

資料編

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資料-1 調査団員・氏名

(1) 現地調査

現地調査の調査団員の構成は、以下のとおりである。

氏名	担当	所属
田中 博之	総括	国際協力機構 経済開発部 農業農村第1G第2チーム 課長
宮原 徹也	協力企画	国際協力機構 経済開発部 農業農村第1G第2チーム
加藤 一正	業務主任／施設配置計画	株式会社エコー
黒木 賢二	施設設計／環境社会配慮(2)／ 免税情報調査(2)／ 堆砂量測量管理(2)	株式会社エコー
アニエス・ラマ	免税情報調査(1)／環境社会配慮(1) ジェンダー配慮(2)	株式会社エコー
酒井 修二	施工計画／機材計画／積算／ 堆砂量測量管理(1)	株式会社エコー

(2) 概要説明

概要説明現地調査の調査団員の構成は、以下のとおりである。

氏名	担当	所属
田中 博之	総括	国際協力機構 経済開発部 農業農村第1G第2チーム 課長
宮原 徹也	協力企画	国際協力機構 経済開発部 農業農村第1G第2チーム
加藤 一正	業務主任／施設配置計画	株式会社エコー
黒木 賢二	施設設計／環境社会配慮(2)／ 免税情報調査(2)／ 堆砂量測量管理(2)	株式会社エコー
アニエス・ラマ	免税情報調査(1)／環境社会配慮(1) ジェンダー配慮(2)	株式会社エコー

資料-2 調査行程

(1) 現地調査

第1次現地調査 日程

日程	年月日	満月：● 新月：○		休日		官団員		コンサルタント団員								
				セントルシア	日本	田中博之	宮原徹也	加藤一正	黒木賢二	アニエス・ラマ	酒井 修二	総括		計画管理		
												業務主任/ 施設配置計画	施設設計/環境社会配慮 (2)/免税情報調査(2)/堆 砂量測量管理(2)	免税情報調査(1)/環境社 会配慮(1)/ジェンダー配 慮(2)	施工計画/機材計画/積 算/堆砂量測量管理(1)	
1	2021/9/23	木			祝				HND 16:45 → ATL 16:05 (DL)							
2	2021/9/24	金							ATL 09:43 → UVF 14:20 (DL)							
3	2021/9/25	土							現場視察、環境大気の簡易テスト、漁民へのヒアリング（環境）							
4	2021/9/26	日							カフェー規制で移動制限（警察署へ異動許可願）、生態系調査、海上視察、ステーキホルダー協議の準備							
5	2021/9/27	月							午前：ショゼール漁港管理事務所（ステーキホルダー協議調整）、環境ヒア 午後：ショゼール→安藤ハザマへのヒアロードニーベイ（夕方）							
6	2021/9/28	火							AM：JICA事務所表敬・打合せ（土捨場の許可遅れ） PM：水産局打合せ（インセプション説明、土捨場の許可遅れ→理事会が必要）							
7	2021/9/29	水							水産局；波濤土捨て場に関する理事会（理事会が承認後に波濤会社との契約するよう指摘あり）							
8	2021/9/30	木							波濤会社との打合せ（契約及び日程調整）		免税情報収集・環境調査					
9	2021/10/1	金							環境コンサル（水質・底質・騒音・振動）との打合せ （契約・日程調整）		免税情報収集・環境調査					
10	2021/10/2	土							ロードニーベイ→カルデサック機視察（免税情報）→ショゼール							
11	2021/10/3	日							採石場（Will Rock視察）、波濤作業に当たっての警察署との調整（交差点への標識設置など） カフェー規制で移動制限：タイムラプスカメラ設置							
12	2021/10/4	月			祝				カフェー規制で移動制限：祝日で移動できず							
13	2021/10/5	火							環境コンサル（水質・底質・騒音・振動）との現場打合せ、マスコミ対応 ステーキホルダー協議-(1)：普後住民、ステーキホルダー協議-(2)：漁民 タイムラプスカメラ設置							
14	2021/10/6	水	○						ショゼール → ロドニーベイ、 水産局・財務省との合同協議（現地企業活用型の入札、土捨場許可に係る大臣説明会日程調整） 環境コンサルとの打合せ・契約（水質）、JICA中間報告		ロードニーベイ→ショゼール					
15	2021/10/7	木							大臣（農水省・インフラ省）への現場説明会（土捨て場・建設許可許可） ショゼール→ロードニーベイ							
16	2021/10/8	金							波濤会社との打合せ（波濤許可調整、視察企業活用型ヒア、他ト ナー工事実績視察）、波濤許可のための資料作成		免税情報収集・環境調査					
17	2021/10/9	土							安藤ハザマ打合せ 国内打合せ		国内打合せ・資料整理					
18	2021/10/10	日							カフェー規制で移動制限：資料整理、国内打合せ							
19	2021/10/11	月			祝				水産局（副局長）との打合せ（波濤機械・維持管理・ソフト、土捨て場許可調整） 国内ミーティング							
20	2021/10/12	火							JICA事務所打合せ（COX氏対応）、建設企業ヒアリング（現地企業活用型、積算単価依頼）							
21	2021/10/13	水							水産局打合せ		土捨て場許可申請に係る打合せ（インフラ省）、 波濤会社との契約、環境コンサルとの調整					
22	2021/10/14	木							資料整理		建設企業ヒアリング					
23	2021/10/15	金							水産局打合せ（ミニッツ日程調整、土捨て場許可申請打合せ）		建設企業ヒアリング					
24	2021/10/16	土							資料整理		土捨て場申請書類作成 Cox氏対応					
25	2021/10/17	日							ショゼール漁港（Sabwisa beach、タイムラプス）		財務省との打合せ（免税情報）					
26	2021/10/18	月							到着（カナダ経由）		資料整理					
27	2021/10/19	火							JICA事務所、ミニッツ協議		インフラ省打合せ（建設許可、土捨て場許可）					
28	2021/10/20	水	●						ミニッツ協議		建設企業ヒアリング					
29	2021/10/21	木							ミニッツ協議、JICA事務所報告		JICA事務所、ミニッツ協議、土捨て場許可申請書類作成 インフラ省打合せ（建設許可、土捨て場許可申請書類提出）					
30	2021/10/22	金							ミニッツ署名 JICA事務所報告		建設企業ヒアリング					
31	2021/10/23	土							ショゼール以外の漁港視察		建設企業ヒアリング					
32	2021/10/24	日							ATL泊（PCR検査⇒結果）							
33	2021/10/25	月							1850UVF- -0810LGW 1530LHR-		ATL 11:10 → → HND 14:20 (DL)					
34	2021/10/26	火							1055HND							
35	2021/10/27	水							/							
36	2021/10/28	木														
37	2021/10/29	金														
38	2021/10/30	土														
39	2021/10/31	日														
40	2021/11/1	月														
41	2021/11/2	火														
42	2021/11/3	水														
43	2021/11/4	木														
44	2021/11/5	金	○													
45	2021/11/6	土														
46	2021/11/7	日														

(2) 概要説明

第2次現地調査 日程

日程	年月日	満月:● 新月:○	休日		官団員		コンサルタント		
			セントルシア	日本	田中博之	宮原徹也	加藤 一正	アニエス・ラマ	黒木賢二
					総括	計画管理	業務主任/ 施設配置計画	免税情報調査(1)/環 境社会配慮(1)/ジェン ダー配慮(2)	施設設計/環境社会配 慮(2)/免税情報調査 (2)/堆砂量測量管理 (2)
	2022/4/27	水							PCR検査
1	2022/4/28	木							PCR陰性証明取得 HND 18:30 → ATL 15:50(DL)
2	2022/4/29	金							ATL 10:00 → UVF 14:28(DL)
3	2022/4/30	土							ショゼール漁港視察
4	2022/5/1	日							資料整理
5	2022/5/2	月							資料整理
6	2022/5/3	火							水産局・JICA HQとのMD打合せ 浚渫会社との打合せ
7	2022/5/4	水							浚渫会社との契約・打合せ
8	2022/5/5	木							AM:JICA表敬 PM:水産局との打合せ
9	2022/5/6	金							ロドニーベイ→ショゼール 管理事務所との打合せ
10	2022/5/7	土							現場確認 浚渫管理
11	2022/5/8	日							浚渫管理
12	2022/5/9	月							水産局・JICA HQとのMD打合せ 浚渫管理
13	2022/5/10	火							浚渫管理
14	2022/5/11	水							浚渫管理
15	2022/5/12	木							浚渫管理
16	2022/5/13	金							PCR検査
17	1 2022/5/14	土							PCR陰性証明取得、 HND 16:45 → ATL 16:05 (DL)
18	2 2022/5/15	日							ATL 09:43 → UVF 14:20(DL)
19	3 2022/5/16	月							AM: JICA事務所、水産局表敬 & ミニッツ協議、 PM: ミニッツ協議
20	4 2022/5/17	火							ミニッツ協議
21	5 2022/5/18	水							AM: ロドニーベイ⇄ショゼール視察、PM: ステークホルダー協議
22	6 2022/5/19	木							ミニッツ協議
23	7 2022/5/20	金							ミニッツ署名、TT大使館報告16:30～
24	8 2022/5/21	土							団内ミーティング、資料整理
25	9 2022/5/22	日							午前:PCRテスト(at Bay Garden Hotel)
26	10 2022/5/23	月							PCR陰性証明書の取得、JVf 15:59 →ATL 20:54(DL)
27	11 2022/5/24	火							ATLにてPCR検査→陰性証明書の入手
28	12 2022/5/25	水							ATL 11:35 →HND 14:20(DL)
29	13 2022/5/26	木							→HND 14:20(DL)
出張日数			(A)				13	13	29

資料-3 関係者リスト

(1) 農業・水産・食品安全・地方開発省

氏名	所属	担当事項
Hon. Alfred Prospere	農業・水産・食品安全・地方開発省	大臣
Mr. Julian Barrymore Felicien	農業・水産・食品安全・地方開発省	事務次官
Ms. Soriah Niles-Regis	農業・水産・食品安全・地方開発省	副事務次官
Ms. Sarahlyn Ismond	経理部	経理担当者Ⅲ
Ms. Sarita Williams-Peter	水産局 (DoF)	水産局長
Mr. Thomas Nelson	水産局 (DoF)	副所長
Ms. Rita Straughn	水産局 (DoF)	水産局担当
Ms. Monique S. Calderon	水産局 (DoF)	水産生物学者
Ms. Shamza Daniel	水産局 (DoF)	エクステンションオフィサー
Ms. Aurelia Theodore	ショーゼル漁港管理事務所	事務長
Ms.Emma	ショーゼル漁港管理事務所	事務員
Ms. St.Rose	ショーゼル漁港管理事務所	事務員
Mr. Richardson Jean Baptiste	ショーゼル地区 Choiseul district	Community President

(2) インフラ・港湾・運輸・施設開発・都市再開発省

氏名	所属	担当事項
Hon. Stephenson King	インフラ・港湾・運輸・施設開発・都市再開発省	大臣
Mr. Ivor Daniel	インフラ・港湾・運輸局	事務次官
Mr. Hildreth Lewis	物理計画・都市再生局 Department of Physical Planning and Urban Renewal	事務次官
Ms. Karen Augustin	開発管理局	事務総長
Mr. Albert Jn. Baptiste	インフラ・港湾・運輸局	上席技師
Mr. Werner Houson	施設計画課	施設計画員
Mr. Eddie Parsade	技術局、南部地区	土木技師
Mr. Daren Cenac	セントルシア空港・港湾局 (SLASPA)	局長
Mr. Christopher Alexander	セントルシア空港・港湾局 (SLASPA)	海事長
Ms. Sephora Auguste	セントルシア空港・港湾局 (SLASPA)	海事事務官

Mr. Wilbur Etienne	セントルシア空港・港湾局 (SLASPA)	海事官
Mr. Kerwin John	セントルシア空港・港湾局 (SLASPA)	海事官 Maritime Officer

(3) 財務・経済開発・青年経済省

氏名	所属	担当事項
Ms. Esther Rigobert	Department of Finance	事務次官
Ms. Jemma Lafeuille	Department of Finance, Reseach and Policy Unit	部長
Mr. Janai Leonce	Department of Finance, Reseach and Policy Unit	Chief Economist
Mr. Anthony D. Jean	Procurement Administration Unit, Department of Fiancne, Economic Growth & Job Secutiryt	部長
Ms. Marcia Vite	Inland Revenue Department	Comptroller
Mr. Cleveland Emanus	Inland Revenue Department, Strategic Design, Planning & Monitoring Division	Deputy Comptroller
Mr. Larry Andrew	Inland Revenue Department, Audit Large and Medium Taxpayer Section	Senior Tax Inspector
Mr. Sherman Emmanuel	間接税税務局	Comptroller (Ag)
Ms. Anita Montoute	間接税税務局	Comptroller

(4) 大使館トリニダード・トバゴ

氏名	所属	担当事項
平山 達夫	在トリニダード・トバゴ日本大使館	特命全権大使(第1次現地調査)
松原 裕	在トリニダード・トバゴ日本大使館	特命全権大使(第2次現地調査)
佐藤 克哉	在トリニダード・トバゴ日本大使館	二等書記官

