are presented by the Bank to JICA under an Authorization to Pay (A/P) issued by the Government of the recipient country or its designated authority.

(9) Authorization to Pay (A/P)

The Government of the recipient country should bear an advising commission of an Authorization to Pay and payment commissions paid to the Bank.

(10) Social and Environmental Considerations

The Government of the recipient country must carefully consider social and environmental impacts by the Project and must comply with the environmental regulations of the recipient country and JICA socio-environmental guidelines.

(11) Monitoring

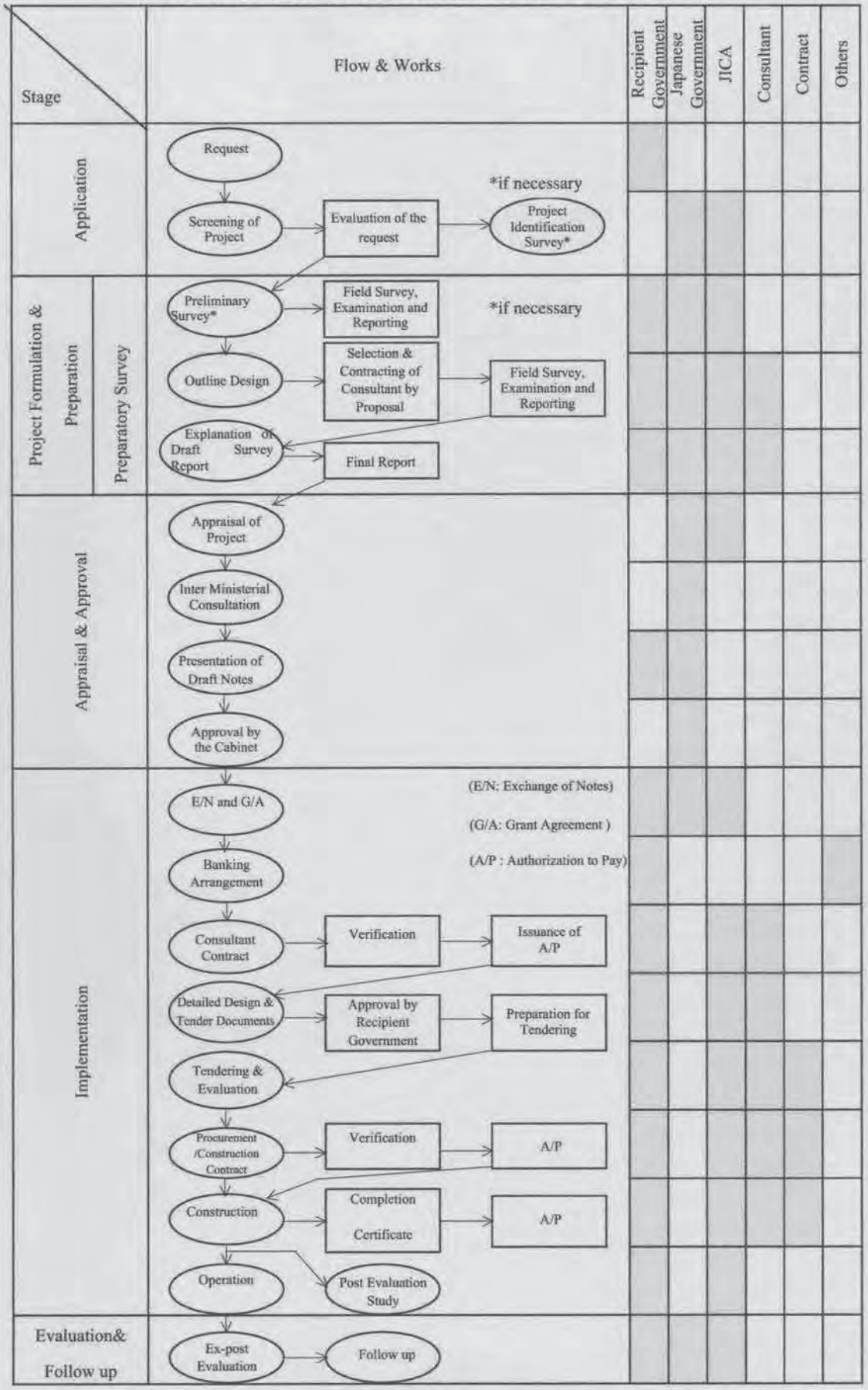
The Government of the recipient country must take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and must regularly report to JICA about its status by using the Project Monitoring Report (PMR).

(12) Safety Measures

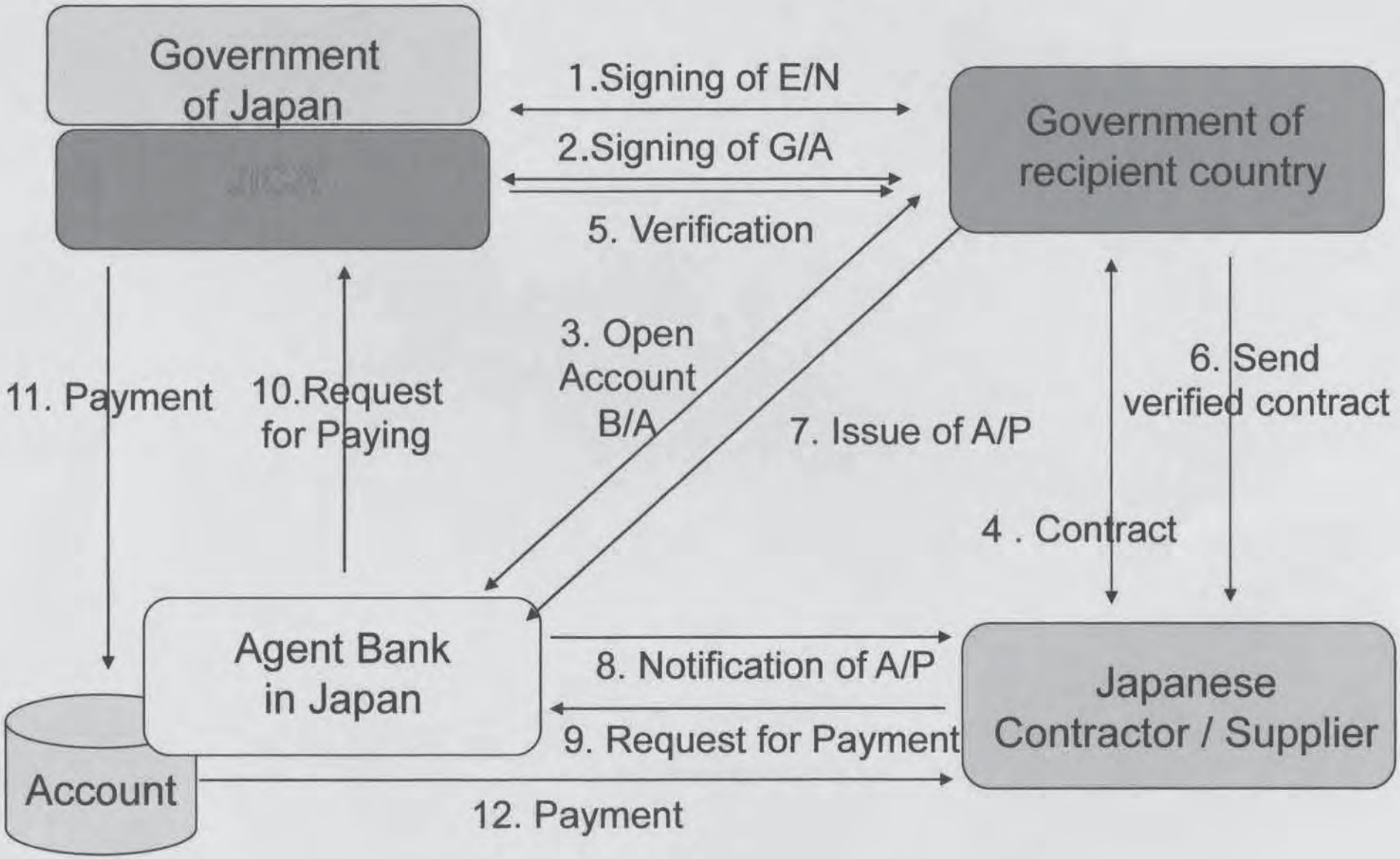
The Government of the recipient country must ensure that the safety is highly observed during the implementation of the Project.

Annex 2

FLOW CHART OF JAPANESE GRANT PROCEDURES



Financial Flow of Grant Aid



Major Undertakings to be taken by Each Government

No	Items	Responsibility		Major Undertakings to be taken by Recipient			
		To be covered by Grant Aid	To be covered by recipient side	Deadline	In charge	Cost	Remarks
	Before Tender						
1	To bear the following commissions paid to the Japanese bank for banking services based upon the B/A						
	1) Advising commission of A/P		●		SFA		
	2) Payment commission		●		SFA MFTBE		
2	To give due environmental and social consideration in the implementation of the Project		●		SFA MECCE		
3	To secure the following land necessary for the implementation of the Project						
	1) Project sites		●		SFA		
	2) Temporary stock yard for construction near the Project area		●		SFA		
4	To clear, level and reclaim the project site						
	1) Demolition of unnecessary existing building		●		SFA		
	2) Removal of unnecessary existing trees		●		SFA		
	3) Leveling and reclaiming the site for the building		●		SFA		
5	To obtain the planning, construction approval		●		SFA P/A		
	During the Project						
6	To bear the following commissions to a bank of Japan for the banking services based upon the B/A						
	1) Advising commission of A/P		●		SFA MFTBE		
	2) Payment commission for A/P		●		SFA MFTBE		
7	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products						
	1) Marine (air) transportation of the Products from Japan to the recipient country	●			Contractor Supplier(s)		
	2) Tax exemption and customs clearance of the products at the port of disembarkation		●		SFA MFTBE		
	3) Internal transportation from the port of disembarkation to the project site	●			Contractor Supplier(s)		
8	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work		●		SFA MHA/ID		

9	(To exempt Japanese nationals from, without using the Grant,) customs duties, internal taxes and other fiscal levies such as VAT(Value Added Tax), NBT(Nation Building Tax), PAL(Port and Airport Levies), CID, CESS, Excise Special Provision, and Construction Industry Guarantee Fund Levy, which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract		●		SFA MHA/ID		
10	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment		●		SFA MFTBE		
11	Construct temporary access road for the construction work.		●		SFA		
12	To construct the following facilities:						
	1) The building (ice plant)	●			Contractor		
	2) The Quay	●			Contractor		
	3) The gates and fences in and around the site		●		SFA		
	4) The road within the site	●			Contractor		
	5) The road outside the site		●		SFA		
13	To provide facilities for distributing electricity, water supply and drainage, and other incidental facilities necessary for the implementation of the Project outside the site						
	1) Electricity						
	a. The distribution power line to the site		●		SFA PUC		
	b. The drop wiring and internal wiring within the site	●			Contractor		
	c. The main circuit breaker and transformer		●		SFA PUC		
	2) Water Supply						
	a. The potable water distribution main to the site		●		SFA PUC		
	b. The water supply system within the site	●			Contractor		
	3) Drainage						
	a. Central Drainage on the port		●		SFA		
	b. The drainage system (storm drainage, and others) within the site	●			Contractor		
	4) Furniture and Equipment						
	a. General furniture		●		SFA		
	After the Project						
14	To ensure that facilities and the products be maintained and used properly and effectively for the implementation of the Project		●		SFA MFTBE MFA		
15	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		●		SFA MFTBE		
16	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid						
	1) Allocation of maintenance cost		●		SFA MFTBE		
	2) Operation and maintenance organization and staff		●		SFA MFA		
	3) Routine check/periodical maintenance		●		SFA		

(B/A: Banking Arrangement, A/P: Authorization to pay)

*; The cost estimates are provisional. This is subject to the approval of the Government of Japan.

MFTBE : Ministry of Finace the Blue Economy

MECCE : Minister of Environment,Climate Change,&Energy

P A : Planning Authority

MHA/ID : Ministry of Home Affairs / Immigration department

PUC : Public Utility Corporation

MFA : Ministry of Fisheries and Agriculture

Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXX

20XX, Month

Organization Information

Authority (Signer of the G/A)	_____ Person in Charge _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Executing Agency	_____ Person in Charge _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____

Outline of Grant Agreement:

Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____
Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:

1: Project Description

1-1 Project Objective

1-2 Necessity and Priority of the Project

- Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country.

1-3 Effectiveness and the indicators

- Effectiveness by the Project

2: Project Implementation

2-1 Project Scope

Table 2-1-1a: Comparison of Original and Actual Location

Location	**Original:** *(M/D)* **Attachment(s):Map**	**Actual:** *(PMRand PCR)* **Attachment(s):Map**

Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
M/D 'Soft component' shall be included in 'Items'.	*M/D*	*(PMR and PCR)* Please state not only th e most updated schedul e but also other past re visions chronologically. All change of design shal l be recorded regardless of its degree.

2-1-2 Reason(s) for the modification if there have been any.

PMR and PCR

2-2 Implementation Schedule
2-2-1 Implementation Schedule

Table 2-2-1: Comparison of Original and Actual Schedule

Items	Original		Actual
	DOD	G/A	
[M/D	*M/D*		*(PMR,PCR)* As of (Date of Revision)
'Soft component' shall be stated in the column of 'Items'.			Please state not only the most updated schedule but also other past revisions chronologically.
Project Completion Date*			

*Project Completion was defined as _____ at the time of G/A.

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

PMR and PCR

2-3 Undertakings by each Government
2-3-1 Major Undertakings
See Attachment 2.

2-3-2 Activities
See Attachment 3.

2-3-3 Report on RD
See Attachment 4.

2-4 Project Cost
2-4-1 Project Cost
Table 2-3-1 Comparison of Original and Actual Cost by the Government of Japan
(Confidential until the Tender)

Items			Cost (Million Yen)	
	Original	Actual	Original	Actual
Construction Facilities (or Equipment)	'Soft component' shall be included in 'Items'.			Please state not only the most updated schedule but

				also other past revisions chronologically.
Consulting Services	- Detailed design -Procurement Management -Construction Supervision			
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = Yen

Table 2-3-2 Comparison of Original and Actual Cost by the Government of XX

Items			Cost (Million USD)	
	Original	Actual	Original	Actual
	'Soft component' shall be included in 'Items'.			Please state not only the most updated schedule but also other past revisions chronologically.
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = (local currency)

2-4-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

PMR, PCR

2-5 Organizations for Implementation

2-5-1 Executing Agency:

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original: *M/D*

Actual, if changed: *PMR and PCR*

2-6 Environmental and Social Impacts

Report based on the agreed environmental checklist and monitoring form (See Attachment 4)

3: Operation and Maintenance (O&M)

3-1 O&M and Management

- Organization chart of O&M
- Operational and maintenance system (structure and the number ,qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc)

Original: *(M/D)*
Actual: *(PCR*

3-2 O&M Cost and Budget

- The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

Original: *(M/D)*

4: Precautions (Risk Management)

- Risks and issues, if any, which may affect the project implementation, outcome, sustainability and planned countermeasures to be adapted are below.

Original Issues and Countermeasure(s): *(M/D)*	
Potential Project Risks	Assessment
1.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
2.	Probability: H/M/L

(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
3.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
Actual issues and Countermeasure(s)	
(PMR and PCR)	

5: Evaluation at Project Completion

5-1 Overall evaluation

Please describe your evaluation on the overall outcome of the Project.

(PCR)

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

PCR

Attachment

1. Project Location Map
2. Undertakings to be taken by each Government
3. Monthly Report
4. Report on RD
5. Monitoring report on environmental and social considerations
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (Completion Report Only)

Minutes of Discussions
on the Preparatory Survey for the Project for
the Construction of Fisheries Facilities at Providence, Zone 6
(Explanation on Draft Preparatory Survey Report)

On the basis of the discussions and field surveys in the Republic of Seychelles (hereinafter referred to as "Seychelles") in March to July, 2015, and the subsequent technical examination of the results in Japan, the Japan International Cooperation Agency (hereinafter referred to as "JICA") prepared a draft Preparatory Survey Report on the Project for the Construction of Fisheries Facilities at Providence, Zone 6 (hereinafter referred to as "the Draft Report").

In order to explain the Draft Report and to consult with the concerned officials of the Government of Seychelles on its contents, JICA sent to Seychelles the Preparatory Survey Team (hereinafter referred to as "the Team") for the explanation of the Draft Report, headed by Mr. Isao Koya, Senior Advisor to the Director General, Rural Development Department, and is scheduled to stay in the country from 26th November to3rd December, 2015.

As a result of the discussions, both sides confirmed the main items described in the attached sheets.

Victoria, 2nd December, 2015

甲谷 伊佐旭佳

Mr. Isao Koya
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan

Mr. Vincent Lucas
Chief Executive Officer
Seychelles Fishing Authority
The Republic of Seychelles

Mr. Michael Nalletamby
Principal Secretary
Ministry of Fisheries and Agriculture
The Republic of Seychelles

Mr. Patrick Payet
Principal Secretary for Finance and Trade
Ministry of Finance, Trade and The Blue Economy
The Republic of Seychelles

ATTACHEMENT

1. Objective of the Project

The objective of the Project is to extend existing quays and expansion of fisheries facilities in Providence fishing port by securement of mooring quays to cater for increasing number of fishing vessels, with the aim to improve port operation and the quality of fish product through fishing activities in accordance with demand fluctuation, thereby contributing to the development of the fishing industry including the fish processing sector.

2. Title of the Project

The Team proposed to change the title of the Project as "The Project for the Construction of Artisanal Fisheries Facilities on Mahe Island (Phase II)" and the Seychelles side agreed in principle to this proposal.

The Team explained to the Seychelles side that the project title would be finalized after consultation with Government of Japan.

3. Project Site

Both sides confirmed that the site of the Project is in Providence, Zone 6.

4. Line Agency and Executing Agency

Both sides confirmed the line agency and executing agency as follows:

4.1. The line agency is Ministry of Fisheries and Agriculture, which would supervise the executing agency.

4.2. The executing agency is Seychelles Fishing Authority (hereinafter referred to as SFA) which shall coordinate with all the relevant agencies to ensure smooth implementation of the Project and ensure that the Undertakings are properly and timely implemented by relevant agencies.

5. Contents of the Draft Report

After the explanation of the contents of the Draft Report by the Team, the Seychelles side agreed in principle to its contents.

6. Cost Estimation

6.1. Both sides confirmed that the Project cost estimation described in the Annex-1 was provisional and would be examined further by the Government of Japan for

its final approval.

6.2. The Team explained to the Seychelles side that the Project Cost covered by Grant Aid described in Annex-1 does not include the contingency. However, the final Project Cost may include the contingency through the appraisal of Government of Japan. The contingency would cover the additional cost against natural disaster and unexpected national condition which are beyond the control of project implementation.

7. Confidentiality of the Cost Estimation and Specifications

Both sides confirmed that the Project cost estimation and technical specifications in the Draft Report should not be duplicated or disclosed to third parties until all the contracts of the Project are concluded.

8. Project Implementation Schedule

The Team explained to the Seychelles side that the expected implementation schedule is as attached in Annex 2.

9. Expected outcomes and Indicators

Both sides agreed that key indicators for expected outcomes are as follows. The Seychelles side has responsibility to monitor the progress of the indicators and achieve the target in year 2021.

[Quantitative Effect]

Quantitative index	Basal index 2015 (Before operation)	Target index 2021 3 years after operation
Port congestion rate (%)	191	100
Annual fish catch landed (tons)	150	292
Monthly Ice sales (tons)	125	375

Notice: Definition of Port congestion rate is as follows.

Definition of Port congestion rate = (actual number of mooring vessels in 2021) / (planned number of mooring vessels (39))

[Qualitative Effect]

i. The work efficiency of fishers is improved through the implementation of port regulations.

ii. The safety of vessels and fishers at Providence/ Victoria ports are improved

through reducing the congestion.

iii. The optimum supply of ice for fishers is ensured through enhancing the operation and management of ice making facility.

iv. The quality of fish product is improved through enhancing the port operation such as the use of ice making facility and landing shed.

10. Technical assistance ("Soft Component" of the Project)

Considering the sustainable operation and maintenance of the provided facility, technical assistance is planned to be provided under the Project. The Seychelles side confirmed to assign the necessary number of competent and appropriate Counter Parts (C/Ps) as described in the Draft Report.

11. Undertakings Taken by Both Sides

Both sides confirmed to undertakings described in Annex 3. The Seychelles side assured to take the necessary measures and coordination including allocation of the necessary budget which are preconditions of implementation of the Project. It is further agreed that the main parts of the Annex 3 would be the Attachment to the Grant Agreement.

12. Monitoring during the Implementation

The Project will be monitored every 3 months by the executing agency in accordance with the Project Monitoring Report (PMR) attached as Annex 4.

Annex-4 is a standard form. The executing agency shall prepare the first version referring to the Final Report and signed Minutes of Discussion of the Preparatory Survey for the Project before the commencement of the Project.

13. Ex-Post Evaluation

JICA will conduct ex-post evaluation three (3) years after the project completion with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, and Sustainability). Result of the evaluation will be publicized. The Seychelles side provide necessary support for the evaluation.

14. Issue to be considered for the smooth implementation of the Project

14.1. Lease agreement of Land adjacent to the Project Site

Some lands adjacent to the project site are leased out to 8 private entities. However, the Seychelles Side has already obtained the consent from all the private entities not

to proceed with any further development/construction in the allocated parcel adjacent to the project site until the Project is completed.

The Seychelles Side explained the current situation of the leased land as follows.

i) Seven private entities have not, to date, initiated any development on the leased land

ii) One entity is utilizing part of the leased land for temporary storage of construction material/equipment and has developed a temporary quay since December, 2011. However, the Seychelles side has already obtained the consent of the entity to remove all the stocked material, equipment and temporal facilities in a timely manner at his own cost.

The Team requested the Seychelles side to inform all the private entities of probable construction schedule and obtain consent again from them on tentative suspension of further development during the construction period before the commencement of the Project, if the Government of Japan approves the project.

14.2. Tax Exemption

The Government of Seychelles shall exempt from all taxes including import duty, Trade Tax, Value Added Tax (VAT) on imported goods, concerning construction materials, machineries and services exclusively used for the Project. The Government of Seychelles shall make available through the budget to pay any VAT on domestic goods and services and levies.

14.3. Gainful Occupation Permit (GOP)

The Government of Seychelles shall exempt Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work from the payment of GOP.

14.4. Utilization plan of Providence Fishing Port

The Seychelles side explained the progress of preparation of a three year utilization plan as follows.

- Draft concept paper of a three year utilization plan is almost completed and it will be finalized by the end of January, 2016.
- Based on the concept paper, SFA will start the consultation with the Government of Seychelles to ensure the financial and human resource needs are addressed.

Both sides agreed that SFA shall prepare the utilization plan (guideline/regulation) considering the result of consultation with the Government of Seychelles and submit it to JICA before the initiation of the tender process for the Project, if the Government of Japan approves the project.

14.5. Preparation of the Project Budget covered by The Seychelles Side

The Seychelles side explained that the required project cost for 2016 such as advising commission of Banking Arrangement, cost for site clearance and fee for the hiring of local consultant has already been catered in the SFA's 2016 annual budget (January to December, 2016). The budget of the Project covered by the Seychelles side will be approved by the Government of Seychelles.

14.6. Necessary Approval of Construction of Facilities

The Seychelles side explained the necessary procedures for obtaining approval for the construction of facilities in the Project as follows.

i) SFA submits final outline design to Project Planning and Implementation Department, Ministry of Land Use and Housing (hereinafter referred to as PPID) and Ministry of Environment Energy and Climate Change for their review and recommendations (expected in February, 2016)

ii) SFA submits the detail design (detailed drawings of architecture and engineering) to PPID for final approval (expected in July, 2016)

iii) If submitted the detailed design is acceptable for PPID, PPID would issues the final approval for construction of facilities within one month following the submission of detailed design to PPID.

The Seychelles side agreed to obtain all the necessary approval required under the laws and regulations of Seychelles from relevant authorities prior to the signing of the contract agreement for construction of the Project facilities.

14.7. Collection of Information

Since information such as the volume of fish landed, ice production and sales, and the berthing occupancy at Providence fishing port is an important indicator to review the operational situation of the port as well as evaluate the output of the Project, The Seychelles side agreed to collect these information periodically and confirm that the system have been established to collect the information.

15. Schedule of the Study

JICA will complete the Final Report of the Preparatory Survey in accordance with the confirmed items and send it to the Seychelles side around January, 2016.

16. Environmental and Social Considerations

16.1. General Issues

16.1.1. Environmental Guidelines and Environmental Category

The Team explained that 'JICA Guidelines for Environmental and Social Considerations (April 2010)' (hereinafter referred to as 'the Guidelines') is applicable for the Project. The Project is categorized as B because it is not considered to be a large-scale Ports and Harbors project, is not located in a sensitive area, and has none of the sensitive characteristics under the Guidelines, and it is not likely to have a significant adverse impact on the environment.

16.1.2. Environmental Checklist

The Seychelles Side and the the Team confirmed information on environmental and social considerations including major impacts and relevant mitigation measures are summarized in the Environmental Checklist attached as Annex 5 . The Seychelles Side confirmed that they would inform JICA of any major changes which may affect environmental and social considerations made for the Project by revising the Checklist in a timely manner.

16.2. Environmental Issues

16.2.1. Environmental Impact Assessment (EIA)

Both sides confirmed the EIA Class-II survey report would be finalized and submitted to Environment Assessment and Permit Section, Ministry of Environment Energy and Climate Change (hereinafter referred to as "MEECC") by December 2016.

The Seychelles Side assured to take necessary measures to obtain approval of EIA by February, 2016.

16.2.2. Environmental Management Plan and Environmental Monitoring Plan

The Seychelles side assured to prepare the Environmental Management Plan in accordance with Annex-6 and send it to JICA by the End of December, 2015.

The Seychelles Side and the Team confirmed that environmental monitoring would be conducted by the Seychelles Side in accordance with the Environmental Monitoring Plan described in Annex-7.

16.3. Environmental and Social Monitoring

The Seychelles Side confirmed that the results of environmental monitoring would be provided to JICA as a part of Project Monitoring Report in accordance with the Environmental Monitoring Form attached as Annex 8 on a quarterly basis until the completion of the project. In case JICA finds that there is a need for improvement in a situation with respect to environmental considerations after the agreed monitoring period, JICA may request to extend the period of monitoring and reporting until JICA confirms the issues have been properly addressed in accordance with the agreement between the Seychelles side and JICA.

16.4. Information Disclosure of Monitoring Results

The Seychelles side explained that there is no stipulated regulations/procedures for information disclosure of Environmental Monitoring Results. The Team requested the Seychelles Side to disclose the monitoring results to local project stakeholders, and the Seychelles Side agreed to disclose monitoring results in the administrating office of the Providence Fishing Port.

The Seychelles side agreed JICA's disclosure of provided monitoring results in the monitoring form (Annex 7) on its website.

17. Other Relevant Issues

17.1. Operation and Maintenance of the Facilities (Equipment)

The team explained the importance of operation and maintenance of the facilities constructed by the Project considering that proper asset management impacts greatly on life-span of the facilities and its maintenance cost. The long and mid-term operation and maintenance costs are estimated and shown in Annex-9. The Seychelles side shall secure enough staff and budgets necessary for appropriate operation and maintenance of the facilities.

17.2. Disclosure of Information

Both sides confirmed that the study results excluding the Project cost will be disclosed to the public after completion of the Preparatory Survey. All the study results including the project cost will be disclosed to the public after all the contracts for the Project are concluded.

17.3. Technical Recommendation

The Team explained the technical points to be taken into consideration as follows .

- In case that Quay no.3 is going to be constructed in the future by the Seychelles side, it is ideal to limit the length of vessels using port to 20m, for the safety of vessel maneuvering within the area.
- In case of accumulation of sediment in the port, maintenance dredging by the Seychelles side shall be necessary. However, the depth of dredging in front of quay 1-2 should be limited within 2.5m according to the structural design of steel sheet pile quay.

The Seychelles took note of recommendations .

Annex 1 Cost Estimation
Annex-2 Project Implementation Schedule
Annex 3 Major Undertakings to be implemented by the Seychelles Side/ Major Undertakings to be covered by Grant Aid
Annex 4 Project Monitoring Report (Form)
Annex 5 Environmental Checklist
Annex 6 Environmental Management Plan (Form)
Annex-7 Environmental Monitoring Plan
Annex-8 Environmental Monitoring Form
Annex-9 Estimated Operation and Maintenance Cost

Annex-1

Cost Estimation

(1) Project Cost Estimation covered by Grant Aid

This Page is closed due to the confidenciality.

(2) Project Cost Estimation covered by the Government of Seychelles

The cost borne by the Government of Seychelles is estimated tentatively. Total cost will be 5,100,000 Seychelles Rupee (SCR). Details are shown in below.

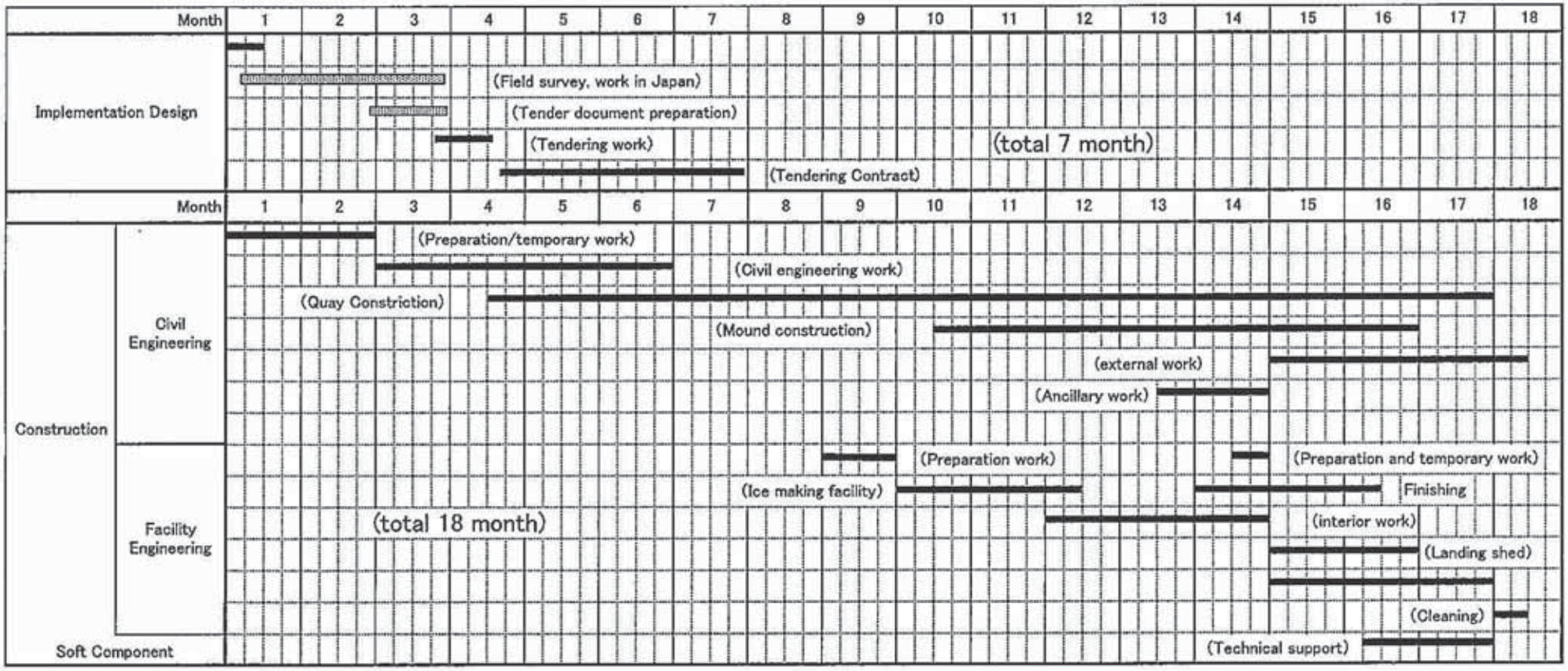
i.	To obtain the approval of EIA (Environmental Authorization)	SCR 145,000
ii.	To open the Bank Account/ Advising commission of A/P and payment commission	SCR 155,000
iii.	To obtain the planning/construction/building/ development permission	SCR 150,000
iv.	To clear, level and reclaim the Project sites	SCR 350,000
v.	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products.	SCR 4,200,000
vi.	To construct the gates and fences in and around the ice plan facility	SCR 100,000

Total SCR 5,100,000

This amount must be secure to budget as the cost for the implementation of the project from National Budget by SFA. It has been confirmed at the time of Explanation of Draft Final Report that the SFA are to secure the budget by applying the budget to the Ministry of Finance.