(5) JICA セ国

氏名	所属	担当事項
殿川 広康	JICA セントルシア事務所	所長
松崎 晃昌	JICA セントルシア事務所	所員
漆畑 ひとみ	JICA セントルシア事務所	企画調査員
Mr. Erland J. George	JICA セ国	Training & Public Relations Officer

(6) 再委託先リスト

氏名	所属	担当事項
Mr. Robert Gajadhar	Skelly Construction Services Ltd.	Managing Director
Mr. Miguel Horne	Skelly Construction Services Ltd.	Civil Engineer/ Operations Manager
Mr. Andres Simons Griffith	Environmental Hygiene & Safety Co. Ltd.	Director
Mr. Gregory StC. Hutchinson	HHF (Hart, Hutchinson & Field) (バルバドス)	Director
Mr. Robin Yearwood	HHF (Hart, Hutchinson & Field) (バルバドス)	測量士 Land Surveyor
Ms. Ermine Herman	IDEQ Caribbean Limited	Chief Executive Officer
Mr. Taheim Herman	IDEQ Caribbean Limited	Indoor Environmentalist
Dr. Kim M Newton-James	CARPHA (Caribbean Public Health Agency)	Officer in charge, Technical Officer
Mr. Kareem Charlemagne	CARPHA (Caribbean Public Health Agency)	Laboratory Manager

(7) 建設企業

氏名	所属	担当事項
Mr. Gilbert Wilson	Wilrock Ltd.	General Manager
Mr. Stephen Shingleton-Smith	C.O. Williams	General Manager
Mr. Steve Brinkhurst	C.O. Williams	Contracts Manager
Mr. Crispin Brown	C.O. Williams	Quantity Surveyor
Mr. Martin Renee	Renee's Construction Co. Ltd.	Managing Director

資料-4 討議議事録(M/D)

(1) 第一回現地調査時 (署名日 : 2021 年 10 月 22 日)

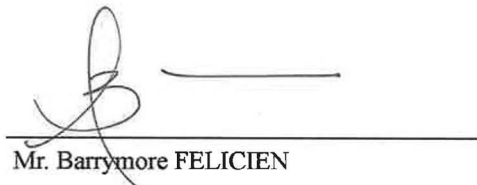
**Minutes of Discussions
on the Preparatory Survey for the Project for
Improvement of Choiseul Fishery Port**

Based on the preliminary discussions between the Government of Saint Lucia (hereinafter referred to as “the Government of Saint Lucia”) and the country office of Japan International Cooperation Agency (hereinafter referred to as “JICA”) in Saint Lucia, JICA dispatched the Preparatory Survey Team (hereinafter referred to as “the Team”) for the Outline Design of the Project for Improvement of Choiseul Fishery Port in Saint Lucia (hereinafter referred to as “the Project”). The Team held a series of discussions with the officials of the Government of Saint Lucia and conducted a field survey. In the course of the discussions, both sides have confirmed the main items described in the attached sheets.

Castries, 22 October, 2021



Mr. TANAKA Hiroyuki
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan



Mr. Barrymore FELICIEN
Permanent Secretary
The Ministry of Agriculture, Fisheries,
Food Security and Rural Development
Saint Lucia

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve the usability of the Choiseul fishery port by countermeasure works for reducing the current sedimentation in Choiseul fishery port, thereby contributing to the productivity for fisher folk and development of fisheries sectors.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as “the Preparatory Survey for the Project for Improvement of Choiseul Fishery Port” (hereinafter referred to as “the Preparatory Survey”).

3. Project site

Both sides confirmed that the site of the Project is the Choiseul fishery port, which is shown in Annex 1.

4. Responsible authorities for the Project

Both sides confirmed the authorities responsible for the Project are as follows:

- 4-1. The Fisheries Department will be the executing agency for the Project (hereinafter referred to as “the Executing Agency”). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be managed by relevant authorities properly and on time. The organization charts are shown in Annex 2.
- 4-2. The line ministry of the Executing Agency is the Ministry of Agriculture, Fisheries, Food Security and Rural Development (hereinafter referred to as “MoA”). MoA shall be responsible for supervising the Executing Agency on behalf of the Government of Saint Lucia.

5. Items requested by the Government of Saint Lucia

As a result of discussions, both sides confirmed that the items requested by the Government of Saint Lucia, which is based on the results of the Final Report for “Data collection survey for current situation of Choiseul Fishing Port” (hereinafter referred to as “the Data Collection Survey”) are as follows:

- Dredging works : Approx. 7,000 m³
- Second groyne : Approx. 70 m

- Submerged breakwater: Approx. 20 m
- Navigational aids: beacons
- 3 years of monitoring, assessment and adjustment works after construction is completed

5-1. JICA will assess the feasibility of the above requested items through the Preparatory Survey and will report the findings to the Government of Japan. In consultation with the Government of Saint Lucia, the final scope of the Project will be decided by the Government of Japan.

5-2. The Government of Saint Lucia shall submit an official request to the Government of Japan through a diplomatic channel before the appraisal of the Project.

6. Procedures and Basic Principles of Japanese Grant

6-1. The Government of Saint Lucia agreed that the procedures and basic principles of Japanese Grant (hereinafter referred to as the “Grant”) as described in Annex 3 shall be applied to the Project.

As for the monitoring of the implementation of the Project, JICA requires the Executing Agency to submit the Project Monitoring Report. This form is attached as Annex 4.

6-2. The Government of Saint Lucia agreed to take the necessary measures, as described in Annex 5, for smooth implementation of the Project. The contents of the Annex 5 will be elaborated and refined during the Preparatory Survey and be agreed in the mission dispatched for explanation of the draft Preparatory Survey Report. The contents of Annex 5 will be updated as the Preparatory Survey progresses, and eventually, will be used as an attachment to the Grant Agreement.

7. Schedule of the Preparatory Survey

7-1. The Team will conduct the Preparatory Survey in Saint Lucia until 3 November, 2021.

7-2. An official request to the Government of Japan will be submitted before December, 2021.

7-3. JICA will prepare a draft Preparatory Survey Report in English and dispatch a mission to Saint Lucia in order to explain its contents around February, 2022.

7-4. If the contents of the draft Preparatory Survey Report is accepted and the undertakings for the Project are fully agreed by the Government of Saint Lucia, JICA will finalize the Preparatory Survey Report and submit it to the MOA around April 2022.

April 2022.

7-5. The above schedule is tentative and subject to change.

8. Environmental and Social Considerations

8-1. The MOA confirmed to give due environmental and social considerations during implementation, and after completion of the Project, in accordance with the JICA Guidelines for Environmental and Social Considerations (April, 2010; https://www.jica.go.jp/english/our_work/social_environmental/guideline/ref.html) and also in accordance with Saint Lucia's National Environmental Guidelines

8-2. The Project is categorized as "B" from the following considerations:

The project is not likely to have significant adverse impact on the environment under the JICA Guidelines for Environmental and Social Considerations in terms of its sectors, characteristics and areas.

8-3. The necessary procedures for the permission to undertake coastal works including the environmental assessment shall be conducted as follow;

- JICA will send the draft Preparatory Survey Report to the MOA inclusive of the social impact assessment and mitigation works to be undertaken during the Project.
- JICA provides the copies of the construction details, coastal profile, bathymetric map of the impacted area, site plan, coastal study and any additional technical details as required in Guide to Obtaining Permission to Develop Land to MOA.
- MOA will obtain the certification for above mentioned documents as required in Guide to Obtaining Permission to Develop Land.
- The MOA will submit the application for permission inclusive of an outline of the Project Brief outlining concepts of application and relevant documents as required by the Development Control Authority (DCA).
- Development Control Authority will review the Preparatory Survey Report and the Result of the Data Collection Survey for the Environmental Impact Assessment and make EIA Review report of the Project.

9. Other Relevant Issues

9-1. Short-term countermeasures as a part of the Preparatory Survey

- The Government of Saint Lucia agreed that dredging work will be conducted two times and a temporary access road will be constructed during the Preparatory Survey. The temporary access road will be constructed at the

planned location of the second groyne.

- JICA agreed that social impacts (vessels, noise, air, water quality...) should be monitored during the preparatory survey and will form part of the Preparatory Survey Report.

9-2 Gender Mainstreaming

- Gender considerations should be included in the social impact component of the Preparatory Survey Report.
- Both sides agreed that if any women are hired as part of the unskilled labor force during the construction period, the payment rate will be same regardless of gender.

9-3 The title of the Project

Both sides agreed that the title of the Project shall be changed to “Project for Improvement of Choiseul Fishing Port”.

9-4 Consideration for fishing activities

Both sides agreed that the Project will take into consideration adverse effects to fishing activities. A temporary jetty will be prepared for fishers if the port is closed due to the Project.

9-5 Sediment dump site

Both sides agreed that the Government of Saint Lucia will select a sediment dump site. The location will be determined based on the result of the assessment of sand and land ownership.

Annex 1 Project Site

Annex 2 Organization Chart

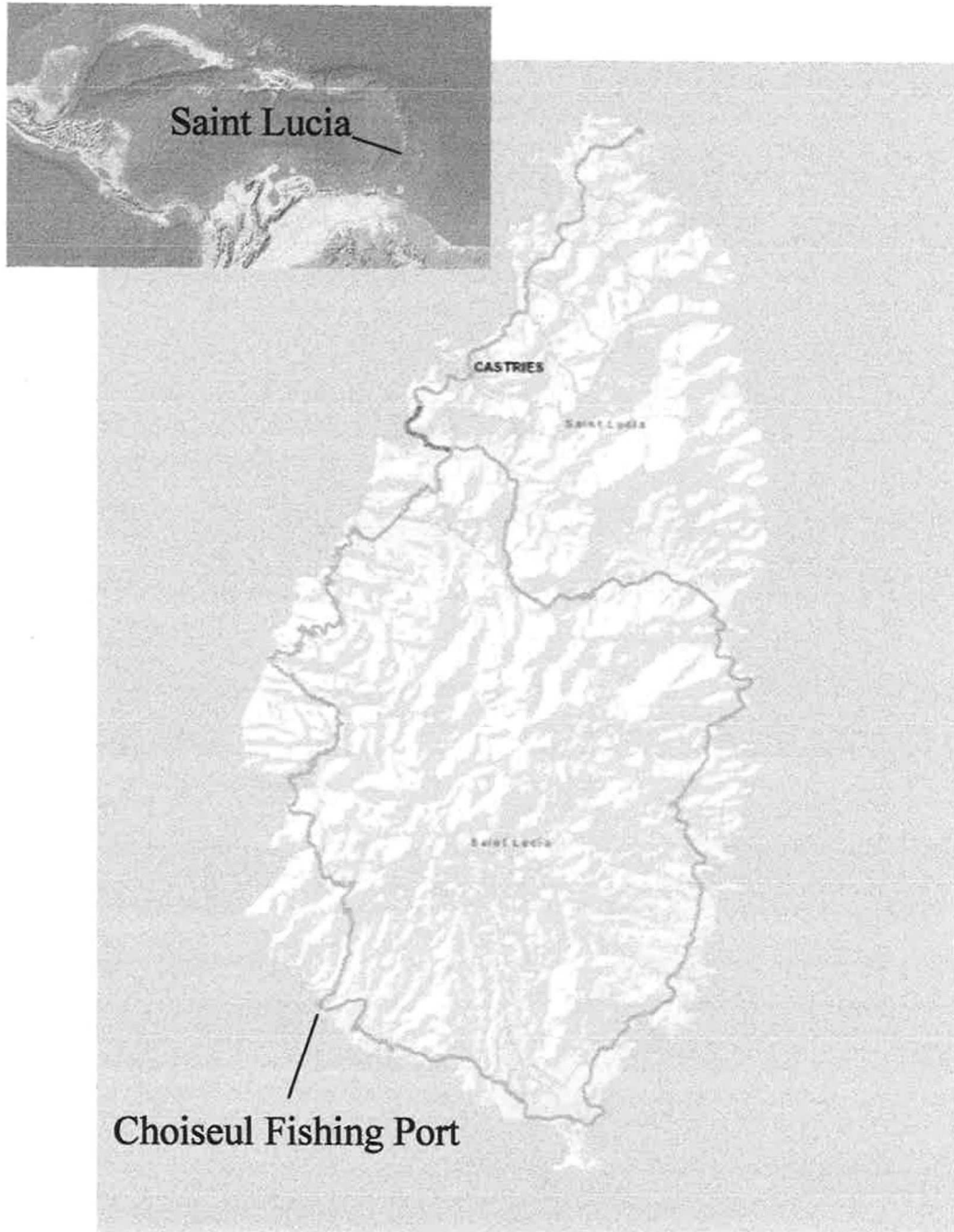
Annex 3 Japanese Grant

Annex 4 Project Monitoring Report (template)