Annex-2

Project Implementation Schedule



Annex-3

1. Major Undertakings to be implemented by the Government of Seychelles

1.1. Before Tender process

No	Items	Deadline	in charge	Cost	Ref.
1	To obtain the approval of EIA (Environmental Authorization)	before G/A	SFA, MECCE	145,000	
2	To ensure the budget for the project implementation	within one month after G/A	SFA, MFTBE CBS	-	
3	To open the Bank Account	within one month after G/A	SFA, MFTBE CBS	155,000	
4	To issue the A/P (for consultant contract) Advising commission of A/P and payment commission need to be covered	within one month after GA	SFA, MFTBE CBS		
5	To prepare the Utilization plan (regulation/guideline) of the Providence Fishing Port	within one month after GA	SFA	-	
6	To obtain the planning/construction/building/ development permission	before PQ	SFA, PPID MECCE	150,000	
7	To secure the land necessary for project implementation. (project sites and temporary stock yard for the construction near the project site)	before PQ	SFA	-	
8	To clear, level and reclaim the Project sites 1) Demolition of unnecessary existing building 2) Removal of unnecessary existing trees 3) Leveling and reclaiming the site for the construction	before PQ	SFA	350,000	
9	Construct temporary access road for the construction work.	before PQ	SFA	-	

1.2. After the signing of the contract with contractor /supplier

No	Items	Deadline	in charge	Cost	Ref
1	To issue the A/P (for construction contract) Advising commission of A/P and payment commission need to be covered	within one month after the signing of contract	SFA, MFTBE CBS	Involved into the cost of 1. item3 and 4	
2	To ensure prompt unloading and customs clearance of the products at ports of disembarkation in the recipient country and to assist internal transportation of the products. 1) Tax exemption of the products at the port of disembarkation 2) Customs clearance of the products at the port of disembarkation	within one month after the equipment/material /heavy machine are delivered to the port/airport.	SFA MFTBE	4,200,000	
3	To accord Japanese nationals whose services may be required in connection with the supply of the products and the services such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.	One month after the submission of required application.	SFA, DICS	-	
4	To exempt Japanese nationals from, without using the Grant, customs duties, internal taxes and other fiscal levies such as VAT(Value Added Tax), Trades Tax, Vehicle Levies, which may be imposed in the recipient country with respect to the supply of the products and services under the verified contract	After contractor's contract	SFA MFTBE	Notice: need to be examined after the signing of the contract	
5	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment		SFA MFA MFTBE	-	
6	To provide facilities for distributing electricity, water supply and drainage, and other incidental facilities necessary for the implementation of the Project outside the site 1) Electricity a. The distribution power line to the site	before the commencement of contraction	SFA		

	b. The main circuit breaker and transformer 2) Water Supply: the potable water distribution main to the site 3) Drainage : Central Drainage on the port				
7	To assign the required staffs for the implementation of Soft Component	before the completion of construction	SFA		
8	To submit Project Monitoring Report with the results of environmental monitoring to JICA on a quarterly	every three month	SFA		
9	To apply for the supplementary budget in the 3rd fiscal quarter (July to September) , if necessary		SFA MFA MFTBE		
10	To construct the gates and fences in and around the ice plan facility	After the completion of the contract	SFA	100,000	

1.3. After the completion of the project

No	Items	Deadline	in charge	Cost	Ref
1	To ensure that facilities and the products be maintained and used properly and effectively for the implementation of the Project		SFA MFA MFTBE		
2	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project		SFA MFA MFTBE		
3	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance organization and staff 3) Routine check/periodical maintenance		SFA MFA MFTBE		
4	To implement Environment Monitoring based on the Environmental monitoring plan	for a period based on EMP	SFA MECCE		
5	To cooperate the Ex-Post Evaluation survey implemented by JICA		SFA MFA		

*** The cost estimates are provisional.**

B/A: Banking Arrangement, **A/P:** Authorization to pay, **PQ:** Notice of Pre-Qualification, **SFA:** Seychelles Fishing Authority, **MFA:** Ministry of Fisheries and Agriculture, **MFTBE:** Ministry of Finace the Blue Economy, **MECCE :** Minister of Environment,Climate Change,&Energy, **PPID:** Project Planning and Implementation Department, Ministry of Land Use and Habitat, **DICS:** Department of Immigration and civil status, Ministry of Home Affairs, **PUC:** Public Utility Corporation

Annex-3

2. Major Undertakings to be covered by Grant Aid

1) To implement detailed design and tender support (Consultant Services)

2) To implement construction supervision (Consultant Services)

3) To construct the following facilities
- Ice making facility
- Landing shed
- Quay No1 , No2 and related aprons
- Access roads to quay within the Project site
- Mooring buoys

4) Marine (air) transportation of the products from Japan to the recipient country

5) Internal transportation of the products from the port of disembarkation to the project site

6) To provide facilities for the distribution of electricity, water supply, drainage and other incidental facilities
- Electricity: The drop wiring and internal wiring within the Project site
- Water Supply: The water supply system within the Project site
- Drainage: The drainage system (storm drainage, and others) within the site

7) To implement Soft Component (Technical Training)

8) To implement Soft Component (Technical Training)

Project Monitoring Report
on
Project Name
Grant Agreement No. XXXXXXX
20XX, Month

Organization Information

Authority (Signer of the G/A)	_____ Person in Charge _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Executing Agency	_____ Person in Charge _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____
Line Agency	_____ Person in Charge _____ (Division) _____ Contacts Address: _____ Phone/FAX: _____ Email: _____

Outline of Grant Agreement:

Source of Finance	Government of Japan: Not exceeding JPY _____ mil. Government of (_____): _____
Project Title	
E/N	Signed date: Duration:
G/A	Signed date: Duration:

1: Project Description

1-1 Project Objective

Notice: Please refer to "1-2 Outline of the Project "on Draft Final report of preparatory survey.

1-2 Necessity and Priority of the Project

Consistency with development policy, sector plan, national/regional development plans and demand of target group and the recipient country.

Notice: Please refer to "1-2 Outline of the Project " on Draft Final report of preparatory survey.

1-3 Effectiveness and the indicators

- Effectiveness by the project

Quantitative Effect (Operation and Effect indicators)		
Indicators	Original (Yr)	Target (Yr)
Qualitative Effect		

2: Project Implementation

2-1 Project Scope

Table 2-1-1a: Comparison of Original and Actual Location

Location	**Original:** *(M/D)* **Attachment(s):Map**	**Actual:** *(PMR)* **Attachment(s):Map**

Table 2-1-1b: Comparison of Original and Actual Scope

Items	Original	Actual
(M/D) 'Soft component' shall be included in 'Items'.	*(M/D)*	*(PMR)* Please state not only the most up dated schedule but also other pas t revisions chronologically. All change of design shall be reco rded regardless of its degree.

2-1-2 Reason(s) for the modification if there have been any.

(PMR)

2-2 Implementation Schedule

2-2-1 Implementation Schedule

Table 2-2-1: Comparison of Original and Actual Schedule

Items	Original		Actual
	DOD	G/A	
【M/D】 'Soft component' shall be stated in the column of 'Items'. Project Completion Date*	*(M/D)*		*(PMR)* As of (Date of Revision) Please state not only the most updated schedule but also other past revisions chronologically.

*Project Completion was defined as _____ at the time of G/A.

2-2-2 Reasons for any changes of the schedule, and their effects on the project.

2-3 Undertakings by each Government

2-3-1 Major Undertakings

See Attachment 2.

2-3-2 Activities

See Attachment 3.

2-3-3 Report on RD

See Attachment 4.

2-4 Project Cost

2-4-1 Project Cost

Table 2-4-1a Comparison of Original and Actual Cost by the Government of Japan

(Confidential until the Tender)

Items			Cost (Million Yen)	
	Original	Actual	Original	Actual
Construction Facilities (or Equipment)	'Soft component' shall be included in 'Items'.			Please state not only the most updated schedule but also other past revisions chronologically.
Consulting Services	- Detailed design -Procurement Management -Construction Supervision			
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = Yen

Table 2-4-1b Comparison of Original and Actual Cost by the Government of XX

Items			Cost (Million USD)	
	Original	Actual	Original	Actual
				Please state not only the most

				updated schedule but also other past revisions chronologically.
Total				

Note: 1) Date of estimation:
2) Exchange rate: 1 US Dollar = (local currency)

2-4-2 Reason(s) for the wide gap between the original and actual, if there have been any, the remedies you have taken, and their results.

(PMR)

2-5 Organizations for Implementation

2-5-1 Executing Agency:

- Organization's role, financial position, capacity, cost recovery etc,
- Organization Chart including the unit in charge of the implementation and number of employees.

Original: *(M/D)*

Actual, if changed: *(PMR)*

2-6 Environmental and Social Impacts

- The results of environmental monitoring as attached in [redacted] in accordance with Schedule 4 of the Grant Agreement.
- The results of social monitoring as attached [redacted] in accordance with Schedule 4 of the Grant Agreement.
- Information on the disclosed results of environmental and social monitoring to local stakeholders, whenever applicable.

3: Operation and Maintenance (O&M)

3-1 O&M and Management

- Organization chart of O&M
- Operational and maintenance system (structure and the number ,qualification and skill of staff or other conditions necessary to maintain the outputs and benefits of the project soundly, such as manuals, facilities and equipment for maintenance, and spare part stocks etc)

Original: *(M/D)*

Actual: *(PMR)*

3-2 O&M Cost and Budget

- The actual annual O&M cost for the duration of the project up to today, as well as the annual O&M budget.

Original: *(M/D)*

4: Precautions (Risk Management)

- Risks and issues, if any, which may affect the project implementation, outcome, sustainability and planned countermeasures to be adapted are below.

Original Issues and Countermeasure(s): *(M/D)*	
Potential Project Risks	Assessment
1.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
2.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
3.	Probability: H/M/L
(Description of Risk)	Impact: H/M/L
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action during the Implementation:
	Contingency Plan (if applicable):
Actual issues and Countermeasure(s)	
(PMR)	

5: Evaluation at Project Completion and Monitoring Plan

5-1 Overall evaluation

Please describe your overall evaluation on the project.

5-2 Lessons Learnt and Recommendations

Please raise any lessons learned from the project experience, which might be valuable for the future assistance or similar type of projects, as well as any recommendations, which might be beneficial for better realization of the project effect, impact and assurance of sustainability.

5-3 Monitoring Plan for the Indicators for Post-Evaluation

Please describe monitoring methods, section(s)/department(s) in charge of monitoring, frequency, the term to monitor the indicators stipulated in 1-3.

Attachment

1. Project Location Map
2. Undertakings to be taken by each Government
3. Monthly Report
4. Report on RD
5. Environmental Monitoring Form / Social Monitoring Form
6. Monitoring sheet on price of specified materials (Quarterly)
7. Report on Proportion of Procurement (Recipient Country, Japan and Third Countries) (Final Report Only)

Annex- 5

Environmental Checklist

Categ	Environmental Item	Main Cheek Items	Yes: Y No: N	Confirmation of Environmental Considerations
1 Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a):N (b):N (c):Y (d):	(a)EIA report is prepared by the SFA with instruction of the Ministry of Environment, Energy and Climate Change and submit for approval by November 2015. (b)EIA report is approved and examined by the Ministry of Environment, Energy and Climate Change, by November 2015. Environmental permit is issued in December 2015. (c) Before EIA implementation, the Ministry of Environment, Energy and Climate Change will hold a stakeholders meeting. (d) Additional approvals are not requirement after the approval of Environmental Permit.
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(a):Y (b):	(a)Stakeholders meeting were held on 25th of May and 3rd Jun 2015. Project details are explained to the Stakeholders. Opportunity of Consensus was build, and comments were collected from the stakeholders. (b) The project site does not consist residential area since the site is situated in the industrial zone. Comments obtained from Stakeholders meeting were reflected to the Project plan. from safe operation of the port and functional operation of facilities.
	(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a):Y	(a) the Project site was selected from different alternative plans for the project, which were design from different aspect of social and environmental consideration.
2 Pollution Control	(1) Air Quality	(a) Do air pollutants, such as sulfur oxides (SOx), nitrogen oxides (NOx), and soot and dust emitted from ships, vehicles and project equipments comply with the country's emission standards? Are any mitigating measures taken?	(a):Y	(a)No specific air pollutants will discharged from the project component. Exhaust gas from small vehicle might be emitted, but the project will adversely affect to the air quality.
	(2) Water Quality	(a) Do effluents from the project facilities comply with the country's effluent and environmental standards? (b) Do effluents from the ships and other project equipments comply with the country's effluent and environmental standards? (c) Does the project prepare any measures to prevent leakages of oils and toxicants? (d) Does the project cause any alterations in coastal lines and disappearance/appearance of surface water to change water temperature or quality by decrease of water exchange or changes in flow regimes?	(a):Y (b):Y (c):Y (d):N (e):Y	(a)The project facilities are complied with Seychelles environmental standard for wastewater effluent from the quay and ice making facility installed by the Project. (b) No effluent was observed from water quality survey held in 2015 from vessels and other project equipment. Water quality level is to clear the environmental standards of the Seychelles. Installations of ice making units are design with circular cooling system to reduce effluent to the port from project components. (c)Basic structure of floor is design to avoid external outflow of oil for facilities and equipment that utilize oil.

Categ	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations
		(c) Does the project prepare any measures to prevent polluting surface, sea or underground water by the penetration from reclaimed lands?		(d) The project is extension of existing port, minor modification of formal lines are design in the port, however there will be no change in coastal lines and no effect to water current, temperatures, or water exchanges. (e)The project does not contain reclaimed land work.
	(3) Wastes	(a) Are wastes generated from the ships and other project facilities properly treated and disposed of in accordance with the country's regulations? (b) Is offshore dumping of dredged soil properly disposed in accordance with the country's regulations? (c) Does the project prepare any measures to avoid dumping or discharge toxicants?	(a):Y (b):Y (c):Y	(a) Currently, wastes generated from the vessels and other project facilities are collect three times a week by the contracted private company. After the project implementation, their contract with SFA is remain as it is. (b)In Seychelles, soil is basically valuable, hence soils collected from dredging is never disposed. Dredged soil is properly collected to use as accordance with the country's regulations. (c) SFA will monitor of dumping or discharge toxicants. SFA will also prepare awareness program relating waste to the port users.
	(4) Noise and Vibration	(a) Do noise and vibrations from the vehicle and train traffic comply with the country's standards?	(a):Y	(a) The project is situated in industrial area where no residence are living , and not adversely have affect by the noise and vibration accordance with country's regulation. However, monitoring plan for Noise and vibration are require after the implementation of the Project.
	(5) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	(a):N	(a) The project will not extract any groundwater. Building structure design to the project components is designed with a reinforcing concrete bars structure to reduce weight.
	(6) Odor	(a) Are there any odor sources? Are adequate odor control measures taken?	(a):Y	(a) General wastes are collect by the private company, three times a week. The contract with the company will continue after completion of construction.
	(7) Sediment	(a) Are adequate measures taken to prevent contamination of sediments by discharges or dumping of hazardous materials from the ships and related facilities?	(a):Y	(a)Contamination of sediments discharges of hazardous material from procured equipment or ships are controlled by the proper maintenance. In addition, hazardous material will not discharge from facilities as environmentally considerate equipment are selected from procurement stage.
Natural Environ	(1) Protected Areas	(a) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a):N	(a)The project site is not located in protected areas accordance with international and national law. In addition, the Project will not create any affect to protected areas.

Categ	Environmental Item	Main Cheek Items	Yes: Y No: N	Confirmation of Environmental Considerations
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? (b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? (c) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem? (d) Is there a possibility that the project will adversely affect aquatic organisms? Are adequate measures taken to reduce negative impacts on aquatic organisms? (e) Is there a possibility that the project will adversely affect vegetation or wildlife of coastal zones? If any negative impacts are anticipated, are adequate measures taken to reduce the impacts on vegetation and wildlife?	(a):N (b):N (c):N (d):N (e):N	(a) The project site does not encompass primeval forest, tropical rain forest, ecologically valuable habitats (b) The project site dose not encompass to the protected area of endangered by the Seychelles Laws or international treaties and conventions. (c) No significant ecological impacts are observed. (d) The project will not adversely affect to the aquatic organism. (e) The project will not adversely affect to the vegetation and wild animals in coastal zone.
	(3) Hydrology	(a) Do the project facilities affect adversely flow regimes, waves, tides, currents of rivers and etc if the project facilities are constructed on/by the seas?	(a):N	(a) The project will not adversely affect to the flow of surface water and groundwater.
	(4) Topography and Geology	(a) Does the project require any large scale changes of topographic/geographic features or cause disappearance of the natural seashore?	(a):N	(a) The project will not adversely affect to topographic/geographic feature.
4 Social Environment	(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? (b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement? (c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? (d) Are the compensations going to be paid prior to the resettlement? (e) Are the compensation policies prepared in document? (f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? (g) Are agreements with the affected people obtained prior to resettlement? (h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?	(a):N (b): (c): (d): (e): (f): (g): (h): (i): (j):	(a)(b)(c)(d)(e)(f)(g)(h)(i)(j)The project will not cause any resettlement.

Categ	Environmental Item	Main Cheek Items	Yes: Y No: N	Confirmation of Environmental Considerations
		(i) Are any plans developed to monitor the impacts of resettlement? (j) Is the grievance redress mechanism established?		
	(2) Living and Livelihood	(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?	(a):N	(a)The project will not adversely affect resettlement and living conditions of the people.
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance with the country's laws?	(a):N	(a)The project does not affect the local archaeological, historical, cultural, and religious heritage
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken? (b) Is there a possibility that landscape is spoiled by construction of high-rise buildings such as huge hotels?	(a):N (b):N	(a)The project site is assign as industrial zone. The project will not adversely affect to local landscape. (b)The projects component is constructed with one-story building, therefore the project components will not adversely affect to local landscape.
	(5)Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples? (b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	(a):N (b)	(a)(b) The project will not adversely affect to the culture and lifestyle of ethnic minorities and indigenous people.
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project? (b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials? (c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.? (d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	(a):Y (b):Y (c):Y (d):Y	(a)(b)(c)(d) The accidents is to prevented by installation of fences, secured the traffic with security guards, notice the construction schedule, and enlighten the workers with the safety management during the construction.
5 Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? (b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts? (c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?	(a):Y (b):N (c):N	(a)Impacts during construction Noise: The noise will be arisen during the construction work. The construction hours are to limit during the night and holiday. Dust: The construction work, vehicles movement, and strong wind at the site will create the dust. Appropriate sprinkling of water is planned during construction period to reduce impact. Water quality: For minimize impact to water quality, appropriate

Categ	Environmental Item	Main Check Items	Yes: Y No: N	Confirmation of Environmental Considerations
				construction equipment and silt fence are use during the construction period. Sediment: All of the construction work must be supervise to monitor the oil leakage during the Project. (b)Construction activities will not adversely affect the natural environment (ecosystem). (c)Construction activities will not adversely affect the social environment.
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? (b) What are the items, methods and frequencies of the monitoring program? (c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? (d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	(a):Y (b): (c):Y (d):Y	(a) Proponent and development of implement monitoring program are to prepare by SFA. Monitoring program is prepared to determine for seawater, waste and soil, respectively. (b) SFA will conduct seawater, soil and wastes monitoring accordance with country's regulation. Seawater sample is carried out to analyze once every three months dring the quay construction work. Soil sample is to analyze during the operation of Heavy machineries in addition to once every month. Wastes in the port is to monitor every three months. (c)Monitoring system is established by SFA. Require staffs and necessary budget for implementation of monitoring programs is secure by the SFA. (d)Monitoring report system is to establish by SFA including format, frequency of reporting. SFA have responsibility to prepare monitoring report to Ministry of Environment, Energy and Climate Change once a year.
6 Note	Reference to Checklist of Other Sectors	(a) For processing and storage facilities, where necessary, pertinent items described in the Mining and Industry checklist should also be checked. (b) Where necessary, pertinent items described in the Ports and Harbors checklist should also be checked (e.g., projects including construction of ports and harbor facilities).	(a): (b):	(a)It is no required in the project (b)It is no required in the project
	Note on Using Environmental Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a):	(a)Component of ice making facility is equipped with units using refrigerant. The Project is design to select ammonia as refrigerant instead of Freon to reduce effect to depletion ozone layers for ice making unit. In addition, smallest requirement of ice demand is applied to reduce electrical consumption and emission by CO2.

Annex-6

Environmental Management Plan

	Project Activity	Potential Environmental Impact	Mitigation Measures (Proposed/Implemented)	Parameters to be Monitored	Location	Methods, equipment and frequency of Measurement (Date and/or time of Measurement)	Measured Value (Average/Max/Total,etc)	Standard Value (legal standard , standard for contract, and/or international standard)	Responsible Institution	Past trend and current status including remedial measures if necessary
Pre-construction Phase										
Construction phase										
Operation and Maintenance phase										

Ex: **Construction phase**

Project Activity	Potential Environmental Impact	Mitigation Measures (Proposed/Implemented)	Parameters to be Monitored	Location	Methods, equipment and frequency of Measurement (Date and/or time of Measurement)	Measured Value (Average/Max/Total,etc)	Standard for Contract (Legal/International Standard)	Responsible Institution	Past trend and current status including remedial measures if necessary
Construction of bridge and approach roads	Air pollution	• Construction-related vehicles must qualify for 'Emission Permit' • Speed limit for construction-related vehicles. • Watering of unpaved roads	SO_2	2 points in xxx and 3 points in xxx	Conductometric method, measured monthly using IS4150 (JMS Inc.) 13 March 2011	High: 45 μg/m³ (24h) Low: 18 μg/m³ (24h) Average:21μg/m³ (24h)	20 μg/m³ (WHO: 20 μg/m³, IFC: 5 μg/m³)	xxx Bridge Authority	Above standard value(s) but declining steadily.
			NO_2	2 points in xxx and 3 points in xxx	Absorptiometry method, measured monthly using Model 8101 (Benxics Corp.) 13 March 2011	High: 260 μg/m³ (1h) Low: 180 μg/m³ (1h) Average: 220μg/m³ (1h)	20 μg/m³ (WHO: 200 μg/m³, IFC: 50 μg/m³)	xxx Bridge Authority	Above standard value(s). Fluctuating, with the past 12 months' average of 26 μg/m³ (24h)
			PM10	2 points in xxx and 3 points in xxx	Gravimetric methods, measured monthly using GMW-1200 (Anderson Instruments Inc.) 13 March 2011	High: 160 μg/m³ (24h) Low: 80 μg/m³ (24h) Average:145μg/m³ (24h)	50 μg/m³ (WHO: 50 μg/m³, IFC: 12.5 μg/m³)	xxx Bridge Authority	Above standard value(s) but declining steadily.
Construction of bridge	Decrease in the catch of local fishery	• Avoid underwater construction activities during the spawning season of commercially important species.	Number, size, and maturity of hilsa (*Tenualosa ilisha*)	3 points upstream and 3 points downstream of the construction site.	Experimental fishery (bi-monthly) and sampling from the fishermen's catch (monthly). 13 March 2011	Annual landing: 2000t Average size: 41cm	Annual landing*: 2,100t Average size*: 42cm *Value before the construction.	Fishery Centre of xxx	Decrease in annual landing, but this may be due to the series of cyclones which heavily affected the fisheries industry in 2011.
Construction of bridge and bank protection	Population decline in reptilian species	• Secure habitat/breeding site of endangered species. • Avoid or minimize construction work during the mating/breeding season. • Creation of biotope (not implemented)	Number, size, and sex ratio of *Geoclemys hamiltonii*	40 km² of the riverbanks of both sides (20 km² upstream and 20 km² downstream from the construction site)	Quadrate method, measured monthly during the rain season and bi-monthly during the dry season. 13 March 2011	• Average of 0.8 mature individuals per 100m² • Tertiary male to female ratio: 6 to 10 • A total of 12 juvenile observed.	Average of 1.1* mature individuals per 100m² *Value before the construction.	University of xxx	Decline in population density, but not significant enough to attribute it to the project. Anomaly in M/F ratio may be due to the exceedingly warm weather during the breeding season.

Annex-7

Environmental Monitoring Plan

Seychelles Fishing Authority (SFA), as a responsible organization of the project, has responsibility to conduct the environmental monitoring plan accordance with following measures. The monitoring is planned from before construction stage to after starting operation. SFA is requested to conduct the environmental monitoring, a safety instruction, and pollution prevention together with the constructor through the construction phase.

Water analysis of project site has been studied in March 2015. The result obtained from collected water samples were below limit of Seychelles standard. The project proponent should refer to the following monitoring plan for submitting reports.

Item	Elements	Location	Frequencies	Responsible Organization
【Construction phase 】				
Water pollution	Dissolve Oxygen (DO) Total coliforms Suspended Solid (SS) pH	Front of construction area	During the quay construction work: Every three month.	SFA Contractor
Soil pollution	Oil Oil film	Construction area	Every month and During operation of Heavy machineries	SFA
【Operation and maintenance phase 】				
Water Pollution	Dissolve Oxygen (DO) Total coliforms Suspended Solid (SS) pH	Front of construction area	Every 6 month for two years	SFA
Waste	General waste	In the port	Every 3 month for two years	SFA

In the Project, the regulations of Seychelles standard are used for monitoring, accordingly.

Annex-8

Environnemental Monitoring Form

1. Responses/Actions to Comments and Guidance from Government Authorities and the Public

Monitoring Item	Monitoring Results during Report Period
ex.) Responses/Actions to Comments and Guidance from Government Authorities	

2. Mitigation Measures

- Water Quality（Ambient Water Quality）

Item	Unit	Measured Value (Mean)	Measured Value (Max.)	Country's Standards	Referred International Standards	Remarks (Measurement Point, Frequency, Method, etc.)
SS (Suspended Solid)	(mg/L)			30	200	
DO						
Total coliforms	(N/100ml)			500	3000/cm^3	
pH						

- Soil

Monitoring Item	Monitoring Results during Report Period
Oil, Oil film	

- Wastes

Monitoring Item	Monitoring Results during Report Period
Waste	

-When monitoring plans including monitoring items, frequencies and methods are decided, project phase or project life cycle (such as construction phase and operation phase) should be considered.

Annex-9

Estimated Operation and Maintenance Cost

Providence fishing port is respected to maintain to operate after the implementation of the project by the SFA. However, implementation agency will have responsibility to keep budget to ensure sustainable medium- and long-term operation maintenance cost for appropriate depreciation.

It is recommended to secure the budget for items as shown in Table (1) and (2) for sustainable operation of the project.

Table (1) Long term Maintenance Cost for Facilities

Interval	Cost (SCR)	Remark
5 years	214,000	Facilities painting, repair of the port facility
10 years	428,000	Exchange of pump system

Table(2) Maintenance cost for Equipment

Interval	Cost (SCR)	Remark
2.5 years	43,000	Lubrication oil for refrigerating compressor, Refrigerant
5 years	150,000 210,000	Refrigerating compressor, Replacement of parts Bollards (10% of bollard to be change)
10 years	300,000	Refrigerating compressor, Replacement of main part, Replacement of ventilation fan
30 years	1,200,000	Anode corrosion for Sheet pile

Appendices 5. Soft Component (Technical Assistance) Plan

5-1 Soft Component (Technical Assistance) Plan

Seychelles side requested training as the Soft Component of its personnel for the upgrading of technical capacity in the operation and maintenance/management of ice-making facility provided in the project.

5-2 Activities of the Soft Component

Activity of the Soft Components is focused on:

[Activity of the Soft Components]

Activity	Duration	Starting time
Improvement of technical operation on ice making facility	1.0 months	1.5 month before handing over

Outcome 1

Outcome: "Establishment of maintenance plan for the ice making plan"

Activities

1-1 To make a draft of maintenance plan and maintenance notes for the ice making plant.

1-2 To explain basic operation procedures and the relation between the each units of ice making facility.

1-3 To clarify the maintenance procedures for the equipment such as ice making plant and to coach actual maintenance.

1-4 To instruct the methods of collection of operation data for the equipment such as ice making facility

1-5 To conduct method for recoding on the maintenance notes and analyzing the operation data for ice making facility

1-6 To make maintenance plan and maintenance notes for the ice making facility

Based on the information and lessons learned from the activities through 1-2 to 1-6, the maintenance plan (schedules) and records of maintenance (log-book) for the each equipment are to be prepared.

5-3 Implementation Resources

Because the consultants or NGOs capable of giving total guidance with regard to management, accounting, and the operation of the concerned facilities of this Project, Resources for the Soft Component is not capable to find locally. It is determined to dispatch the Japanese consultants who was involved in this preparatory survey, and to engage the Soft Component in collaboration with the local counterparts.

Resources

(1) Japanese side

One consultant who has experience on ice-making facility in fisheries sector will be dispatched. Consultants will have experience of training on those facilities and offer guidance on refrigeration management system. He/she will prepare the teaching materials in Japan.

(2) Seychelles side

During the implementation of the Soft Component, following counterparts will be dispatched to collaborate with the Japanese trainer.