Annex 5 Major Undertakings to be taken by the Government of St. Lucia

End

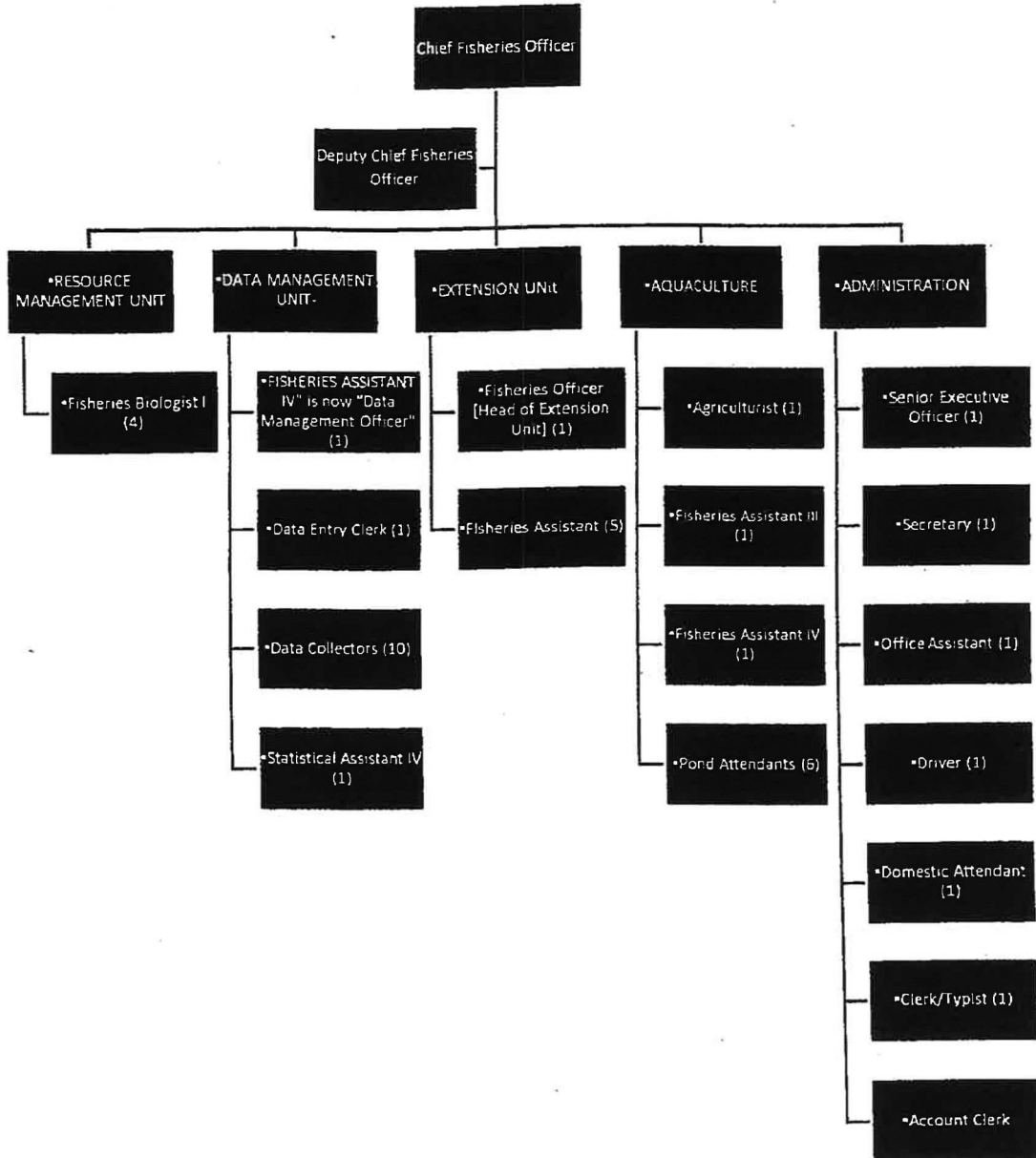
Project Site



Am

d.

Organization Chart



JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as “the Recipient”) to purchase the products and/or 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. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as “Project Grants”).

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See “PROCEDURES OF JAPANESE GRANT” for details):

(1) Preparation

- The Preparatory Survey (hereinafter referred to as “the Survey”) conducted by JICA

(2) Appraisal

- Appraisal by the government of Japan (hereinafter referred to as “GOJ”) and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

- The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as “the G/A”)

- Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as “the B/A”)

- Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as “the Bank”) to receive the grant

Construction works/procurement

- Implementation of the project (hereinafter referred to as “the Project”) on the basis of the G/A

(4) Ex-post Monitoring and Evaluation

- Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the 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 necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant 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 an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

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

JICA requests the Recipient to take 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 executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (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 feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

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 signed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."



2) Banking Arrangements (B/A) (See “Financial Flow of Japanese Grant (A/P Type)” for details)

a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.

b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA's procurement guidelines as stipulated in the G/A.

4) 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 to continue to work on the Project's implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

The Recipient is required to 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 to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the “Meeting”) will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the



Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

- a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.
- b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

- 1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.
- 2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

4) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.



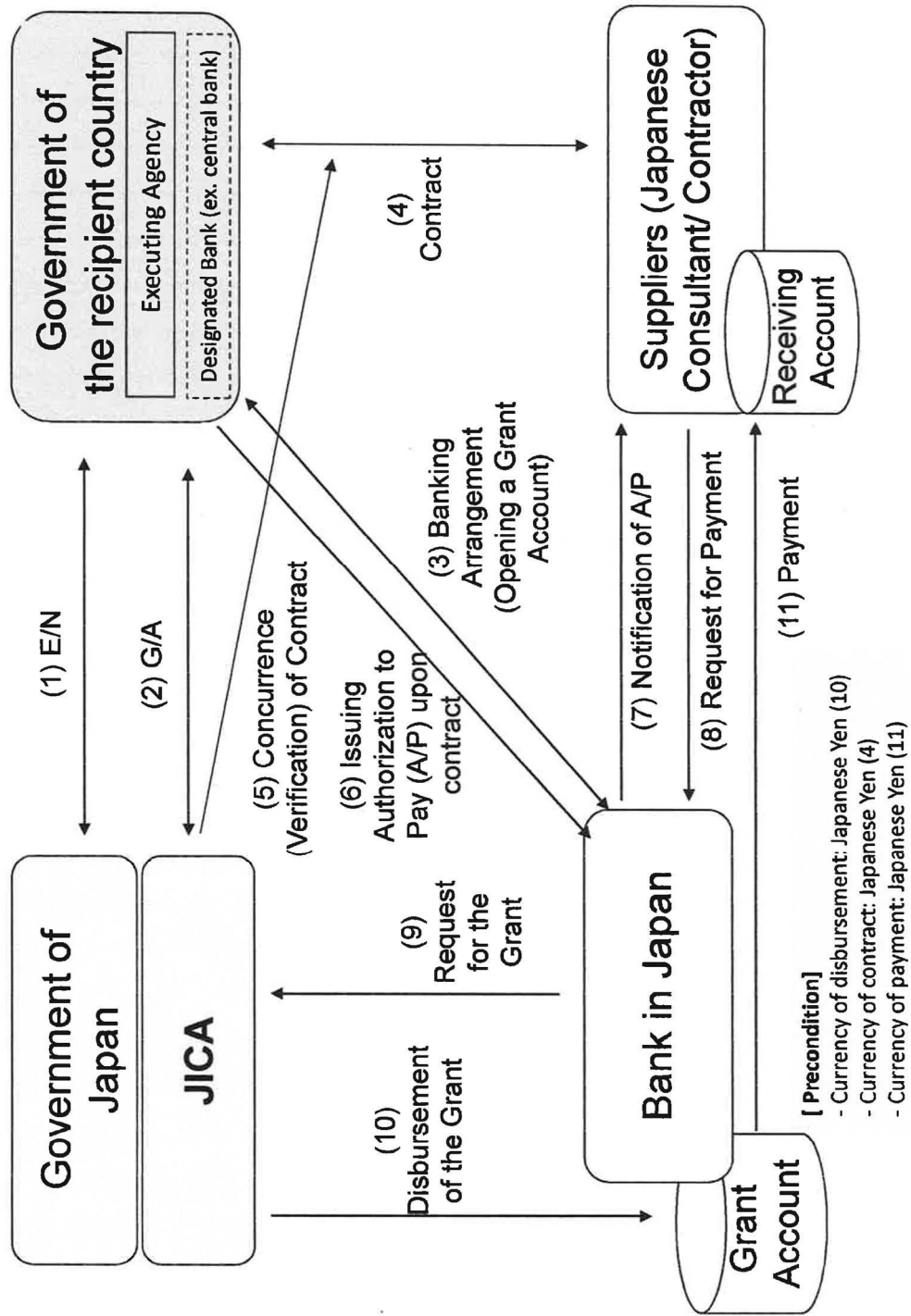
PROCEDURES OF JAPANESE GRANT

Stage	Procedures	Remarks	Recipient Government	Japanese Government	JICA	Consultants	Contractors	Agent Bank
Official Request	Request for grants through diplomatic channel	Request shall be submitted before appraisal stage.	x	x				
1. Preparation	(1) Preparatory Survey Preparation of outline design and cost estimate		x		x	x		
2. Appraisal	(2) Preparatory Survey Explanation of draft outline design, including cost estimate, undertakings, etc.		x		x	x		
	(3) Agreement on conditions for implementation	Conditions will be explained with the draft notes (E/N) and Grant Agreement (G/A) which will be signed before approval by Japanese government.	x	x (E/N)	x (G/A)			
	(4) Approval by the Japanese cabinet			x				
3. Implementation	(5) Exchange of Notes (E/N)		x	x				
	(6) Signing of Grant Agreement (G/A)		x		x			
	(7) Banking Arrangement (B/A)	Need to be informed to JICA	x					x
	(8) Contracting with consultant and issuance of Authorization to Pay (A/P)	Concurrence by JICA is required	x			x		x
	(9) Detail design (D/D)		x			x		
	(10) Preparation of bidding documents	Concurrence by JICA is required	x			x		
	(11) Bidding	Concurrence by JICA is required	x			x	x	
	(12) Contracting with contractor/supplier and issuance of A/P	Concurrence by JICA is required	x				x	x
	(13) Construction works/procurement	Concurrence by JICA is required for major modification of design and amendment of contracts.	x			x	x	
	(14) Completion certificate		x			x	x	
4. Ex-post monitoring & evaluation	(15) Ex-post monitoring	To be implemented generally after 1, 3, 10 years of completion, subject to change	x		x			
	(16) Ex-post evaluation	To be implemented basically after 3 years of completion	x		x			

notes:

1. Project Monitoring Report and Report for Project Completion shall be submitted to JICA as agreed in the G/A.
2. Concurrence by JICA is required for allocation of grant for remaining amount and/or contingencies as agreed in the G/A.

Financial Flow of Japanese Grant (A/P Type)



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

Organizational Information

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

General Information:

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

1: Project Description

1-1 Project Objective

--

1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

--

1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original <i>(proposed in the outline design)</i>	Actual
1.		

2-2 Scope of the work

Components	Original* <i>(proposed in the outline design)</i>	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

Any

[Signature]

2-3 Implementation Schedule

Items	Original		Actual
	<i>(proposed in the outline design)</i>	<i>(at the time of signing the Grant Agreement)</i>	

Reasons for any changes of the schedule, and their effects on the project (if any)

--

2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations

See Attachment 2.

2-4-2 Activities

See Attachment 3.

2-4-3 Report on RD

See Attachment 11.

2-5 Project Cost

2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
1.				
Total				

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

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
1.				

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

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 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 (at the time of outline design) name: role: financial situation: institutional and organizational arrangement (organogram): human resources (number and ability of staff):
Actual (PMR)

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original (at the time of outline design)
Actual (PMR)

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original (at the time of outline design)



Actual (PMR)

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks (at the time of outline design)

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

	Contingency Plan (if applicable):
Actual Situation and Countermeasures	
(PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

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.

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5-3 Monitoring Plan of 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.

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Attachment

1. Project Location Map
 2. Specific obligations of the Recipient which will not be funded with the Grant
 3. Monthly Report submitted by the Consultant
- Appendix - Photocopy of Contractor's Progress Report (if any)
- Consultant Member List
 - Contractor's Main Staff List
4. Check list for the Contract (including Record of Amendment of the Contract/ Agreement and Schedule of Payment)
 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) (PMR (final) only)
 8. Pictures (by JPEG style by CD-R) (PMR (final) only)
 9. Equipment List (PMR (final) only)
 10. Drawing (PMR (final) only)
 11. Report on RD (After project)

Major Undertakings to be taken by the Government of St. Lucia

1. Specific obligations of the Government of St. Lucia which will not be funded with the Grant

(1) Before the Tender

NO	Items	Deadline	Incharge	Estimated Cost	Ref
1	To submit request to MOF for signing of the banking arrangement (B/A) with a bank in Japan (the Agent Bank) to open a bank account	within 1 month after the signing of the G/A	MOA		
2	To submit request to MOF for Authorisation to Pay (A/P) to a bank in Japan (the Agent Bank) for the consultant's payment	within 1 month after the signing of the contract	MOA		
3	To submit payment request to the MOF for the following commissions or charges to the Agent Bank in Japan for the banking services based upon the B/A		MOA		
	1) Payment of advising commission or charge for A/P	within 1 month after the signing of the contract(s)	MOF		
	2) Payment of commission or charges for A/P	every payment	MOF		
4	To facilitate approval from the Development Control Authority (DCA) for the IEE/EIA (Conditions of approval should be fulfilled, if any) and secure the necessary budget for implementation for Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP) (and fulfilling conditions of approval, if any).	within 1 month after the signing of the G/A	MOA		
5	To submit Project Monitoring Report (with the results of the Detailed Design)	before preparation of the bidding documents	FD		
6	To assist in obtaining the construction permit including dumping site for sediment dredged by the project.	within 1 month after the signing of the G/A	FD		

MOF: Ministry of Finance, Economic Growth, Job Creation, External Affairs and the Public Service

FD: Fisheries Department

MOI: Ministry of Infrastructure, Ports, Transports, Physical Development and Urban Renewal.

(2) During the Project Implementation

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To request issuance of A/P by the MOF to the Agent Bank in Japan for the payment to the supplier and the contractor	within 1 month after the signing of the contract(s)	MOA		
2	To submit payment request to the MOF for the following commissions or charges to the Agent Bank in Japan for the banking services based upon the B/A		MOA		
	1) Payment of advising commission or charge for A/P	within 1 month after the signing of the contract(s)	MOF		
	2) Payment of commission or charges for A/P	every payment	MOF		

3	To conduct necessary procedures such as “Request for disbursement” to JICA (upon contract with construction firms and/or procurement firms (suppliers)), “Application of remittance” to Bank (upon contract with construction firms and/or procurement firms (suppliers))	during the Project	FD		
4	To facilitate unloading and customs clearance in a timely manner at ports of disembarkation in the country of the Recipient and to assist the Supplier(s) with internal transportation therein	during the Project	MOA		
5	To facilitate the entry and stay of 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 into the country of the Recipient and stay therein for the performance of their work	during the Project	MOA		
6	To facilitate the exemption of customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the products and/or the services	during the Project	MOA		
7	To request funding from the MOF for expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	MOA		
8	To notify JICA promptly of any incident or accident, which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers.	during the construction	FD		
9	To submit Project Monitoring Report	every month	FD		
10	To submit Project Monitoring Report (final) (including as-built drawings, equipment list, photographs, etc.)	within 1 month after signing of Certificate of Completion for the works under the contract(s)	FD		
11	To submit a report concerning completion of the Project	within 6 months after completion of the Project	FD		
12	To assist in ensuring the safety of persons engaged in the implementation of the Project	during the construction	MOA		
13	To implement EMP and EMoP	during the construction	FD		
14	To submit results of environmental monitoring to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report	during the construction	FD		

(3) After the Project

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To implement EMP and EMoP	for a period based on EMP and EMoP	FD		
2	To submit results of environmental monitoring to JICA, by using the monitoring form, semi-annually - The period of environmental monitoring may be extended if any significant negative impacts on the environment are found. The extension of environmental monitoring will be decided based on the agreement between Fisheries Department and JICA.	for 3 years after the Project	FD		
3	To properly maintain and utilize the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	After completion of the Project	FD		

2. Other obligations of the Government of St. Lucia funded with the Grant

NO	Items	Deadline	Amount (Million Japanese Yen)*	
1	Construction of improved Choiseul Fishing Port Dredging works : Approx. 7,000 m ³ Second groin : Approx. 70 m Submerged breakwater: Approx. 20 m Navigational aids: beacons		/	/
2	To implement detailed design, bidding support and construction supervision (Consulting Service)		/	/
3	3 years of monitoring, assessment and adjustment works after construction is completed		/	/
4	Adjustment works		/	/
5	Contingencies		/	/
Total			/	/

*The Amount is provisional. This is subject to the approval of the Government of Japan.

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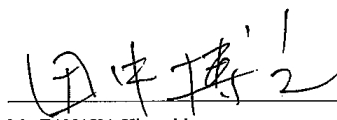
(2) 第二回現地調査時（署名日：2022年5月20日）

**Minutes of Discussions
on the Preparatory Survey for the Project for
Improvement of Choiseul Fishing Port
(Explanation on Draft Preparatory Survey Report)**

With reference to the minutes of discussions signed between The Ministry of Agriculture, Fisheries, Food Security and Rural Development and the Japan International Cooperation Agency (hereinafter referred to as "JICA") on 22 October, 2021 and in response to the request from the Government of Saint Lucia, JICA dispatched the Preparatory Survey Team (hereinafter referred to as "the Team") for the explanation of Draft Preparatory Survey Report (hereinafter referred to as "the Draft Report") for the Project for Improvement of Choiseul Fishing Port (hereinafter referred to as "the Project").

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

Castries, 20 May, 2022



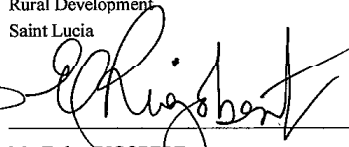
Mr. TANAKA Hiroyuki
Leader
Preparatory Survey Team
Japan International Cooperation Agency
Japan



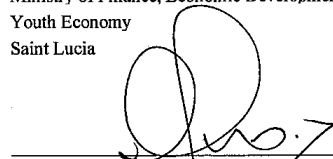
Mr. Barrymore FELICIE
Permanent Secretary
Ministry of Agriculture, Fisheries, Food Security and
Rural Development
Saint Lucia



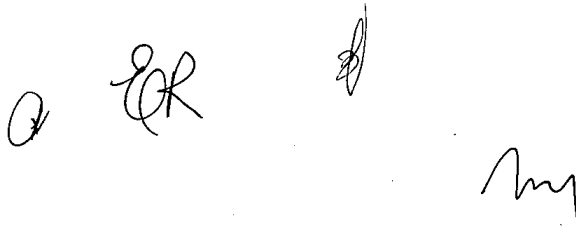
Mr. Ivor DANIEL
Permanent Secretary
Department of Infrastructure, Ports and Transport
Ministry of Infrastructure, Ports, Transport, Physical
Development and Urban Renewal
Saint Lucia



Ms. Esther RIGOBERT
Permanent Secretary
Department of Finance
Ministry of Finance, Economic Development, and the
Youth Economy
Saint Lucia



Mr. Hildreth LEWIS
Permanent Secretary
Department of Physical Planning and Urban Renewal
Ministry of Infrastructure, Ports, Transport, Physical
Development and Urban Renewal
Saint Lucia



ATTACHEMENT

1. Objective of the Project

The objective of the Project is to improve the usability of the fishing port by reducing the current sedimentation in Choiseul Fishing Port, thereby contributing to the productivity for fisher folk and development of fisheries sectors.

2. Title of the Preparatory Survey

Both sides confirmed the title of the Preparatory Survey as “the Preparatory Survey for the Project for Improvement of Choiseul Fishing Port”.

3. Project site

Both sides confirmed that the site of the Project is in Choiseul Fishing Port, which is shown in Annex 1.

4. Responsible authority for the Project

Both sides confirmed the authorities responsible for the Project are as follows:

- 4-1. The Fisheries Department will be the executing agency for the Project (hereinafter referred to as “the Executing Agency”). The Executing Agency shall coordinate with all the relevant authorities to ensure smooth implementation of the Project and ensure that the undertakings for the Project shall be taken care by relevant authorities properly and on time. The organization charts are shown in Annex 2.
- 4-2. The line ministry of the Executing Agency is the Ministry of Agriculture, Fisheries, Food Security and Rural Development (hereinafter referred to as “MoA”). MoA shall be responsible for supervising the Executing Agency on behalf of the Government of Saint Lucia.

5. Contents of the Draft Report

After the Team explains the contents of the Draft Report, the Saint Lucia side agreed to its contents. JICA will finalize the Preparatory Survey Report based on the confirmed items. The report will be sent to the Saint Lucia side around August 2022.

6. Cost estimate

Both sides confirmed that the cost estimate including the contingency explained by the Team is provisional and will be examined further by the Government of Japan for



2







its approval. The contingency would cover the additional cost against natural disaster, unexpected natural conditions, etc.

7. Confidentiality of the cost estimate and technical specifications

Both sides confirmed that the cost estimate and technical specifications of the Project should never be disclosed to any third parties until all the contracts under the Project are concluded.

8. Procedures and Basic Principles of Japanese Grant

The Saint Lucia side agreed that the procedures and basic principles of Japanese Grant (hereinafter referred to as “the Grant”) as described in Annex 3 shall be applied to the Project. In addition, the Saint Lucia side agreed to take necessary measures according to the procedures.

9. Timeline for the project implementation

The Team explained to the Saint Lucia side that the expected timeline for the project implementation is as attached in Annex 4.

10. Expected outcomes and indicators

Both sides agreed that key indicators for expected outcomes are as follows. The Saint Lucia side will be responsible for the achievement of agreed key indicators targeted in year 2030 and shall monitor the progress for Ex-Post Evaluation based on those indicators.

[Quantitative indicators]

Indicator	Baseline (in 2020)	Target (in 2030)
Amount of sedimentation inside Choiseul Fishing Port (in a year)	7,000m ³	500m ³
Annual fish landing (MT)	(Average from 2015 to 2019) 59	68

[Qualitative indicators]

- Fishing activities will be more efficient because fishers don't need to transport the boat over long distances.
- Boat and engine breakdown caused by sedimentation will be reduced, thereby the operating cost of fishing will be reduced.

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- Financial burden will be reduced due to the reduction of frequency of dredging works

11. Ex-Post Evaluation

JICA will conduct ex-post evaluation after three (3) years from the project completion, in principle, with respect to five evaluation criteria (Relevance, Effectiveness, Efficiency, Impact, Sustainability). The result of the evaluation will be publicized. The Saint Lucia side is required to provide necessary support for the data collection.

12. Undertakings of the Project.

12-1. Both sides confirmed the undertakings of the Project as described in Annex 5.

With regard to exemption of customs duties, internal taxes and other fiscal levies as stipulated in 1.-(2)-6 of Annex 5, both sides confirmed that such customs duties, internal taxes and other fiscal levies, which shall be clarified in the bid documents by Ministry of Finance, Economic Development, and the Youth Economy (MOF) during the implementation stage of the Project.

The Saint Lucia 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 costs are indicative, i.e. at Outline Design level. More accurate costs will be calculated at the Detailed Design stage.

12-2. Both sides confirmed that the Annex 5 will be used as an attachment of G/A.

12-3. As shown in Annex 5, Both sides confirmed that MOI shall take necessary measures to ensure and maintain the security of the Project site and the persons related to the implementation of the Project, in cooperation with relevant authorities such as police.

13. Monitoring during the implementation

The Project will be monitored by the Executing Agency and reported to JICA by using the form of Project Monitoring Report (PMR) attached as Annex 6. The timing of submission of the PMR is described in Annex 5.

14. Project completion

Both sides confirmed that the Project is completed when all the facilities are constructed and the secondary improvement work is completed by the Grant. The completion of the Project will be reported to JICA promptly, but in any event not later

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than six months after the completion of the Project.

15. Environmental and Social Considerations

15-1 General Issues

15-1-1 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 the Project is not likely to have significant adverse impact on the environment under the JICA guidelines for environmental and social considerations (April 2010) in terms of its sectors, characteristics and areas.

15-1-2 Environmental Checklist

The environmental and social considerations including major impacts and mitigation measures for the Project are summarized in the Environmental Checklist attached as Annex 7. Both sides confirmed that in case of major modification of the content of the Environmental Checklist, the Saint Lucia side shall submit the modified version to JICA in a timely manner.

15-2 Environmental Issues

15-2-1 Environmental Impact Assessment (EIA)

EIA report is not required for the Project.

15-2-2 Environmental Management Plan and Environmental Monitoring Plan

Both sides confirmed Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP) of the Project is as Annex8, respectively. Both side agreed that environmental mitigation measures and monitoring shall be conducted based on the EMP and EMoP, which may be updated during the detailed design stage.

15-3 Social Issues

Both sides confirmed that the Project takes into consideration the adverse effects to fishing activities. As a counter measure, a temporary jetty will be prepared for fishers while the port is closed during the construction phase of the Project Schedule.

15-4 Environmental Monitoring

15-4-1 Environmental Monitoring

Both sides agreed that the Saint Lucia side will submit results of environmental monitoring to JICA by using the monitoring form attached as Annex 9. The timing of submission of the monitoring form is described in Annex 5.

15-4-2 Information Disclosure of Monitoring Results

Both sides confirmed that the Saint Lucia side will disclose results of environmental monitoring to local stakeholders through their website. The Saint Lucia side agreed

JICA will disclose results of environmental monitoring submitted by the Saint Lucia side as the monitoring forms attached as Annex 9 on its website.

16. Other Relevant Issues

16-1 Disclosure of Information

Both sides confirmed that the Preparatory Survey Report from which project cost is excluded will be disclosed to the public after completion of the Preparatory Survey. The comprehensive report including the project cost will be disclosed to the public after all the contracts under the Project are concluded.

16-2 Gender Mainstreaming

Both sides confirmed that if any women are hired as part of the unskilled labor force during the construction period, the payment rate will be same regardless of gender.

16-3 VAT exemption

Both sides agreed that the MOA will request VAT exemption by the end of May 2022 for the Project through the Ministry of Finance to obtain cabinet approval.

16-4 Climate change adaptation

Both sides confirmed that the Project contributes to climate change adaptation. The Project mitigates the effect of the drifted sand that has accumulated in the Choiseul Fishing Port. This will allow the port to operate more efficiently.