Two persons for facility maintenance personnel (technical staff)

5-4 Outputs

1) Completion report
2) Maintenance plan (maintenance and inspection logbook, working record table, replacement parts manual**)**
3) Medium-and long-term maintenance plan (operation plan, maintenance schedule, parts replacement record)
4) Operation manual (operation regulation, operation guidance)

Appendices 6. Other Relevant Data

- 6.1 Environmental Social consideration
  - 6.1.1 Environmental Check list
  - 6.1.2 Environmental monitoring plan
  - 6.1.3 Environmental monitoring form
- 6.2 Analysis Result of in-Port Calmness

Appendix- 6.1.1

Environmental Checklist

Category	Environmental Item	Main Cheek Items	Yes: Y No: N	Confirmation of Environmental Considerations
1. Permits and Explanation	(1) EIA and Environmental Permits	(a) Have EIA reports been already prepared in official process? (b) Have EIA reports been approved by authorities of the host country's government? (c) Have EIA reports been unconditionally approved? If conditions are imposed on the approval of EIA reports, are the conditions satisfied? (d) In addition to the above approvals, have other required environmental permits been obtained from the appropriate regulatory authorities of the host country's government?	(a):N (b):N (c):Y (d):	(a)EIA report is prepared by the SFA with instruction of the Ministry of Environment, Energy and Climate Change and submit for approval by November 2015. (b)EIA report is approved and examined by the Ministry of Environment, Energy and Climate Change, by November 2015. Environmental permit is issued in December 2015. (c) Before EIA implementation, the Ministry of Environment, Energy and Climate Change will hold a stakeholders meeting. (d) Additional approvals are not requirement after the approval of Environmental Permit.
	(2) Explanation to the Local Stakeholders	(a) Have contents of the project and the potential impacts been adequately explained to the Local stakeholders based on appropriate procedures, including information disclosure? Is understanding obtained from the Local stakeholders? (b) Have the comment from the stakeholders (such as local residents) been reflected to the project design?	(a):Y (b):	(a)Stakeholders meeting were held on 25th of May and 3rd Jun 2015. Project details are explained to the Stakeholders. Opportunity of Consensus was build, and comments were collected from the stakeholders. (b) The project site does not consist residential area since the site is situated in the industrial zone. Comments obtained from Stakeholders meeting were reflected to the Project plan, from safe operation of the port and functional operation of facilities.
	(3) Examination of Alternatives	(a) Have alternative plans of the project been examined with social and environmental considerations?	(a):Y	(a) the Project site was selected from different alternative plans for the project, which were design from different aspect of social and environmental consideration.
2. Pollution Control	(1) Air Quality	(a) Do air pollutants, such as sulfur oxides (SOx), nitrogen oxides (NOx), and soot and dust emitted from ships, vehicles and project equipments comply with the country's emission standards? Are any mitigating measures taken?	(a):Y	(a)No specific air pollutants will discharged from the project component. Exhaust gas from small vehicle might be emitted, but the project will adversely affect to the air quality.
	(2) Water Quality	(a) Do effluents from the project facilities comply with the country's effluent and environmental standards? (b) Do effluents from the ships and other project equipments comply with the country's effluent and environmental standards? (c) Does the project prepare any measures to prevent leakages of oils and toxicants? (d) Does the project cause any alterations in coastal lines and disappearance/appearance of surface water to change water temperature or quality by decrease of water exchange or changes in flow regimes? (e) Does the project prepare any measures to prevent polluting surface, sea or underground water by the penetration from reclaimed	(a):Y (b):Y (c):Y (d):N (e):Y	(a)The project facilities are complied with Seychelles environmental standard for wastewater effluent from the quay and ice making facility installed by the Project. (b) No effluent was observed from water quality survey held in 2015 from vessels and other project equipment. Water quality level is to clear the environmental standards of the Seychelles. Installations of ice making units are design with circular cooling system to reduce effluent to the port from project components. (c)Basic structure of floor is design to avoid external outflow of oil for facilities and equipment that utilize oil. (d) The project is extension of existing port, minor modification of formal

Category	Environmental Item	Main Cheek Items	Yes: Y No: N	Confirmation of Environmental Considerations
		lands?		lines are design in the port, however there will be no change in coastal lines and no effect to water current, temperatures, or water exchanges. (e)The project does not contain reclaimed land work.
	(3) Wastes	(a) Are wastes generated from the ships and other project facilities properly treated and disposed of in accordance with the country's regulations? (b) Is offshore dumping of dredged soil properly disposed in accordance with the country's regulations? (c) Does the project prepare any measures to avoid dumping or discharge toxicants?	(a):Y (b):Y (c):Y	(a) Currently, wastes generated from the vessels and other project facilities are collect three times a week by the contracted private company. After the project implementation, their contract with SFA is remain as it is. (b)In Seychelles, soil is basically valuable, hence soils collected from dredging is never disposed. Dredged soil is properly collected to use as accordance with the country's regulations. (c) SFA will monitor of dumping or discharge toxicants. SFA will also prepare awareness program relating waste to the port users.
	(4) Noise and Vibration	(a) Do noise and vibrations from the vehicle and train traffic comply with the country's standards?	(a):Y	(a) The project is situated in industrial area where no residence are living , and not adversely have affect by the noise and vibration accordance with country's regulation. However, monitoring plan for Noise and vibration are require after the implementation of the Project.
	(5) Subsidence	(a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause subsidence?	(a):N	(a) The project will not extract any groundwater. Building structure design to the project components is designed with a reinforcing concrete bars structure to reduce weight.
	(6) Odor	(a) Are there any odor sources? Are adequate odor control measures taken?	(a):Y	(a) General wastes are collect by the private company, three times a week. The contract with the company will continue after completion of construction.
	(7) Sediment	(a) Are adequate measures taken to prevent contamination of sediments by discharges or dumping of hazardous materials from the ships and related facilities?	(a):Y	(a)Contamination of sediments discharges of hazardous material from procured equipment or ships are controlled by the proper maintenance. In addition, hazardous material will not discharge from facilities as environmentally considerate equipment are selected from procurement stage.
3. Natural Environment	(1) Protected Areas	(a) Is the project site located in protected areas designated by the country's laws or international treaties and conventions? Is there a possibility that the project will affect the protected areas?	(a):N	(a)The project site is not located in protected areas accordance with international and national law. In addition, the Project will not create any affect to protected areas.
	(2) Ecosystem	(a) Does the project site encompass primeval forests, tropical rain forests, ecologically valuable habitats (e.g., coral reefs, mangroves, or tidal flats)? (b) Does the project site encompass the protected habitats of endangered species designated by the country's laws or international treaties and conventions? (c) If significant ecological impacts are anticipated, are adequate protection measures taken to reduce the impacts on the ecosystem? (d) Is there a possibility that the project will adversely affect aquatic organisms? Are adequate measures taken to reduce negative impacts on aquatic organisms? (e) Is there a possibility that the project will adversely affect vegetation or wildlife of coastal zones? If any negative impacts are	(a):N (b):N (c):N (d):N (e):N	(a) The project site does not encompass primeval forest, tropical rain forest, ecologically valuable habitats (b) The project site dose not encompass to the protected area of endangered by the Seychelles Laws or international treaties and conventions. (c) No significant ecological impacts are observed. (d) The project will not adversely affect to the aquatic organism. (e) The project will not adversely affect to the vegetation and wild animals in coastal zone.

Category	Environmental Item	Main Cheek Items	Yes: Y No: N	Confirmation of Environmental Considerations
		anticipated, are adequate measures taken to reduce the impacts on vegetation and wildlife?		
	(3) Hydrology	(a) Do the project facilities affect adversely flow regimes, waves, tides, currents of rivers and etc if the project facilities are constructed on/by the seas?	(a):N	(a) The project will not adversely affect to the flow of surface water and groundwater.
	(4) Topography and Geology	(a) Does the project require any large scale changes of topographic/geographic features or cause disappearance of the natural seashore?	(a):N	(a) The project will not adversely affect to topographic/geographic feature.
4. Social Environment	(1) Resettlement	(a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement? (b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement? (c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement? (d) Are the compensations going to be paid prior to the resettlement? (e) Are the compensation policies prepared in document? (f) Does the resettlement plan pay particular attention to vulnerable groups or people, including women, children, the elderly, people below the poverty line, ethnic minorities, and indigenous peoples? (g) Are agreements with the affected people obtained prior to resettlement? (h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan? (i) Are any plans developed to monitor the impacts of resettlement? (j) Is the grievance redress mechanism established?	(a):N (b): (c): (d): (e): (f): (g): (h): (i): (j):	(a)(b)(c)(d)(e)(f)(g)(h)(i)(j)The project will not cause any resettlement.
	(2) Living and Livelihood	(a) Is there a possibility that the project will adversely affect the living conditions of inhabitants? Are adequate measures considered to reduce the impacts, if necessary?	(a):N	(a)The project will not adversely affect resettlement and living conditions of the people.
	(3) Heritage	(a) Is there a possibility that the project will damage the local archeological, historical, cultural, and religious heritage? Are adequate measures considered to protect these sites in accordance	(a):N	(a)The project does not affect the local archaeological, historical, cultural, and religious heritage

Category	Environmental Item	Main Cheek Items	Yes: Y No: N	Confirmation of Environmental Considerations
		with the country's laws?		
	(4) Landscape	(a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken? (b) Is there a possibility that landscape is spoiled by construction of high-rise buildings such as huge hotels?	(a):N (b):N	(a)The project site is assign as industrial zone. The project will not adversely affect to local landscape. (b)The projects component is constructed with one-story building, therefore the project components will not adversely affect to local landscape.
	(5)Ethnic Minorities and Indigenous Peoples	(a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples? (b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?	(a):N (b)	(a)(b) The project will not adversely affect to the culture and lifestyle of ethnic minorities and indigenous people.
	(6) Working Conditions	(a) Is the project proponent not violating any laws and ordinances associated with the working conditions of the country which the project proponent should observe in the project? (b) Are tangible safety considerations in place for individuals involved in the project, such as the installation of safety equipment which prevents industrial accidents, and management of hazardous materials? (c) Are intangible measures being planned and implemented for individuals involved in the project, such as the establishment of a safety and health program, and safety training (including traffic safety and public health) for workers etc.? (d) Are appropriate measures taken to ensure that security guards involved in the project not to violate safety of other individuals involved, or local residents?	(a):Y (b):Y (c):Y (d):Y	(a)(b)(c)(d) The accidents is to prevented by installation of fences, secured the traffic with security guards, notice the construction schedule, and enlighten the workers with the safety management during the construction.
5. Others	(1) Impacts during Construction	(a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)? (b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts? (c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?	(a):Y (b):N (c):N	(a)Impacts during construction Noise: The noise will be arisen during the construction work. The construction hours are to limit during the night and holiday. Dust: The construction work, vehicles movement, and strong wind at the site will create the dust. Appropriate sprinkling of water is planned during construction period to reduce impact. Water quality: For minimize impact to water quality, appropriate construction equipment and silt fence are use during the construction period. Sediment: All of the construction work must be supervise to monitor the oil leakage during the Project. (b)Construction activities will not adversely affect the natural environment (ecosystem). (c)Construction activities will not adversely affect the social environment.

Category	Environmental Item	Main Cheek Items	Yes: Y No: N	Confirmation of Environmental Considerations
	(2) Monitoring	(a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts? (b) What are the items, methods and frequencies of the monitoring program? (c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)? (d) Are any regulatory requirements pertaining to the monitoring report system identified, such as the format and frequency of reports from the proponent to the regulatory authorities?	(a):Y (b): (c):Y (d):Y	(a) Proponent and development of implement monitoring program are to prepare by SFA. Monitoring program is prepared to determine for seawater, waste and soil, respectively. (b) SFA will conduct seawater, soil and wastes monitoring accordance with country's regulation. Seawater sample is carried out to analyze once every three months dring the quay construction work. Soil sample is to analyze during the operation of Heavy machineries in addition to once every month. Wastes in the port is to monitor every three months. (c)Monitoring system is established by SFA. Require staffs and necessary budget for implementation of monitoring programs is secure by the SFA. (d)Monitoring report system is to establish by SFA including format, frequency of reporting. SFA have responsibility to prepare monitoring report to Ministry of Environment, Energy and Climate Change once a year.
6. Note	Reference to Checklist of Other Sectors	(a) For processing and storage facilities, where necessary, pertinent items described in the Mining and Industry checklist should also be checked. (b) Where necessary, pertinent items described in the Ports and Harbors checklist should also be checked (e.g., projects including construction of ports and harbor facilities).	(a): (b):	(a)It is no required in the project (b)It is no required in the project
	Note on Using Environmental Checklist	(a) If necessary, the impacts to transboundary or global issues should be confirmed (e.g., the project includes factors that may cause problems, such as transboundary waste treatment, acid rain, destruction of the ozone layer, or global warming).	(a):	(a)Component of ice making facility is equipped with units using refrigerant. The Project is design to select ammonia as refrigerant instead of Freon to reduce effect to depletion ozone layers for ice making unit. In addition, smallest requirement of ice demand is applied to reduce electrical consumption and emission by CO2.

Appendices 6.1.2 Environmental Monitoring Plan

Seychelles Fishing Authority (SFA), as a responsible organization of the project, has responsibility to conduct the environmental monitoring plan accordance with following measures. The monitoring is planned from before construction stage to after starting operation. SFA is requested to conduct the environmental monitoring, a safety instruction, and pollution prevention together with the constructor through the construction phase.

Water analysis of project site has been studied in March 2015. The result obtained from collected water samples were below limit of Seychelles standard. The project proponent should refer to the following monitoring plan for submitting reports.

Item	Elements	Location	Frequencies	Responsible Organization
【Construction phase 】				
Water pollution	Dissolve Oxygen (DO) Total coliforms Suspended Solid (SS) pH	Front of construction area	During the quay construction work: Every three month.	SFA Contractor
Soil pollution	Oil Oil film	Construction area	Every month and During operation of Heavy machineries	SFA
【Operation and maintenance phase 】				
Water Pollution	Dissolve Oxygen (DO) Total coliforms Suspended Solid (SS) pH	Front of construction area	Every 6 month for two years	SFA
Waste	General waste	In the port	Every 3 month for two years	SFA

In the Project, the regulations of Seychelles standard are used for monitoring, accordingly.

Appendices 6.1.3 Environmental Monitoring Form

1. Responses/Actions to Comments and Guidance from Government Authorities and the Public

Monitoring Item	Monitoring Results during Report Period
ex.) Responses/Actions to Comments and Guidance from Government Authorities	

2. Mitigation Measures

- Water Quality(Ambient Water Quality)

Item	Unit	Measured Value(Mean)	Measured Value(Max.)	Country's Standards	Referred International Standards	Remarks (Measurement Point, Frequency, Method, etc.)
SS (Suspended Solid)	(mg/L)			30	200	
DO						
Total coliforms	(N/100ml)			500	3000/cm^3	
pH						

- Soil

Monitoring Item	Monitoring Results during Report Period
Oil, Oil film	

- Wastes

Monitoring Item	Monitoring Results during Report Period
Waste	

-When monitoring plans including monitoring items, frequencies and methods are decided, project phase or project life cycle (such as construction phase and operation phase) should be considered.

Appendices 6.2 Analysis Result of in-Port Calmness

(1) In-port calmness analysis related to the construction of Quay No. 1, No. 2, and No. 3

As only upright structures were constructed in Phase 1 for the quay in the present Providence fishing port and most of the remaining consists of mild slope revetment made of riprap and such, the depletion effect of wave reflection is good, so a relatively favorable calm water area can be secured.

In this project, the construction plan for Quay No. 1 and No. 2, which are among the three requested quays (Quay No. 1, No. 2, No. 3) from the government of the recipient country and which is urgent and necessary judging from the present conditions of use by vessels, has been drawn up from the government of the recipient country. In the future, construction of Quay No. 3 by the government of the recipient country may occur. From the above, if as in the original request most of the waterfront line of Quays No. 1, No. 2, and No. 3 consist of upright quay construction, there is a possibility of not being able to maintain a favorable calm water area due to an increase of the wave reflected ratios as shown in Figure 6.2 (1).

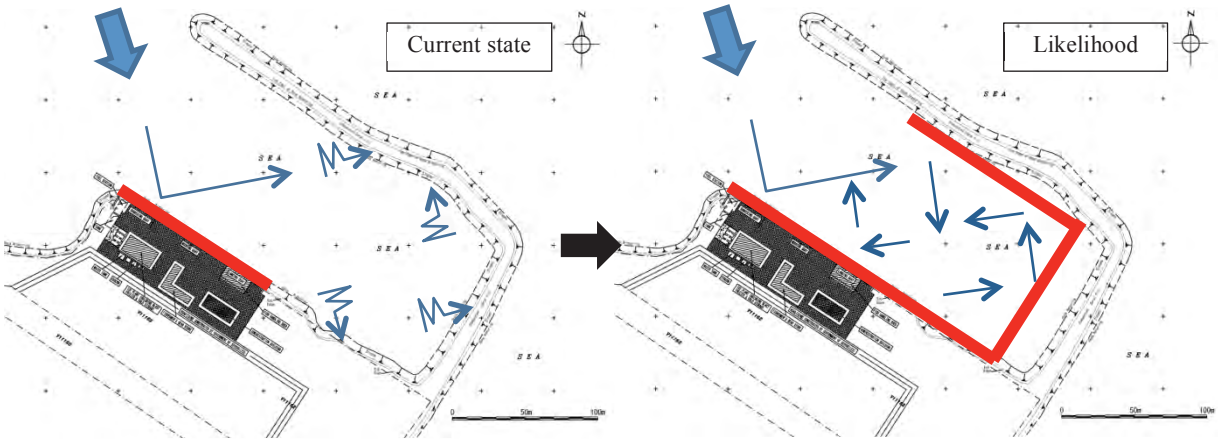


Figure 6.2(1) Worsening in-port calmness from upright quays

Therefore, using a wave direction and wave height rank demarcation frequency table in front of the Providence fishing port, a calmness analysis was made for the following 3 cases as shown in Figure 6.2 (2).

a) Constructing of Quay No. 1 (upright structure)
b) Constructing of Quay No. 1 and No. 2 (upright structure)
c) Constructing Quay No. 1 through No. 3 (upright structure)

As for calmness analysis, the wave height ratio was observed in zones A, B, C, and D in order to understand the water area characteristics in front of each quay. Representative samples of wave height ratio distribution charts, for waves coming from the North and from the Southeast, obtained from calculations, are shown in Figure-Index 6.2 (3) to Figure-Index 6.2 (5). In general, the critical wave height of a landing quay or mooring quay is set at the Japanese fishing port standard of 0.3 m in consideration of safety of the vessels using the port, and the operation rate throughout the year is set to

be 95.7% or over. Therefore, the operation ratio in each zone obtained from the average wave height ratios within the zone as shown in Table 6.2 (1) are shown in Table 6.2 (2) and Table 6.2 (3).