16-5 Dredging Works

Both sides confirmed that the Project will reduce a significant amount of sedimentation in the Choiseul Fishing Port as indicated in "10. Expected outcomes and indicators". If the need arises for more dredging work after the completion of the Project, the Executing Agency will dredge the sediment.

Annex 1 Project Site

Annex 2 Organization Chart

Annex 3 Japanese Grant

Annex 4 Project Implementation Schedule

Annex 5 Major Undertakings to be taken by the Government of Saint Lucia

Annex 6 Project Monitoring Report (template)

Annex 7 Environmental Check List

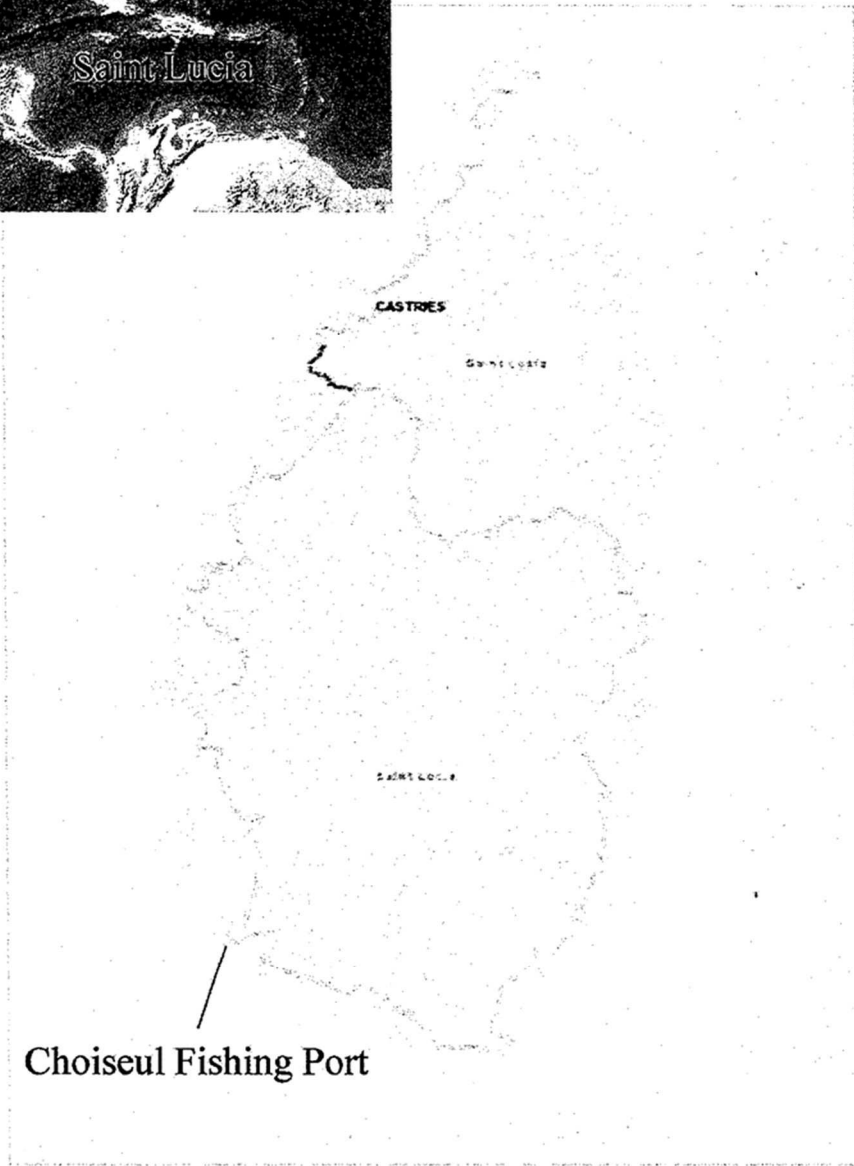
Annex 8 Environmental Management Plan/Environmental Monitoring Plan

Annex 9 Environmental Monitoring Form

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Project Site



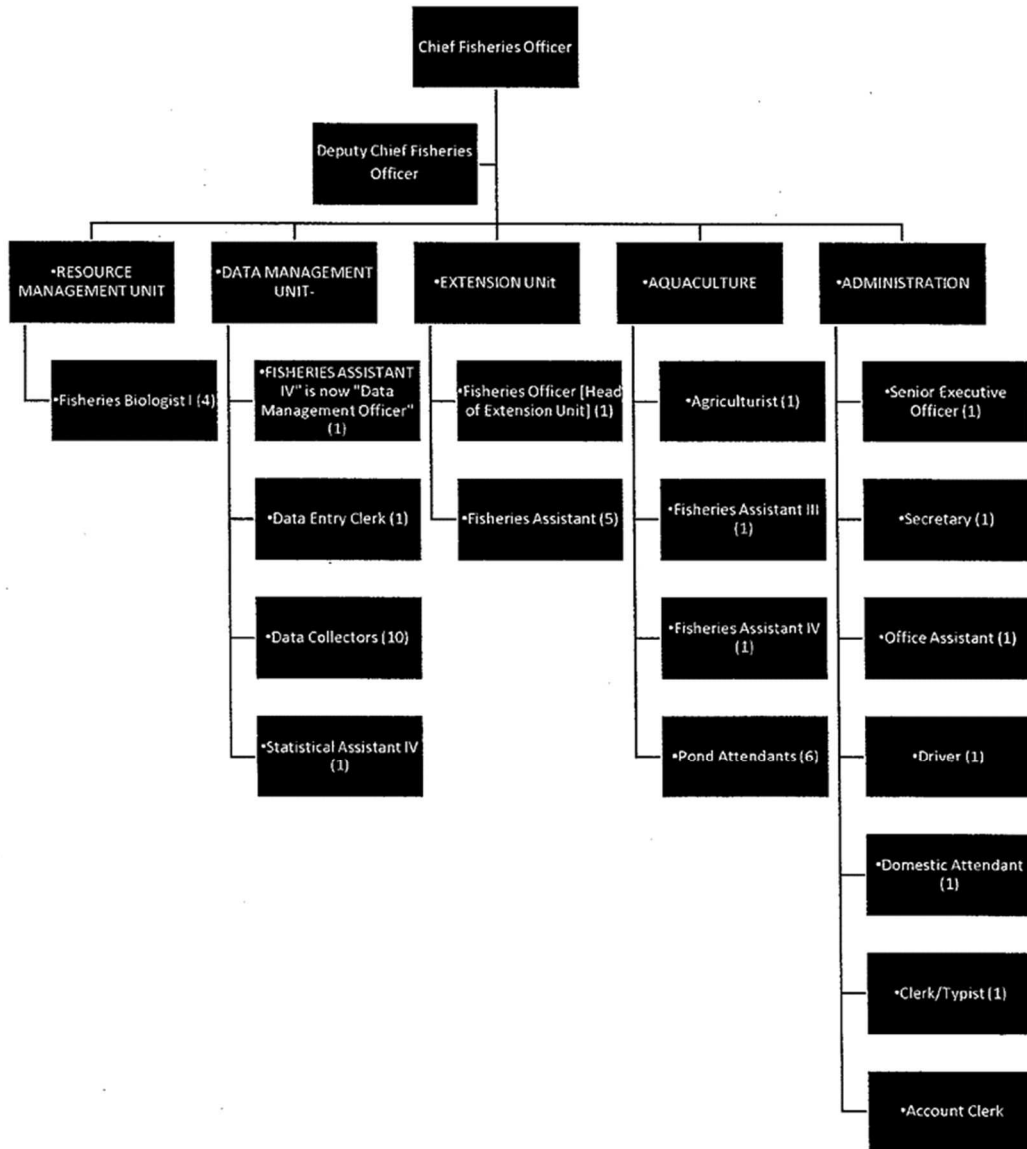
Choiseul Fishing Port

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[Signature]



JAPANESE GRANT

The Japanese Grant is non-reimbursable fund provided to a recipient country (hereinafter referred to as “the Recipient”) to purchase the products and/or 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. Followings are the basic features of the project grants operated by JICA (hereinafter referred to as “Project Grants”).

1. Procedures of Project Grants

Project Grants are conducted through following procedures (See “PROCEDURES OF JAPANESE GRANT” for details):

(1) Preparation

- The Preparatory Survey (hereinafter referred to as “the Survey”) conducted by JICA

(2) Appraisal

- Appraisal by the government of Japan (hereinafter referred to as “GOJ”) and JICA, and Approval by the Japanese Cabinet

(3) Implementation

Exchange of Notes

- The Notes exchanged between the GOJ and the government of the Recipient

Grant Agreement (hereinafter referred to as “the G/A”)

- Agreement concluded between JICA and the Recipient

Banking Arrangement (hereinafter referred to as “the B/A”)

- Opening of bank account by the Recipient in a bank in Japan (hereinafter referred to as “the Bank”) to receive the grant

Construction works/procurement

- Implementation of the project (hereinafter referred to as “the Project”) on the basis of the G/A

(4) Ex-post Monitoring and Evaluation

- Monitoring and evaluation at post-implementation stage

2. Preparatory Survey

(1) Contents of the Survey

The aim of the Survey is to provide basic documents necessary for the appraisal of the 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 necessary for the implementation of the Project.

- Evaluation of the feasibility of the Project to be implemented under the Japanese Grant 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 an outline design of the Project.
- Estimation of costs of the Project.
- Confirmation of Environmental and Social Considerations

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

JICA requests the Recipient to take 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 executing agency of the Project. Therefore, the contents of the Project are confirmed by all relevant organizations of the Recipient based on the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Survey, JICA contracts with (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 feasibility of the Project.

3. Basic Principles of Project Grants

(1) Implementation Stage

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 signed between the GOJ and the Government of the Recipient to make a pledge for assistance, which is followed by the conclusion of the G/A between JICA and the Recipient to define the necessary articles, in accordance with the E/N, to implement the Project, such as conditions of disbursement, responsibilities of the Recipient, and procurement conditions. The terms and conditions generally applicable to the Japanese Grant are stipulated in the "General Terms and Conditions for Japanese Grant (January 2016)."



2) Banking Arrangements (B/A) (See "Financial Flow of Japanese Grant (A/P Type)" for details)

- a) The Recipient shall open an account or shall cause its designated authority to open an account under the name of the Recipient in the Bank, in principle. JICA will disburse the Japanese Grant in Japanese yen for the Recipient to cover the obligations incurred by the Recipient under the verified contracts.
- b) The Japanese Grant will be disbursed when payment requests are submitted by the Bank to JICA under an Authorization to Pay (A/P) issued by the Recipient.

3) Procurement Procedure

The products and/or services necessary for the implementation of the Project shall be procured in accordance with JICA's procurement guidelines as stipulated in the G/A.

4) 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 to continue to work on the Project's implementation after the E/N and G/A.

5) Eligible source country

In using the Japanese Grant disbursed by JICA for the purchase of products and/or services, the eligible source countries of such products and/or services shall be Japan and/or the Recipient. The Japanese Grant may be used for the purchase of the products and/or services of a third country as eligible, if necessary, taking into account the quality, competitiveness and economic rationality of products and/or services necessary for achieving the objective of the Project. However, the prime contractors, namely, constructing and procurement firms, and the prime consulting firm, which enter into contracts with the Recipient, are limited to "Japanese nationals", in principle.

6) Contracts and Concurrence by JICA

The Recipient will conclude contracts denominated in Japanese yen with Japanese nationals. Those contracts shall be concurred by JICA in order to be verified as eligible for using the Japanese Grant.

7) Monitoring

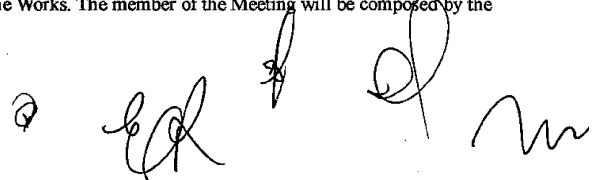
The Recipient is required to take their initiative to carefully monitor the progress of the Project in order to ensure its smooth implementation as part of their responsibility in the G/A, and to regularly report to JICA about its status by using the Project Monitoring Report (PMR).

8) Safety Measures

The Recipient must ensure that the safety is highly observed during the implementation of the Project.

9) Construction Quality Control Meeting

Construction Quality Control Meeting (hereinafter referred to as the "Meeting") will be held for quality assurance and smooth implementation of the Works at each stage of the Works. The member of the Meeting will be composed by the



Recipient (or executing agency), the Consultant, the Contractor and JICA. The functions of the Meeting are as followings:

- a) Sharing information on the objective, concept and conditions of design from the Contractor, before start of construction.
- b) Discussing the issues affecting the Works such as modification of the design, test, inspection, safety control and the Client's obligation, during of construction.

(2) Ex-post Monitoring and Evaluation Stage

- 1) After the project completion, JICA will continue to keep in close contact with the Recipient in order to monitor that the outputs of the Project is used and maintained properly to attain its expected outcomes.
- 2) In principle, JICA will conduct ex-post evaluation of the Project after three years from the completion. It is required for the Recipient to furnish any necessary information as JICA may reasonably request.

(3) Others

1) Environmental and Social Considerations

The Recipient shall carefully consider environmental and social impacts by the Project and must comply with the environmental regulations of the Recipient and JICA Guidelines for Environmental and Social Considerations (April, 2010).

2) Major undertakings to be taken by the Government of the Recipient

For the smooth and proper implementation of the Project, the Recipient is required to undertake necessary measures including land acquisition, and bear an advising commission of the A/P and payment commissions paid to the Bank as agreed with the GOJ and/or JICA. The Government of the Recipient shall ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the Recipient with respect to the purchase of the Products and/or the Services be exempted or be borne by its designated authority without using the Grant and its accrued interest, since the grant fund comes from the Japanese taxpayers.

3) Measures to ensure more efficient implementation of the Grant

- i) In the event that the E/N and the G/A concerning a project cannot be signed by the end of the following Japanese fiscal year of the cabinet decision concerned by the GOJ, the authorities concerned of the two Governments will discuss the cancellation of the project.



ii) In the event that the period, specified in the G/A, during which the grant is available expires before the completion of the disbursement, the authorities concerned of the GOJ will thoroughly review the status, situation and perspective of the implementation of the project concerned before extending the said period. The authorities concerned of the two Governments will discuss the termination of the project including a refund, unless there are concrete prospects for its completion.

iii) Regardless of the period mentioned in 2) above, the authorities concerned of the two Governments will, in the event that five years have passed since the cabinet decision concerned by the GOJ before the completion of the disbursement, except as otherwise confirmed between them, discuss the termination of a project including a refund, unless there are concrete prospects for its completion.

4) Proper Use

The Recipient is required to maintain and use properly and effectively the products and/or services under the Project (including the facilities constructed and the equipment purchased), to assign staff necessary for this operation and maintenance and to bear all the expenses other than those covered by the Japanese Grant.

5) Export and Re-export

The products purchased under the Japanese Grant should not be exported or re-exported from the Recipient.



Major Undertakings to be taken by the Government of St. Lucia

1. Specific obligations of the Government of St. Lucia which will not be funded with the Grant

(1) Before the Bidding

NO	Items	Deadline	In charge	Estimated Cost (XCD)	Ref
1	To sign the banking arrangement (B/A) with a bank in Japan (the Agent Bank) to open a bank account	within 1 month after the signing of the G/A	MOF	10,000	
2	To issue A/P to a bank in Japan (the Agent Bank) for the consultant's payment	within 1 month after the signing of the contract	MOA		
3	To bear the following commissions to the Agent Bank for the banking services based upon the B/A				
	1) Advising commission of A/P	within 1 month after the signing of the contract(s)	MOF	33,000	
	2) Payment commission for A/P	every payment	MOF	33,000	
4	To approve and secure the necessary budget for implementation for Environmental Management Plan (EMP) and Environmental Monitoring Plan (EMoP) (and fulfilling conditions of approval, if any).	within 1 month after the signing of the G/A	MOA		
5	To submit Project Monitoring Report (with the results of the Detailed Design)	before preparation of the bidding documents	FD		
6	To obtain the construction permit, sand permit and ensure the relocation site of the material dredged through the Project	within 1 month after the signing of the G/A	MOA		
7	To submit Project Monitoring Report (with the result of Detailed Design)	before preparation of the bidding documents	FD		

FD: Fisheries Department

MOA: Ministry of Agriculture, Fisheries, Food Security and Rural Development

MOF: Ministry of Finance, Economic Development, and the Youth Economy

MOI: Ministry of Infrastructure, Ports, Transports, Physical Development and Urban Renewal.

(2) During the Project Implementation

NO	Items	Deadline	In charge	Estimated Cost (XCD)	Ref.
1	To issue A/P to the Agent Bank for the payment to the supplier and the contractor	within 1 month after the signing of the contract(s)	MOF		
2	To bear the following commissions to the Agent Bank for the banking services based upon the B/A				

	1) Advising commission of A/P	within 1 month after the signing of the contract(s)	MOF	33,000	
	2) Payment commission for A/P	every payment for consultant	MOF	33,000	
4	To ensure prompt unloading and customs clearance at ports of disembarkation in the country of the Recipient and to assist the Supplier(s) with internal transportation therein	during the Project	MOA		
5	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 country of the Recipient and stay therein for the performance of their work	during the Project	MOA		
6	To ensure that customs duties, internal taxes and other fiscal levies which may be imposed in the country of the Recipient with respect to the purchase of the products and/or the services are exempted or be borne by its designated authority without using the Grant.	during the Project	MOF		
7	To bear all the expenses, other than those covered by the Grant, necessary for the implementation of the Project	during the Project	MOF		
8	To notify JICA promptly of any incident or accident, which has, or is likely to have, a significant adverse effect on the environment, the affected communities, the public or workers.	during the construction	FD		
9	To submit Project Monitoring Report	every month	FD		
10	To submit Project Monitoring Report (final) (including as-built drawings, equipment list, photographs, etc.)	within 1 month after signing of Certificate of Completion for the works under the contract(s)	FD		
11	To submit a report concerning completion of the Project	within 6 months after completion of the Project	FD		
12	To ensure the safety of persons engaged in the implementation of the Project	during the construction	MOI		
13	To implement EMP and EMoP	during the construction	FD		
14	To submit results of environmental monitoring to JICA, by using the monitoring form, on a quarterly basis as a part of Project Monitoring Report	during the construction	FD		

(3) After the Project

NO	Items	Deadline	In charge	Estimated Cost	Ref.
1	To implement EMP and EMoP	for a period based on EMP and EMoP	FD		
2	To submit results of environmental monitoring to JICA, by using the monitoring form, semi-annually - The period of environmental monitoring may be extended if any significant negative impacts on the environment are found. The extension of environmental monitoring will be decided based on the agreement between Fisheries Department and JICA.	for 3 years after the Project	FD		
3	To properly maintain and utilize the facilities constructed and equipment provided under the Grant Aid 1) Allocation of maintenance cost 2) Operation and maintenance structure 3) Routine check/Periodic inspection	After completion of the Project	FD		

2. Other obligations of the Government of Saint Lucia funded with the Grant

NO	Items	Deadline	Amount (Million Japanese Yen)*
1	Improvement of Choiseul Fishing Port Dredging works : Approx. 9,500 m ³ Second groyne : Approx. 55 m Submerged breakwater: Approx. 20 m Navigational aids : beacons	March 2026	/
2	To implement detailed design, bidding support and construction supervision (Consulting Service)		
3	Monitoring and assessment		
4	Improvement works based on the monitoring		
5	Contingencies		
	Total		

* The Amount is provisional. This is subject to the approval of the Government of Japan.



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

Organizational Information

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

General Information:

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



1: Project Description

1-1 Project Objective

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1-2 Project Rationale

- Higher-level objectives to which the project contributes (national/regional/sectoral policies and strategies)
- Situation of the target groups to which the project addresses

--

1-3 Indicators for measurement of "Effectiveness"

Quantitative indicators to measure the attainment of project objectives		
Indicators	Original (Yr)	Target (Yr)
Qualitative indicators to measure the attainment of project objectives		

2: Details of the Project

2-1 Location

Components	Original <i>(proposed in the outline design)</i>	Actual
1.		

2-2 Scope of the work

Components	Original* <i>(proposed in the outline design)</i>	Actual*
1.		

Reasons for modification of scope (if any).

(PMR)

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2-3 Implementation Schedule

Items	Original		Actual
	<i>(proposed in the outline design)</i>	<i>(at the time of signing the Grant Agreement)</i>	

Reasons for any changes of the schedule, and their effects on the project (if any)

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2-4 Obligations by the Recipient

2-4-1 Progress of Specific Obligations
 See Attachment 2.

2-4-2 Activities
 See Attachment 3.

2-4-3 Report on RD
 See Attachment 11.

2-5 Project Cost

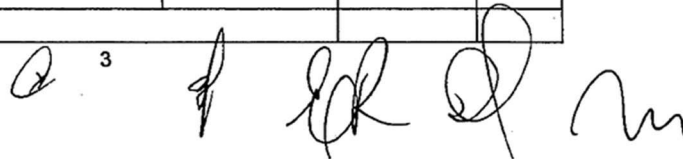
2-5-1 Cost borne by the Grant(Confidential until the Bidding)

Components			Cost (Million Yen)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
1.				
Total				

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

2-5-2 Cost borne by the Recipient

Components			Cost (1,000 Taka)	
	Original <i>(proposed in the outline design)</i>	Actual <i>(in case of any modification)</i>	Original ^{1),2)} <i>(proposed in the outline design)</i>	Actual
1.				

3 

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

Reasons for the remarkable gaps between the original and actual cost, and the countermeasures (if any)

(PMR)

2-6 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 (at the time of outline design) name: role: financial situation: institutional and organizational arrangement (organogram): human resources (number and ability of staff):
Actual (PMR)

2-7 Environmental and Social Impacts

- The results of environmental monitoring based on Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- The results of social monitoring based on in Attachment 5 (in accordance with Schedule 4 of the Grant Agreement).
- Disclosed information related to results of environmental and social monitoring to local stakeholders (whenever applicable).

3: Operation and Maintenance (O&M)

3-1 Physical Arrangement

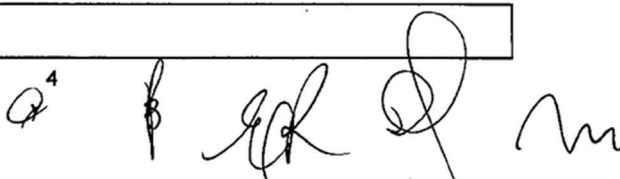
- Plan for O&M (number and skills of the staff in the responsible division or section, availability of manuals and guidelines, availability of spareparts, etc.)

Original (at the time of outline design)
Actual (PMR)

3-2 Budgetary Arrangement

- Required O&M cost and actual budget allocation for O&M

Original (at the time of outline design)

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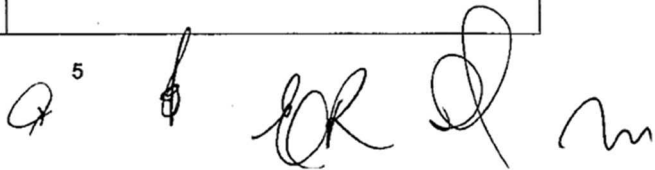
Actual (PMR)

4: Potential Risks and Mitigation Measures

- Potential risks which may affect the project implementation, attainment of objectives, sustainability
- Mitigation measures corresponding to the potential risks

Assessment of Potential Risks (at the time of outline design)

Potential Risks	Assessment
1. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
2. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:
3. (Description of Risk)	Probability: High/Moderate/Low
	Impact: High/Moderate/Low
	Analysis of Probability and Impact:
	Mitigation Measures:
	Action required during the implementation stage:

5 

	Contingency Plan (if applicable):
Actual Situation and Countermeasures (PMR)	

5: Evaluation and Monitoring Plan (after the work completion)

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.

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5-3 Monitoring Plan of 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.

--

6



Attachment

1. Project Location Map
 2. Specific obligations of the Recipient which will not be funded with the Grant
 3. Monthly Report submitted by the Consultant
- Appendix - Photocopy of Contractor's Progress Report (if any)
- Consultant Member List
 - Contractor's Main Staff List
4. Check list for the Contract (including Record of Amendment of the Contract/ Agreement and Schedule of Payment)
 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) (PMR (final) only)
 8. Pictures (by JPEG style by CD-R) (PMR (final) only)
 9. Equipment List (PMR (final) only)
 10. Drawing (PMR (final) only)
 11. Report on RD (After project)

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Date:
Ref. No.

JAPAN INTERNATIONAL COOPERATION AGENCY
JICA Saint Lucia OFFICE
[Address specified in the Article 5 of the Grant Agreement]

Attention: Chief Representative

Ladies and Gentlemen:

NOTICE CONCERNING PROGRESS OF PROJECT

Reference : Grant Agreement, dated (signed date of the G/A), for (name of the Project).

In accordance to the Article 6 (3) of the Grant Agreement, we would like to report on the progress of the Project up to the following stages:

[Common]

- Preparation of bidding documents - result of detailed design
- Completion of final works under construction/procurement contract

[Construction]

- Monthly progress [Month/Year]

[Procurement of Equipment]

- Shipping/delivery, hand-over (take over) of equipment
- Installation works
- Operational training

- Other _____

Please see the details as per attached Project Monitoring Report (PMR).

Very truly yours,

[Signature]

[Name of the signer]

[Title of the signer]

[Name of the executing agency]

cc:
Director General



Environmental checklist

	Environmental Item	Main Check Item	Yes: Y No: N Not applicable: N/A	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1 Permits and Explanation	(1) EIA and Environmental Permit	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/A b) N/A c) N/A d) N	a) EIA is not required. b) EIA is not required. c) EIA is not required. d) Infrastructure Development Permit and Sand Permit are required prior construction.
	(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) Y	a) Stakeholder meeting were held during both first and second site survey, understanding of parties involved was obtained. b) Opinions from hearing and stakeholder meeting are reflected in the project.
	3) Examination of Alternatives	a) Have alternative plans of the project been examined with social and environmental considerations?	a) Y	a) In the comparison of alternatives, environmental related items were also compared and optimal plan was selected.
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 equipment comply with the country's emission standards? Are any mitigating measures taken?	a) N	a) Both NO2 and SO2 exceeded WHO standard values. Nevertheless, it is presumed that possible causes are not directly related to this project. PM2.5 and PM10 are basically within the standard values. Generation of dust is suppressed by regular watering and turning off heavy equipment engine outside of the working hours.