From the analysis above, as the operation ratio in this project is indicated to be more than 99% (95.7% or more in the standard of Japan) in every case including case 3 which considers Quay No.1 to No. 3 as upright, high calmness is conjectured to be secured for the construction of Quay No. 1 and No. 2 that are planned by this project and also for the construction of Quay No. 1 through No. 3 which is requested from the government of the recipient country.

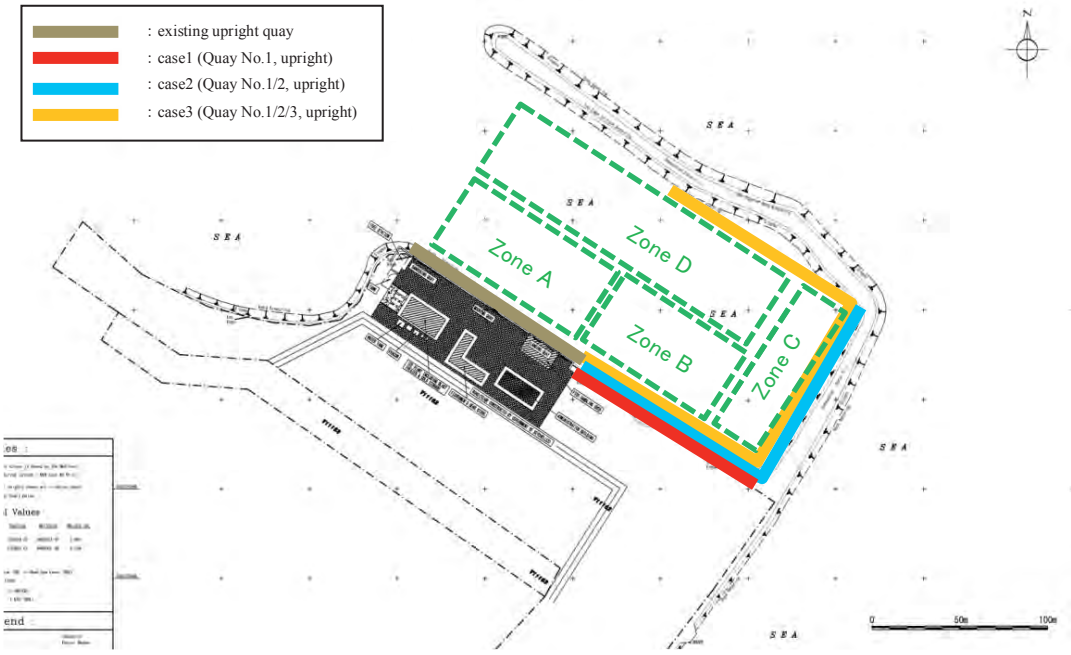
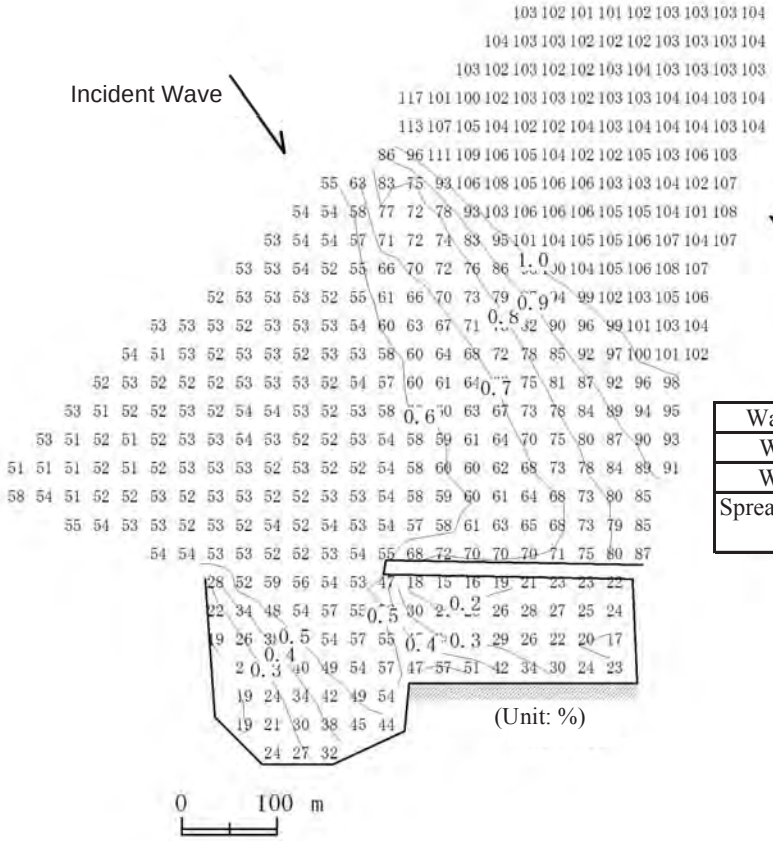


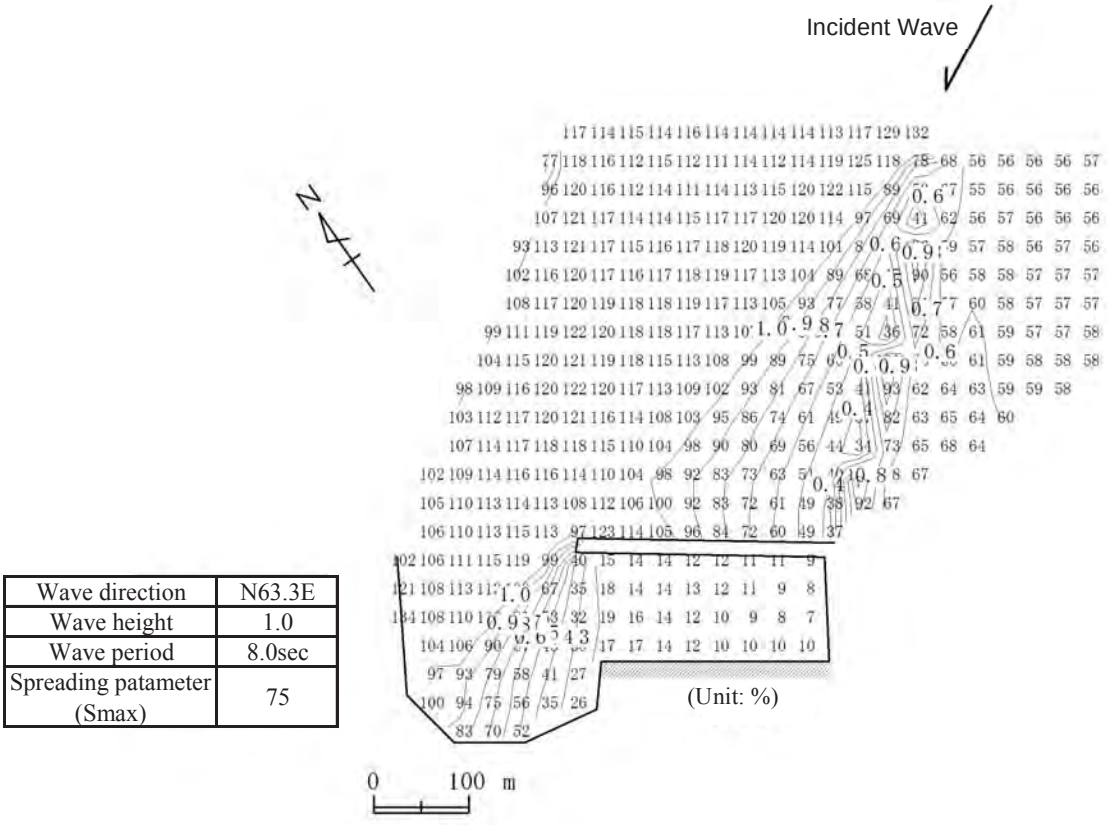
Figure 6.2(2) Model cases to be used in calmness analysis and zone demarcation

Table 6.2(1) Per zone average wave height rate from calmness calculations

Model case \ Offshore wave direction		NNW	N	NNE	ESE	SE	SSE	S
Port entrance	Wave height rate	0.46	0.46	0.42	0.36	0.29	0.23	0.18
	Incident wave direction	N2.1°W	N0.2°W	N2.8°E	N62.8°E	N63.3°E	N63.9°E	N64.1°E
Case 1 (Quay No. 1, upright)	Zone A	0.43	0.42	0.39	0.15	0.15	0.15	0.15
	Zone B	0.27	0.26	0.23	0.09	0.09	0.09	0.09
	Zone C	0.22	0.21	0.19	0.09	0.09	0.09	0.09
	Zone D	0.23	0.22	0.21	0.13	0.13	0.13	0.13
Case 2 (Quay No. 1/2, upright)	Zone A	0.45	0.43	0.40	0.16	0.16	0.16	0.16
	Zone B	0.30	0.29	0.26	0.11	0.11	0.11	0.11
	Zone C	0.27	0.26	0.23	0.11	0.11	0.11	0.11
	Zone D	0.27	0.26	0.24	0.14	0.14	0.14	0.14
Case 3 (Quay No. 1/2/3, upright)	Zone A	0.47	0.46	0.42	0.18	0.18	0.18	0.18
	Zone B	0.38	0.37	0.34	0.17	0.17	0.17	0.17
	Zone C	0.34	0.33	0.30	0.16	0.16	0.16	0.16
	Zone D	0.31	0.31	0.28	0.17	0.17	0.16	0.16



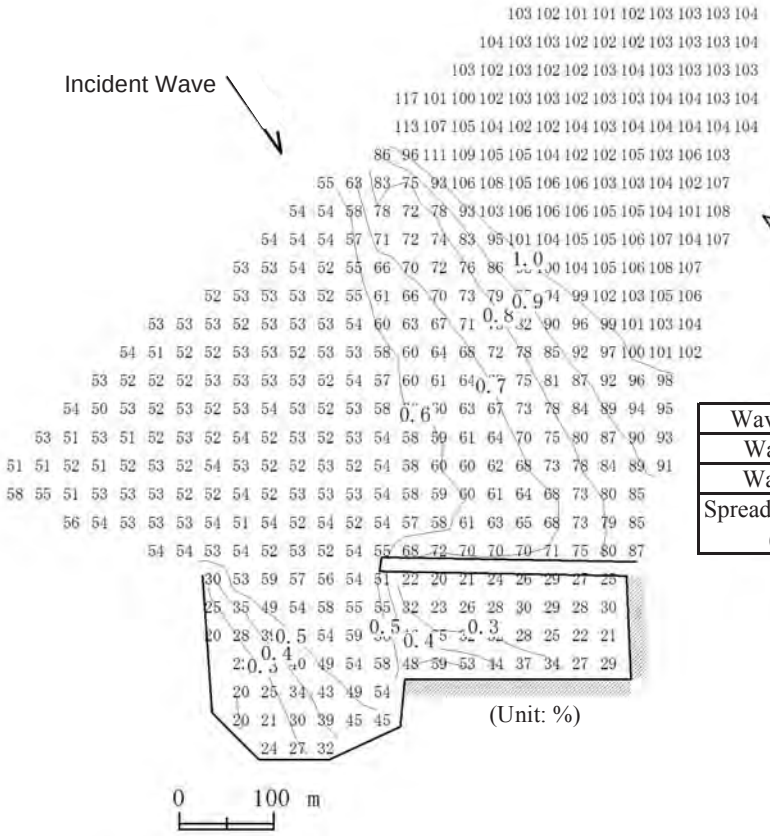
Wave direction	N0.2W
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75



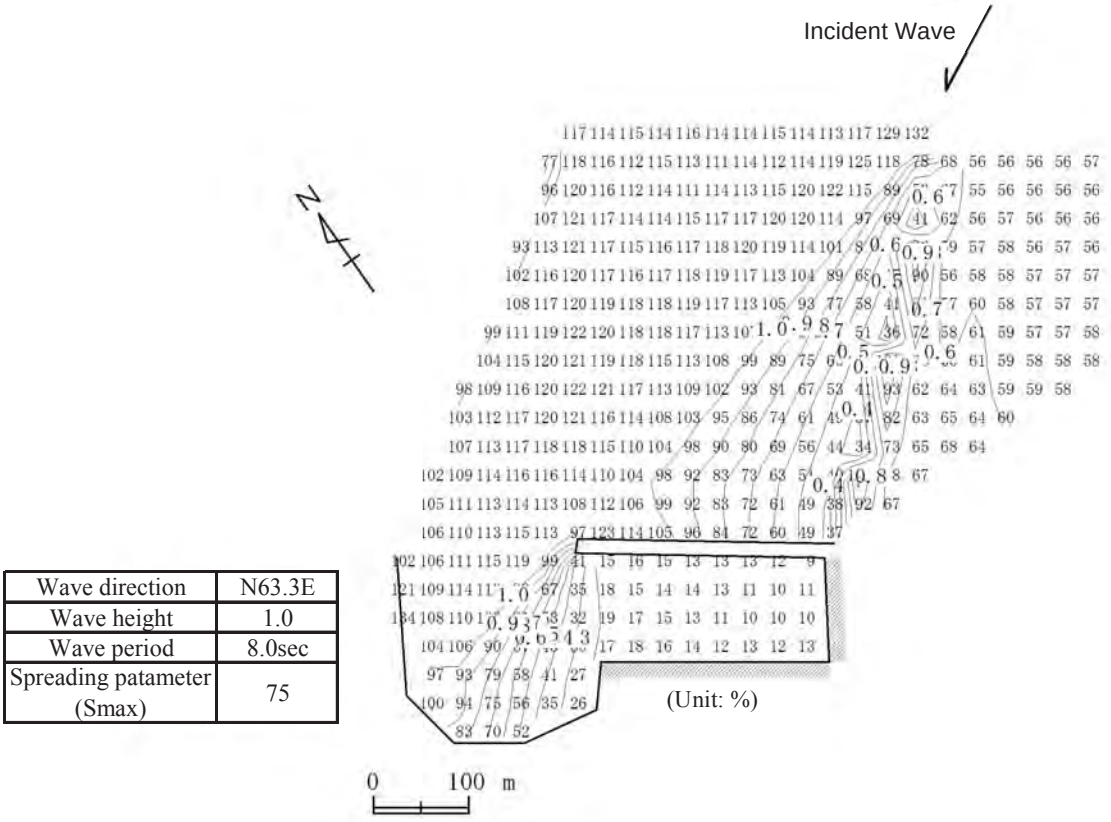
Wave direction	N63.3E
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75

Figure 6.2(3) Calculation of calmness in fishing port

(Case 1: Quay No. 1, upright)