(2) Water Quality	<p>(a) Do effluents from the project facilities comply with the country's effluent and environmental standards?</p> <p>(b) Do effluents from the ships and other project equipment comply with the country's effluent and environmental standards?</p> <p>(c) Does the project prepare any measures to prevent leakages of oils and toxicants?</p> <p>(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?</p> <p>(e) Does the project prepare any measures to prevent polluting surface, sea or underground water by the penetration from reclaimed lands?</p>	<p>a) N/A</p> <p>b) N/A</p> <p>c) Y</p> <p>d) N</p> <p>e) N/A</p>	<p>a) No effluent is generated from the facility.</p> <p>b) No effluent is generated from the ships or project equipment.</p> <p>c) Silt-fence is installed during the dredging to limit the occurrence of turbidity.</p> <p>d) In the future, it is expected that the shoreline (waterfront line) will advance at the beach on the north side of the fishing port, but this will not cause any changes in water temperature or quality.</p> <p>e) No landfill is generated.</p>
(3) Wastes	<p>(a) Are wastes generated from the ships and other project facilities properly treated and disposed of in accordance with the country's regulations?</p> <p>(b) Is offshore dumping of dredged soil properly disposed in accordance with the country's regulations?</p> <p>(c) Does the project prepare any measures to avoid dumping or discharge toxicants?</p>	<p>a) N/A</p> <p>b) Y</p> <p>c) N/A</p>	<p>a) Waste is not generated from ships and project facilities.</p> <p>b) Dredged sediment generated by this project will be placed on the north side of the fishing port. Since this is a sand bypassing system, it does not affect the surrounding water area. In the sand bypassing system, dredged sediment is not recognized as waste.</p> <p>c) Dredged sediment does not contain harmful substances.</p>
(4) Noise and Vibration	<p>a) Do noise and vibrations comply with the country's standards?</p>	<p>a) N</p>	<p>a) Slight exceedance of noise level during dredging was confirmed. As to the vibration, Saint Lucia uses ISO standards. Results were significantly low both before and during the dredging conducted in this survey.</p>
(5) Land subsidence	<p>a) In the case of extraction of a large volume of groundwater, is there a possibility that the extraction of groundwater will cause land subsidence?</p>	<p>a) N/A</p>	<p>a) Extraction of a large volume of groundwater is not generated.</p>
(6) Odor	<p>a) Are there any odor sources? Are adequate odor control measures taken?</p>	<p>a) N</p>	<p>a) Since there is no source of bad odor, no countermeasures will be taken.</p>
(7) Sediment	<p>(a) Are adequate measures taken to prevent contamination of sediments by discharges or dumping of hazardous materials from the ships and related facilities?</p>	<p>a) N</p>	<p>a) In this project, dredging work will occur at existing fishing port and navigation channel. However, in this survey, no harmful substances were contained in the sediment, and no emissions from related facilities were confirmed.</p>

3 Natural Environment	(1) Reserve/ 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 a reserve. Since the construction scale is small and the Piton Management Area, a World Heritage Site, is located about 3.5km north of the project site, no impact is expected.
	(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/A d) N e) N	a) The project site does not include primeval forests, tropical rain forests or ecologically valuable habitats. b) As a result of the ecosystem survey (visual survey) in this survey, no rare species inhabit the site. c) There are no concerns about significant impacts on the ecosystem. d) No adverse effects on aquatic life are expected. e) No adverse effects on coastal vegetation and wildlife are expected.
	(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) Y	a) After the construction of the existing fishing port and the additional breakwater, the flow conditions are such that sand is likely to accumulate in the port. This project will return the sediment transport system to its original state. Thus, there are no adverse impacts, and the project is effective against deposition.
	(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) Y	a) Dredging ensures the water depth inside the port at the port entrance. In addition, the shoreline on the northern side of the second groynes will advance, creating a new beach. Topographical changes will have a positive effect on fishermen and local residents.

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4 Social Environment	1) Resettlement	<p>a) Is involuntary resettlement caused by project implementation? If involuntary resettlement is caused, are efforts made to minimize the impacts caused by the resettlement?</p> <p>b) Is adequate explanation on compensation and resettlement assistance given to affected people prior to resettlement?</p> <p>c) Is the resettlement plan, including compensation with full replacement costs, restoration of livelihoods and living standards developed based on socioeconomic studies on resettlement?</p> <p>d) Are the compensations going to be paid prior to the resettlement?</p> <p>e) Are the compensation policies prepared in document?</p> <p>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?</p> <p>g) Are agreements with the affected people obtained prior to resettlement?</p> <p>h) Is the organizational framework established to properly implement resettlement? Are the capacity and budget secured to implement the plan?</p> <p>i) Are any plans developed to monitor the impacts of resettlement?</p> <p>j) Is the grievance redress mechanism established?</p>	<p>a) N/A b) N/A c) N/A d) N/A e) N/A f) N/A g) N/A h) N/A i) N/A j) N/A</p>	<p>a) Involuntary resettlement is not generated.</p> <p>b) Involuntary resettlement is not generated.</p> <p>c) Involuntary resettlement is not generated.</p> <p>d) Involuntary resettlement is not generated.</p> <p>e) Involuntary resettlement is not generated.</p> <p>f) Involuntary resettlement is not generated.</p> <p>g) Involuntary resettlement is not generated.</p> <p>h) Involuntary resettlement is not generated.</p> <p>i) Involuntary resettlement is not generated.</p> <p>j) Involuntary resettlement is not generated.</p>
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2) Living and Livelihood	<p>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?</p> <p>b) Is there a possibility that changes in water uses (including fisheries and recreational uses) in the surrounding areas due to project will adversely affect the livelihoods of inhabitants?</p> <p>c) Is there a possibility that port and harbor facilities will adversely affect the existing water traffic and road traffic in the surrounding areas?</p> <p>d) Is there a possibility that diseases, including infectious diseases, such as HIV will be brought due to immigration of workers associated with the project? Are considerations given to public health, if necessary?</p>	<p>a) N b) N c) N d) N</p>	<p>a) No negative impact on the living conditions of inhabitants is expected. If the deposition at the port entrance is improved, it will contribute to the promotion of fisheries.</p> <p>b) No adverse effect on the livelihood of the inhabitants is expected. If the port entrance is closed during the construction period, fishing activities can be continued by using a temporary pier.</p> <p>c) No adverse effects on existing water traffic and road traffic are expected. Although the navigation channel will be curved due to the installation of the submerged breakwater and the second groyne, installation of beacon light will ensure safe operation.</p> <p>d) Disease outbreak due to immigration of workers is not expected. Since the construction is on a small scale and a short-period, a large-scale of workers immigration from other areas will not occur during the construction period.</p>
3) Heritage	<p>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?</p>	<p>a) N</p>	<p>a) There is no risk of damaging archeological, historical, cultural or religious valuable heritage or sites.</p>
4) Landscape	<p>a) Is there a possibility that the project will adversely affect the local landscape? Are necessary measures taken?</p>	<p>a) N/A</p>	<p>a) There is no consideration for landscape on the project site.</p>
5) Ethnic Minorities and Indigenous Peoples	<p>a) Are considerations given to reduce impacts on the culture and lifestyle of ethnic minorities and indigenous peoples?</p> <p>b) Are all of the rights of ethnic minorities and indigenous peoples in relation to land and resources respected?</p>	<p>a) N/A b) N/A</p>	<p>a) No adverse effects on ethnic minority or indigenous people are expected.</p> <p>b) No adverse effects on land and resources of ethnic minorities and indigenous people are expected.</p>

	6) Working Conditions	<p>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?</p> <p>(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?</p> <p>(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.?</p> <p>(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?</p>	<p>a) Y b) Y c) Y d) Y</p>	<p>a) The project will be in compliance with Saint Lucia legislation on working environment. The contractors of this project are required to comply with legislation on working environment.</p> <p>b) Installation of safety equipment, management of hazardous materials, and safety considerations in terms of hardware will be taken, which are also required to the contractors of this project.</p> <p>c) Software measures such as formulation of safety and health programs and implementation of safety education for workers are planned and implemented, which are also required to the contractors of this project.</p> <p>d) Measures are taken in bidding materials for security personnel not to infringe on safety of related parties and local residents.</p>
5 Others	1) Impacts during Construction	<p>a) Are adequate measures considered to reduce impacts during construction (e.g., noise, vibrations, turbid water, dust, exhaust gases, and wastes)?</p> <p>b) If construction activities adversely affect the natural environment (ecosystem), are adequate measures considered to reduce impacts?</p> <p>c) If construction activities adversely affect the social environment, are adequate measures considered to reduce impacts?</p>	<p>a) Y b) N c) Y</p>	<p>a) Silt-fence will be used to control turbidity expected to occur generated by the dredging. In addition, regular watering will be conducted at the project site to control dust generation during construction. Impacts of noise and vibration is not expected, but as a consideration for local residents, engine of heavy equipment will be turned off outside of working hours and night work will not be carried out.</p> <p>b) No adverse effect on the ecosystem is expected.</p> <p>c) Construction vehicles pass through residential areas and narrow roads. A traffic control staff will be assigned to prevent accidents.</p>

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	2) Monitoring	<p>a) Does the proponent develop and implement monitoring program for the environmental items that are considered to have potential impacts?</p> <p>b) What are the items, methods and frequencies of the monitoring program?</p> <p>c) Does the proponent establish an adequate monitoring framework (organization, personnel, equipment, and adequate budget to sustain the monitoring framework)?</p> <p>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?</p>	<p>a) Y b) Y c) Y d) Y</p>	<p>a) Monitoring on air quality, water quality, and noise will be conducted. For the monitoring on air quality, implementation of mitigation measures is monitored.</p> <p>b) Monitoring is performed twice during the construction period (once during the amendment work period). There will be a total of two survey location inside and outside the fishing port.</p> <p>c) Monitoring system of the Department of Fisheries will be established. Research company entrusted with the survey by the Department of Fisheries shall carry out the survey and report to JICA. During the construction period, consultant will assist in conducting survey.</p> <p>d) Each survey stage will be reported.</p>
6 Note	Note on Using Environmental Checklist	<p>a) Where necessary, impacts on groundwater hydrology (groundwater level drawdown and salinization) that may be caused by alteration of topography, such as land reclamation and canal excavation should be considered, and impacts, such as land subsidence that may be caused by groundwater uses should be considered. If significant impacts are anticipated, adequate mitigation measures should be taken.</p> <p>b) If necessary, the impacts to transboundary or global issues should be confirmed, if necessary (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).</p>	<p>a) N/A b) N/A</p>	<p>a) No impact on land reclamation, groundwater hydrology or land subsidence due to the alteration of topography is expected.</p> <p>b) The construction is on a small scale. No impact on transboundary or global environment issues is expected.</p>

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Environment Management Plan

1. Impact Assessment

(1) Categorization based on JICA Guidelines for Environmental and Social Considerations

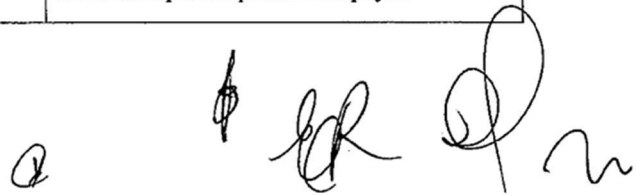
This Project is classified as Category B since adverse impacts on the environmental and society only occur in a limited way.

(2) Impact Assessment

The results of impact assessment after surveying environmental and social aspects are as shown in the following table.