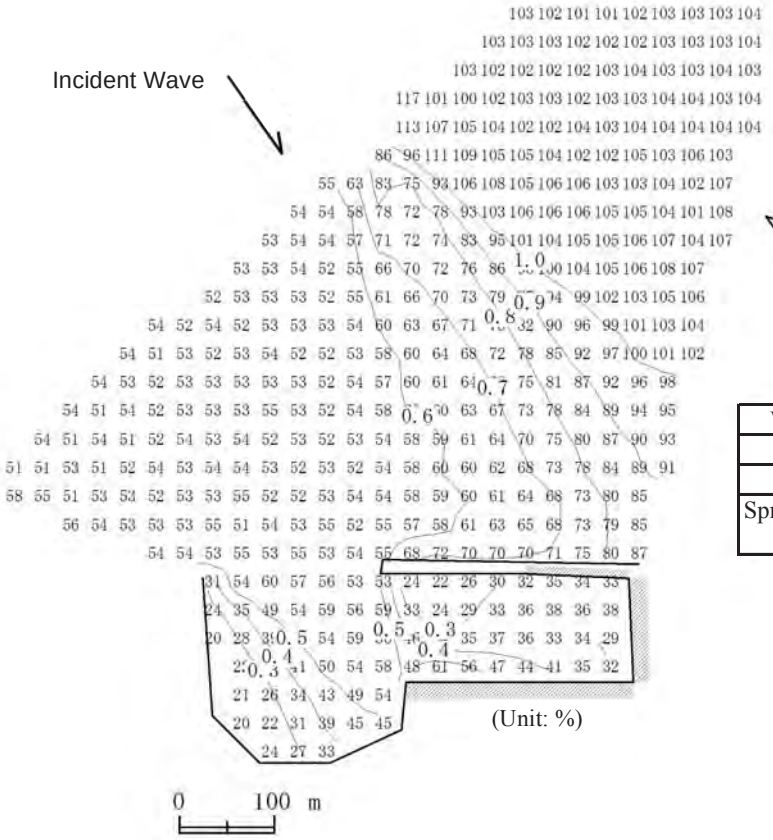
Wave direction	N0.2W
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75



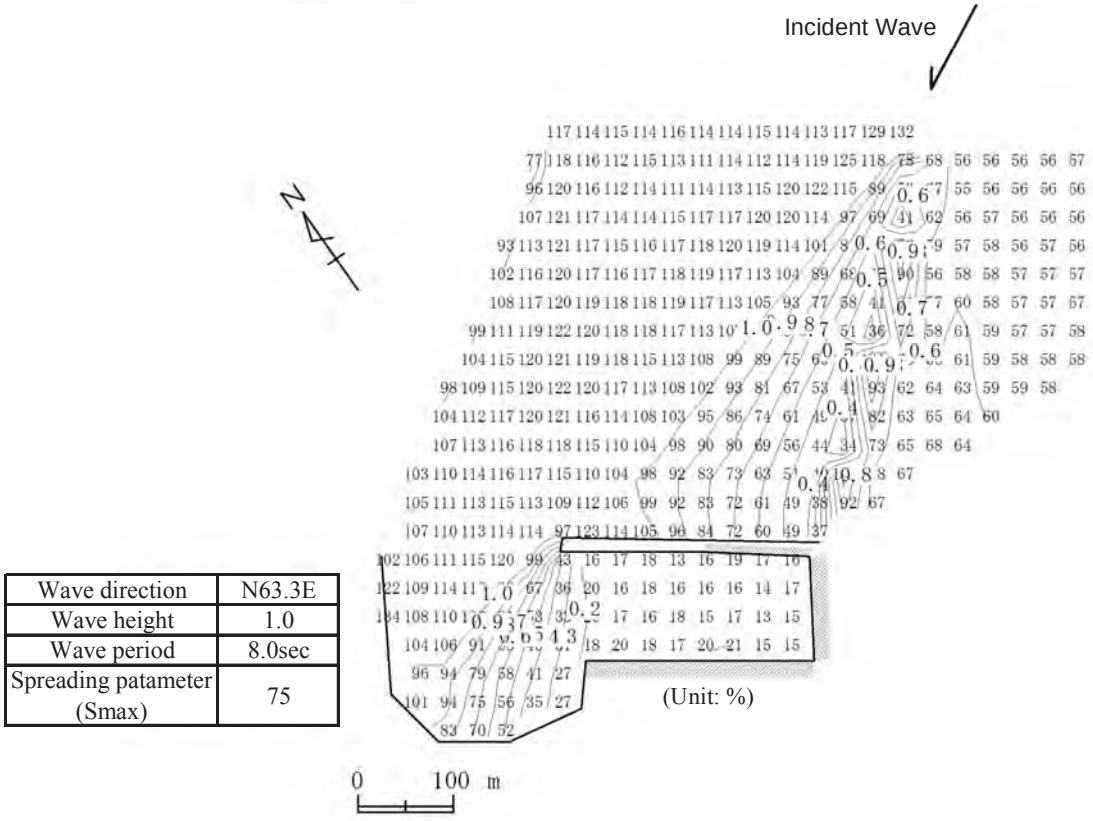
Wave direction	N63.3E
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75

Figure 6.2(4) Calculation of calmness in fishing port

(Case 2: Quay No. 1/2, upright)



Wave direction	N0.2W
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75



Wave direction	N63.3E
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75

Figure 6.2(5) Calculation of calmness in fishing port

(Case 3: Quay No. 1/2/3, upright)

Table 6.2(2) Operation rate and days by zone (critical wave height: 0.3 m)

Model Case (Alterative)	Case 1 (Quay No. 1, upright)				Case 2 (Quay No. 1/2, upright)			
Zone	A	B	C	D	A	B	C	D
Operation Rate (%)	99.04	99.89	100.0	99.98	98.87	99.81	99.89	99.89
Annual Operation Days	361	364	364	364	360	364	364	364

Table 6.2(3) Operation rate and days by zone (critical wave height: 0.3 m)

Model Case (Alterative)	Case 3 (Quay No. 1/2/3, upright)			
Zone	A	B	C	D
Operation Rate (%)	98.58	99.44	99.64	99.75
Annual Operation Days	359	362	363	364

(2) Necessary length of breakwater when Quay No. 4 is constructed, from calmness analysis

The requested place for Quay No. 4, which is outside the scope of this project, is located outside of the Providence fishing port, a place directly affected by waves. Therefore, the construction of a breakwater is considered to be necessary for the safe use of the area of water in front of Quay No. 4. The necessary length of the breakwater shall be decided from the check of the calmness of the water area in front of Quay No. 4 not only during regular wave activity but also during stormy wave activity.

As the construction of Quay No. 4 and the breakwater are excluded from this project because they are considered premature, the plan and design of structures taking into account unusual storm waves shall not be carried out. However, as there is a possibility that the construction of Quay No. 4 and the breakwater in the future will be necessary depending on the increase in number of fishing vessels using the port and surrounding area and the growth in vessel size. A comparison study, for reference was performed at this stage to investigate calmness from regular waves using several model cases having several patterns including requested proposal and zero option.

The model case to be studied shall be the case 4 alternative as shown in Figure 6.2 (6) with 2 water areas, zone A and zone B, setup for calmness analysis. In this case, as zone B is the water area in front of a reclamation revetment but not a mooring water area for vessels, the figure is shown only for reference. Representative samples of wave height rate distribution charts for the water area around Quay No. 4 for waves from the North and Southeast, obtained from calmness analysis, are shown in Figure 6.2 (7) to Figure 6.2 (10).

The average wave height rate in each zone are shown in Table 6.2(4) and the resulting calculated operation rate of each zone against the critical wave height, 30 cm, is shown in Table 6.2(5).

From this analysis, the operation rate of zone A is approximately 60% in case 1 (no breakwater), approximately 66% in case 2 (requested 50-m breakwater), approximately 75% in case 3 (70-m breakwater) and approximately 88% in case 4 (100-m breakwater). All of them are less than the Japanese standard for operation rates which is above 95.7%.

As a result, although it is at the discretion of management, a longer length than the case 3 70-m

length which can secure an operation rate of 75% is considered to be necessary. The requested 50 m length of breakwater in any case is deemed too short.

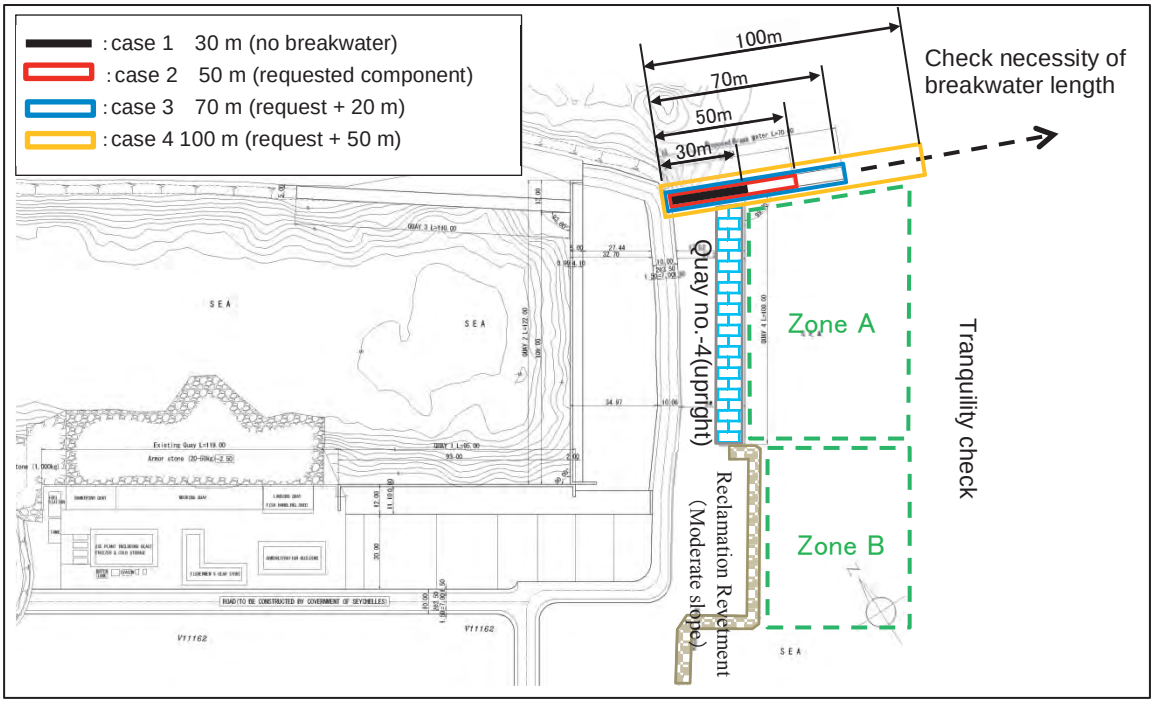
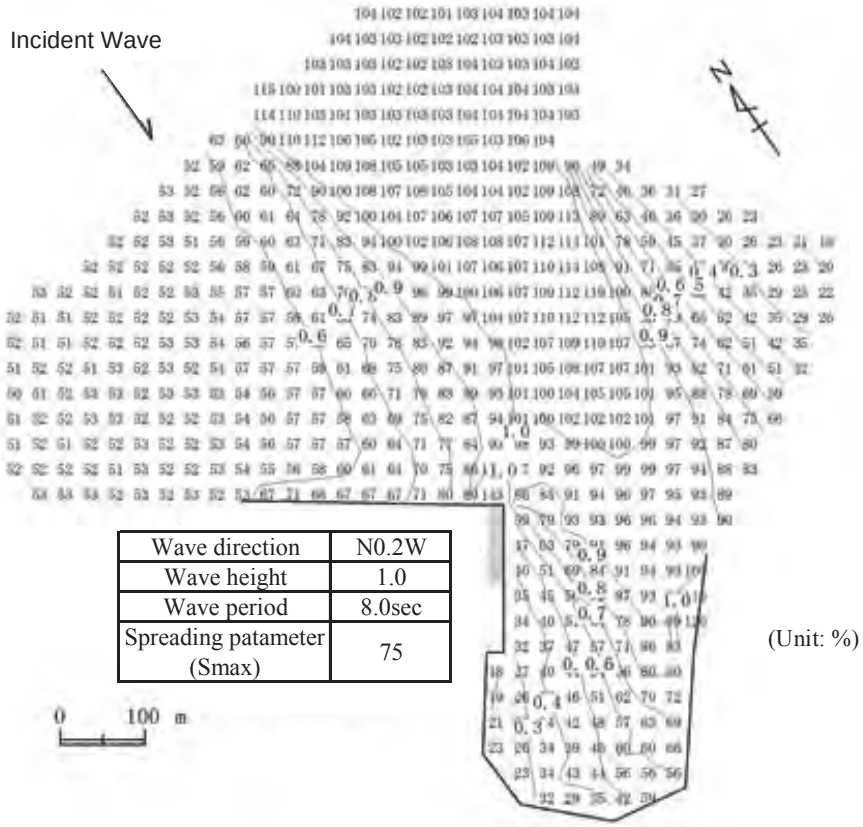


Figure 6.2(6) Model cases to be used for calmness analysis and zone demarcation

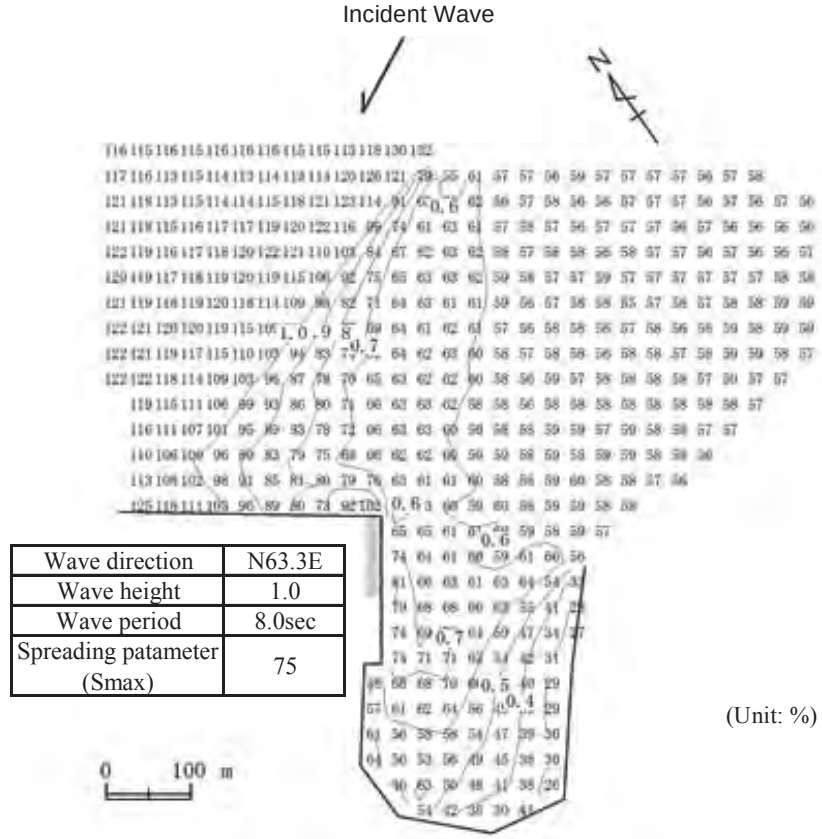
Table 6.2(4) Zone average wave height rate from calmness calculations

Model case (alternative) \ Offshore wave direction		NNW	N	NNE	ESE	SE	SSE	S
Port entrance	Wave height rate	0.46	0.46	0.42	0.36	0.29	0.23	0.18
	Incident wave direction	N2.1°W	N0.2°W	N2.8°E	N62.8°E	N63.3°E	N63.9°E	N64.1°E
Case 1 (no breakwater)	Zone A	0.61	0.64	0.70	0.66	0.67	0.67	0.67
	Zone B	0.40	0.42	0.48	0.71	0.72	0.72	0.72
Case 2 (requested component)	Zone A	0.52	0.55	0.59	0.58	0.58	0.59	0.59
	Zone B	0.31	0.33	0.38	0.65	0.65	0.66	0.66
Case 3 (request +20 m)	Zone A	0.40	0.43	0.47	0.51	0.51	0.52	0.52
	Zone B	0.25	0.26	0.30	0.62	0.62	0.62	0.63
Case 4 (request +50 m)	Zone A	0.24	0.25	0.28	0.38	0.38	0.39	0.39
	Zone B	0.20	0.21	0.24	0.54	0.54	0.55	0.55



Wave direction	N0.2W
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75

(Unit: %)

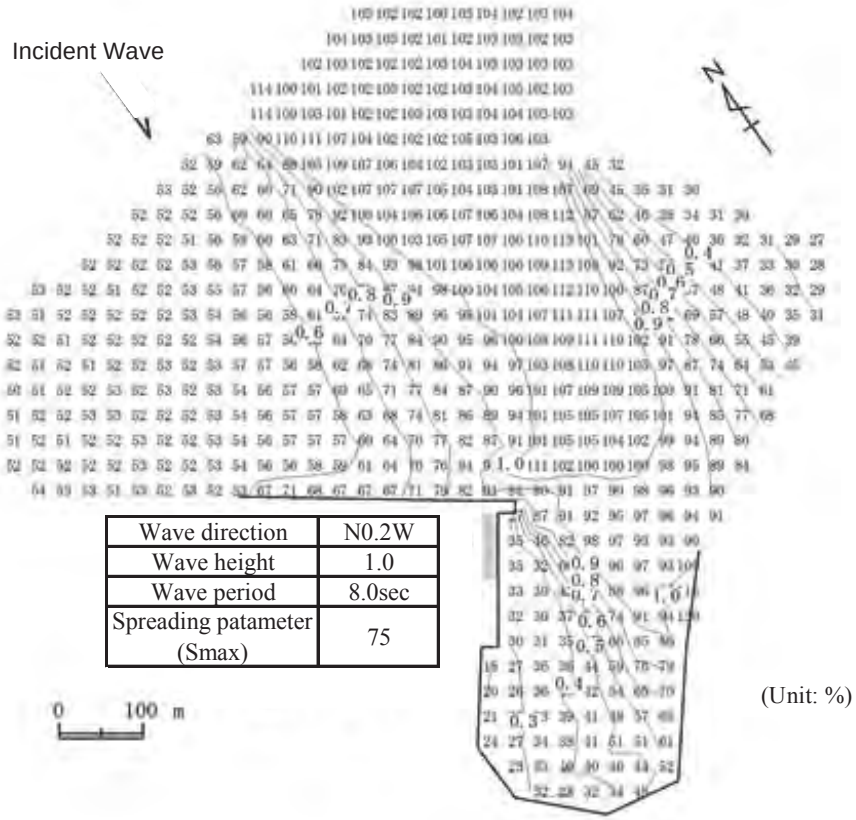


Wave direction	N63.3E
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75

(Unit: %)

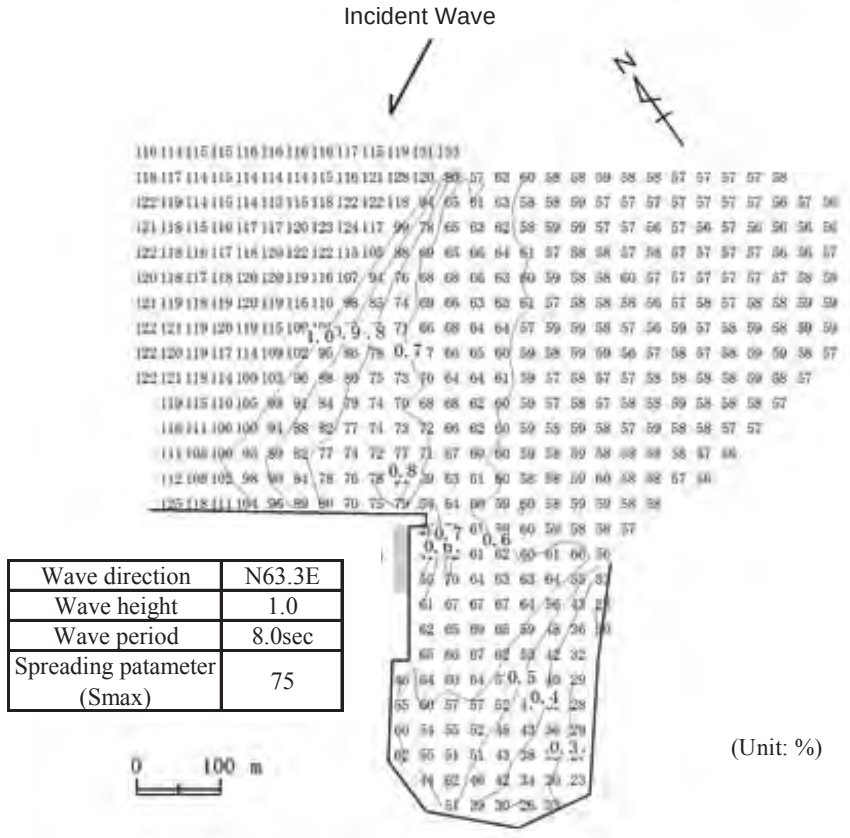
Figure 6.2(7) Calmness calculations at south side of fishing port

(Case 1: quay construction without breakwater)



Wave direction	N0.2W
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75

(Unit: %)

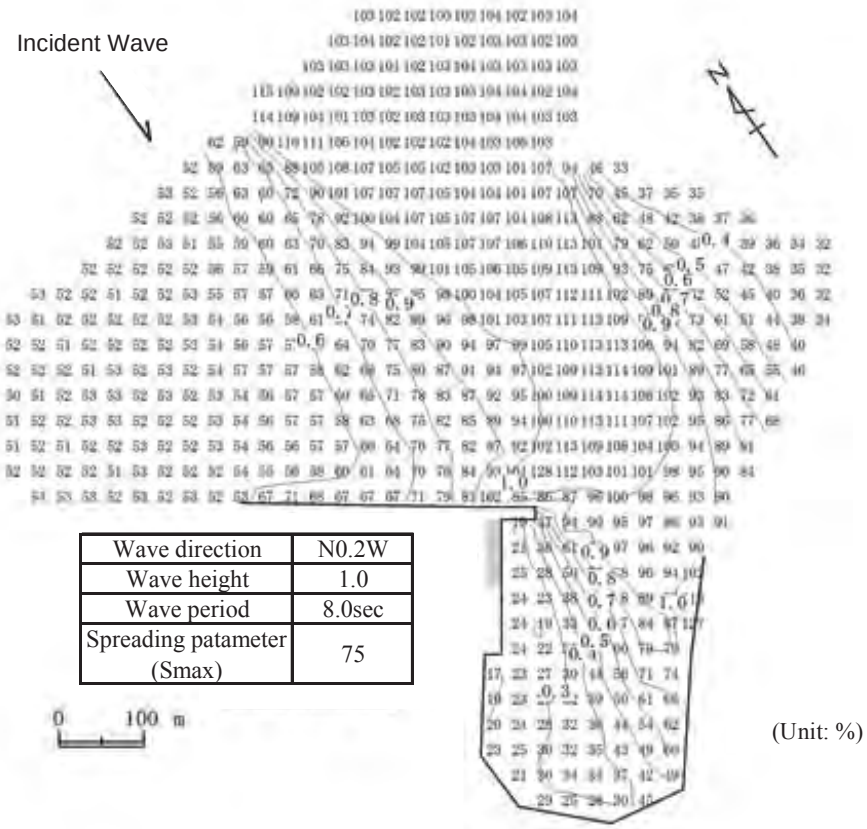


Wave direction	N63.3E
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75

(Unit: %)

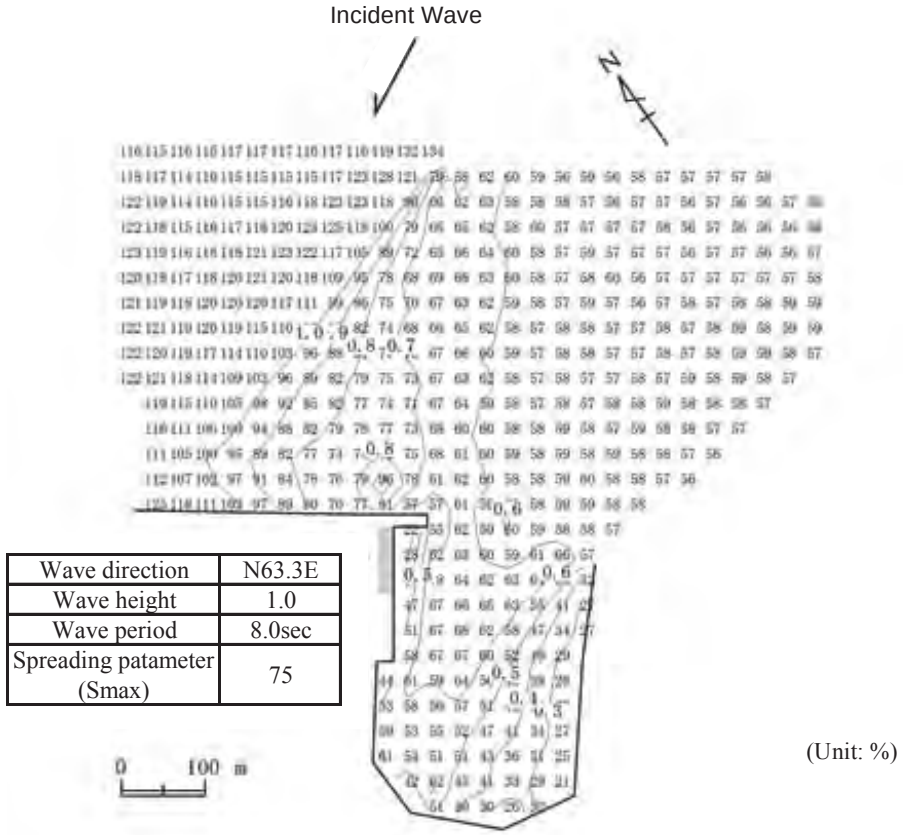
Figure 6.2(8) Calmness calculations at south side of fishing port

(Case 2: requested component)



Wave direction	N0.2W
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75

(Unit: %)

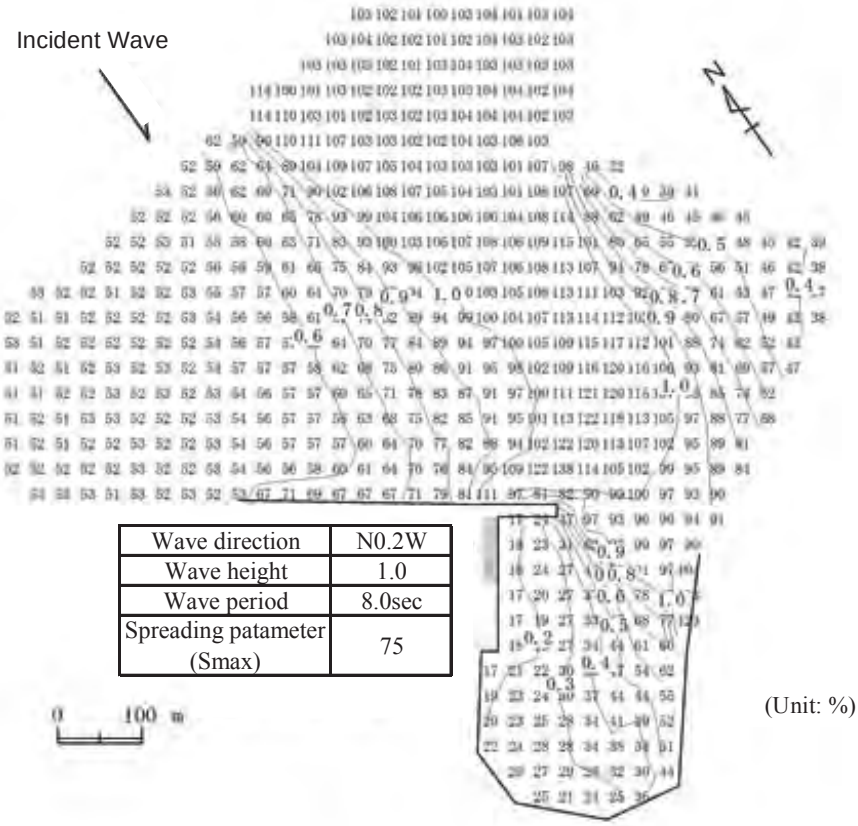


Wave direction	N63.3E
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75

(Unit: %)

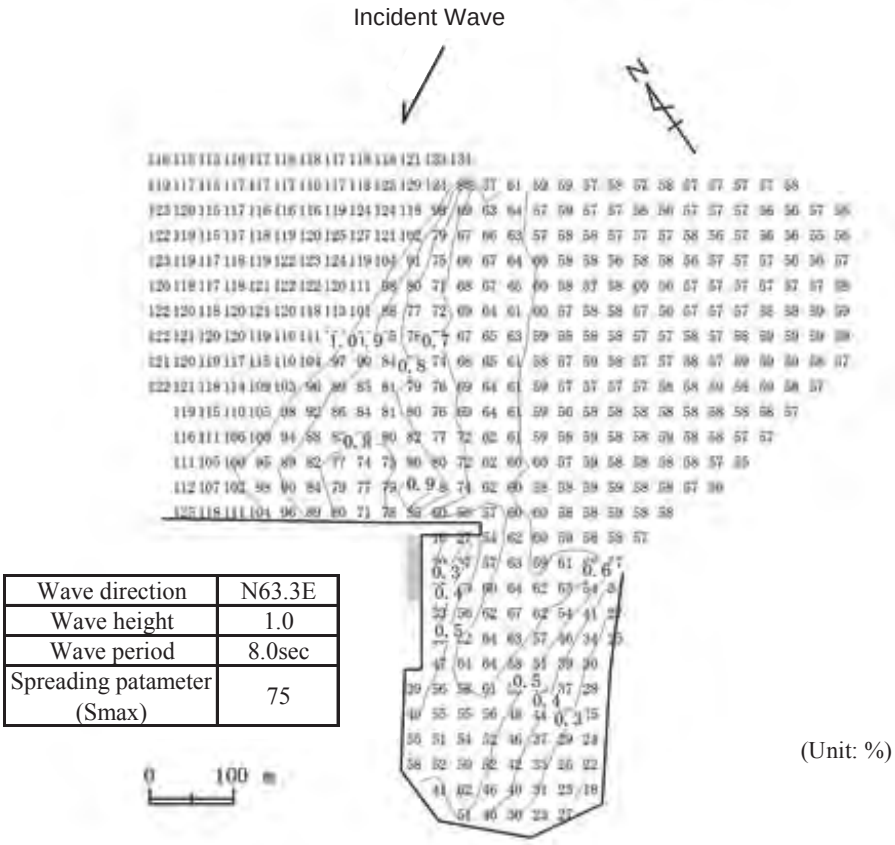
Figure 6.2(9) Calmness calculations at south side of fishing port

(Case 3: requested component with a 20-m extension of breakwater)



Wave direction	N0.2W
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75

(Unit: %)



Wave direction	N63.3E
Wave height	1.0
Wave period	8.0sec
Spreading patameter (Smax)	75

(Unit: %)

Figure 6.2(10) Calmness calculations at south side of fishing port

(Case 4: requested component with a 50-m extension of breakwater)

Table 6.2(5) Operation rate and days by zone (critical wave height 0.3 m)

Model Case (Alterative)	Case 1 (without breakwater)		Case 2 (requested component)		Case 3 (requested component+20 m)		Case 4 (requested component ＋50 m)	
Zone	A	B	A	B	A	B	A	B
Operation Rate (%)	59.31	59.40	66.46	63.66	74.05	65.98	88.55	72.20
Annual Operation Days	216	216	242	232	270	240	323	263

※ Zone A：Quay (mooring water area of vessels) , Zone B: Revetment (for reference only)