No.	Item	Scoping		Monitoring		Evaluation
		Construction	Operation	Construction	Operation	
Control of Pollution						
1	Air pollution	✓		B-	D	<During construction> Gas and dust are emitted due to the construction vehicles and dredging work. <After completion> No impact on the atmosphere is expected.
2	Water pollution	✓		B-	B-	<During construction> Turbidity occurrence is expected in the fishing port due to the dredging work. <After completion> Concern of water quality deterioration due to the dumping of fish waste into the fishing port.
3	Waste	✓	✓	D	D	<During construction > As a result of the sediment survey, no harmful substances are detected. In addition, dredged sediment is not considered as waste because sediment is transported based on the concept of sand bypassing system. <After completion> Dredged material generated by maintenance dredging in the future are not considered as waste based on the concept of sand bypassing system.
4	Soil contamination					<During construction & After completion> No soil contamination is expected in this project.
5	Noise/ Vibration	✓		B-		<During construction> Noise and vibration from heavy equipment and trucks transporting dredged sand are expected due to the construction work. <After completion> No noise or vibration is expected.
6	Land subsidence					<During construction & After completion> Facilities constructed in this project are small and no land subsidence is expected.
7	Offensive odor					<During construction & After completion> No odor is expected in this project.
8	Sediment					<During construction & After completion> Heavy metals on bottom sediment pollution are not used in

						this project, and no impact on sediment is expected.
Natural Environment						
9	Natural reserve					<During construction & After completion> The project site is not adjacent to natural reserve and no impact is expected.
10	Ecosystem	✓			D	<During construction> As a result of site survey, no rare species were confirmed around the project site. No impact on the ecosystem is expected. <After completion> No impact on the ecosystem is expected.
11	Hydrology					<During construction & After completion> No impact on hydrology is expected for this project.
12	Topography/ Geology					<During construction & After completion> No impact is expected.
Social environment						
13	Involuntary resettlement/land acquisition					<During construction & After completion> Involuntary resettlement of residents and land acquisition are not expected in this project.
14	Vulnerable people					<During construction & After completion> Adverse effect on vulnerable people is not anticipated by the implementation of this project.
15	Minorities and indigenous people					<During construction & After completion> There is no impact on minorities and indigenous people by this project.
16	Local economy such as employment and livelihood	✓			D	<During construction> Impacts on local economy such as employment and livelihood are mitigated during the temporary closure of the port entrance due to construction of submerged breakwater. < After completion> Resolution of sedimentation problem improves fishing opportunities. No impact is expected.
17	Land use and local resource utilization	✓	✓	B-	D	<During construction> Fishing activities will be affected due the temporary closure of the port entrance during submerged breakwater construction. Impacts are minimized by mitigation measures. <After completion> The shoreline on the north side of the second groyne will advance, and a new recreational space is formed. There is no negative impact.
18	Water utilization					<During construction & After completion> No adverse impact is expected for this project.
19	Existing social infrastructure and social service	✓			B-	<During construction > Due to the temporary closure of the port entrance during the construction of the submerged breakwater, fishing activities are impacted. Impacts are minimized by mitigation measures. <After completion> This Project is not expected to affect existing social infrastructure or social services.
20	Social organization like social capital and local decision-making body					<During construction & After completion> This project is not expected to affect social organizations such as social capital and local decision-making bodies.
21	Uneven distribution of damages and benefits					<During construction & After completion> No adverse impact is expected for this project.
22	Conflict of interest in the area					<During construction & After completion> No adverse impact is expected for this project.



23	Cultural heritages					<During construction & After completion> No adverse impact is expected for this project.
24	Landscape					<During construction & After completion> No adverse impact is expected for this project.
25	Gender	✓		B-		<During construction> Possibility of wage gap between men and women is expected. <After completion> No gender impact is expected after the construction. Rather, it may lead to employment opportunities for women in nearby restaurants.
26	Children's right					<During construction & After completion> No adverse impact is expected for this project.
27	Infectious disease such as HIV/AIDS	✓		B-		<During construction> Probability of COVID-19 infection for on-site workers during the construction. Since the construction scale is small and on a short period, no large influx of workers is expected. No impact from infectious disease such as HIV/AIDS is expected. <After construction> Since there is no influx of workers, spread of infectious diseases is not expected.
28	Working environment (including labor safety)	✓		B-		<During construction> Accidents may occur during the construction period. <After completion> No adverse impact is expected after the construction.
Others						
29	Accident	✓	✓	B-	B-	<During construction> Accidents may occur on surrounding roads due to increased traffic from to heavy equipment and circulating trucks. <After completion> Since the submerged breakwater cannot be seen from the sea, accidents such as collision of fishing boats may occur.
30	Transboundary impact and climate change					<During construction & After completion> No adverse impact is expected for this project.

A +/-: Serious impact expected
B +/-: Non-serious but expected to have an impact
C: The extent of the impact is unknown
D: No impact expected

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2. Environment Mitigation Measures

(1) Mitigation measures

Mitigation measures against the concerned environmental items are summarized in the following table.

Environmental items	Evaluation	Adverse impact	Mitigation measures
Air pollution	B-	Generation of dust	【During construction】 (1) Control of dust by regular watering (2) Stop heavy equipment engine outside the working hours
Water pollution	B-	Water pollution from turbidity caused by facility construction, dredging, and dumping of fish waste into the fishing port	【During construction】 (1) Construction mitigating the occurrence of turbidity as much as possible 【After construction】 (1) No disposal of fish waste into the fishing port by local residents and fisherfolks
Noise and vibration	B-	Noise and vibration generated by the use of heavy equipment and construction vehicles during the construction period	【After construction/ operation】 (1) Operate engine of heavy equipment only during construction hours (2) Do not carry out construction at night (3) Traffic deceleration of construction equipment near residential area.
Land use and local resource utilization	B-	Temporary closure of the port entrance during construction	【During construction】 (1) Installation of a temporary quay for mooring and landing fishing boats
Existing social infrastructure and social service	B-	Temporary closure of the port entrance during construction	【During construction】 (1) Installation of a temporary quay for mooring and landing fishing boats
Gender	B-	Wage gap between men and women during construction	【During construction】 (1) Specify gender equality wage in advance in the specifications of the contractor's bid.
Infectious disease such as HIV/AIDS	B-	COVID-19 infection for workers	【During construction】 (1) Thoroughly implement epidemic prevention measures such as wearing masks and disinfecting.
Working environment	B-	Accident for construction workers	【During construction】 (1) Enlightenment of safety awareness through safety education for construction workers. (2) Installation of warning signs
Accident	B-	Traffic accidents around the site and fishing boat with the submerged breakwater	【During construction】 (1) Appointment of traffic control staff on the surrounding roads (2) Installation of beacon lights on the submerged breakwater and the second groyne (3) Reparation of existing beacon lights. 【After construction】 (1) Operative 4 beacon lights.

(2) Responsible / executing agency for mitigation countermeasures and costs

The environmental mitigation measures, responsible organizations, implementing agencies, and costs in this Project is shown in the following table.

Environmental Items	Influence degree	Mitigation measures	Responsible agency	Executing agency	Cost
At the time of planning and during construction					
Air pollution	Generation of dust	(1) Regular watering	DoF	Contractor	Included in construction cost
		(2) Stop equipment and engine outside of working hours	DoF	Contractor	No cost incurrence
Water pollution	Occurrence of turbidity due to construction and dredging	(1) Construction limiting the occurrence of turbidity (silt fence, work at low tide, etc.)	DoF	Contractor	Included in construction cost
Noise and vibration	Noise and vibration generated by heavy equipment and construction vehicles	(1) Stop engine of heavy equipment outside of working hours	DoF	Contractor	No cost incurrence
		(2) Do not carry out night construction	DoF	Contractor	No cost incurrence
Land use and local resource utilization	Temporary closure of the port entrance during construction	(1) Installation of a temporary quay during the construction period	DoF	Contractor	Included in construction cost
Existing social infrastructure and services					
Gender	Wage gap between male and female construction workers	(1) Gender equality wages are specified in the bid document to the contractor	DoF	DoF	No cost incurrence
Infectious disease such as HIV/AIDS	COVID-19 infection for workers	(1) Thorough implementation of epidemic prevention measures such as wearing masks and disinfecting.	DoF	Contractor	Included in construction cost
Working environment	Accidents occurring on construction workers	(1) Awareness raising through safety education	DoF	Contractor	No cost incurrence
		(2) Installation of a warning sign	DoF	Contractor	No cost incurrence
Accident	Traffic accident around the site	(1) Appointment of traffic control staff	DoF	Contractor	Included in construction cost
	Accident with the submerged breakwater	(1) Beacon light installation on the submerged breakwater and the second groyne	DoF	Contractor	Included in construction cost
		(2) Reparation of existing beacon lights	DoF	Contractor	Included in construction cost
After construction					
Water pollution	Water pollution due to dumping of fish waste into the fishing port	(1) Prevent dumping waste in the fishing port by fisherfolks and residents (waste disposal has been banned, trash boxes are installed, and trash is collected twice a week. These conditions are promoted and continued)	DoF	DoF	No cost incurrence

3. Environmental Monitoring Plan (draft)

Based on the surveyed data and standards, and considering the scale and type of work expected in this Project, necessity of environmental monitoring has been determined. Water quality is subject to environmental monitoring as shown in the following table.

Environmental Item	Monitoring item	Survey point	Frequency	Responsible agency	Executing agency	Note
During main construction and minor improvement work (during monitoring period)						
Air quality	Implementation status of mitigation measures	Inside the fishing port	As required	DoF	Contractor	Mitigation measures: (1) Regular watering (2) Stop engine of heavy machinery outside of working hours
Water quality	COD	Two locations inside the fishing port	Twice during the main construction (one time during the minor improvement work)	DoF	Contractor	Cost is included in construction cost
	Understanding turbidity (transparency, SS)	Two locations inside and outside the fishing ports	Twice during the main construction (one time during the minor improvement work)	DoF	Contractor	
Noise	-	Two locations around the site	Twice a day	DoF	Contractor	Survey points: entrance and exit of fishing port, rear main roads Frequency: twice a day (one in the morning and one in the afternoon during the construction)
After construction (after Project completion)						
Water quality	COD	Two locations inside the fishing port	Once/ 3 years	DoF	DoF	Cost: Approximately USD500/time
	Escherichia coli bacterium	Two locations inside the fishing port	Once/ 3 years	DoF	DoF	

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Environmental monitoring form

(1) During the Construction

<Air quality (monitoring of implementation of mitigation measures)>

Item	Implementation situation	Remark
Watering (asperion)		Implementation is confirmed accordingly.
Turning off engines outside of operation hours		

<Water quality>

Item	Unit	Measured Value	Baseline value (at the time of the preparatory survey)	Standard value	Remark (measurement point, frequency...)
COD	mg/L		1,000 - 1,200	N/A (*1)	Measurement point: Two (2) locations inside and outside the fishing port. Frequency: Twice during the construction period, once during each minor improvement work.
	Transparency	NTU	3.2 - 21	N/A (*2)	
Turbidity	Suspended Solid (SS)	mg/L	32 - 132	The amount of SS artificially added is 2mg/L or less (*3)	

- (*1) There is no specific standard for Saint Lucia nor stipulation in WHO guideline, and it is impossible to refer to Japanese standard due to difference of measurement method.
- (*2) There is no specific standard for Saint Lucia nor stipulation in WHO guideline.
- (*3) Refer to the Japanese standard (Fisheries water standard (Japan Fisheries Resource Conservation Association)), since there is no specific standard for Saint Lucia nor stipulation in WHO guideline.

<Noise>

Item	Unit	Measured Value	Baseline value (at the time of the preparatory survey)	Standard value	Remark (measurement point, frequency...)
Noise	Leq(A)dB		79.5 (during dredging)	70	Measurement point: Two (2) points (entrance of port, main road besides fishing port) Frequency: 2 times/day (in the morning and afternoon)

(2) During Monitoring period and Operation

【Water quality】

Item	Unit	Measured Value	Baseline value (at the time of the preparatory survey)	Standard value	Remark (measurement point, frequency...)
COD	mg/L		< 200	N/A (*1)	Measurement point: Two (2) locations inside and outside the fishing port. Frequency: Once/ 3 years
Coliform bacilli	CFL/100mL		2,300 - 6,000	1,000 (*2)	

- (*1) There is no specific standard for Saint Lucia nor stipulation in WHO guideline, and it is impossible to refer to Japanese standard due to difference of measurement method.
- (*2) Refer to the WHO guideline, since there is no specific standard for Saint Lucia.



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Please reply to the Executive Secretary

October 21, 2021

Permanent Secretary
Ministry of Agriculture, Fisheries, Food Security
and Rural Development
c/o 5th Floor, Sir Stanislaus James Building
Waterfront
Castries

Dear Sir,

**Re: Proposed Infrastructural Development (coastal dredging)
located on Seabed, Choiseul Fishing Port, Choiseul
Application Registration Number: 1003/21**

The Development Control Authority (DCA) considered your application to conduct coastal dredging on the seabed, Choiseul Fishing Port, Choiseul.

Kindly be informed that the Board at its meeting on October 21, 2021 granted **Approval** to your application subject to the following conditions:

1. The Department of Fisheries to collaborate with SLASPA to install appropriate signage during the operation and inform all fishers and cooperatives using the facility;
2. The developer to inform SLASPA of the development and SLASPA to inform all other mariners of the activity.

Your attention is drawn to the provisions of the Physical Planning and Development Act, Chapter 5.12 as follows:

Section 28 (1)

“If permission is granted for the development of land and the development is not commenced within a period of twelve (12) months from the date on which it was granted, it shall lapse.”

Section 28 (2)

“A person who intends to carry out a development for which permission has been granted shall give notice to the Head of the Physical Planning and Development Division (DCA) of the date on which that development will commence.”

.../2

October 21, 2021
Application Registration Number: 1003/21

Section 29 (1)

“Whenever any plans have been submitted to the Head of the Physical Planning and Development Division (DCA) on an application for permission to develop any land and such permission has been granted, the development in question shall be carried out in accordance with the approved plans and any conditions subject to which permission was granted.”

Should you require further information or clarification on the above, please contact us at the above address or at telephone numbers 468-4456/4455.

Please be guided accordingly.

Yours faithfully,



.....
Executive Secretary
Development Control Authority

Copy: Chairman, Development Control Authority
Deputy Chief Physical Planning Officer
Physical Planning Officer - Mr. W. Houson
District Building Officer – A. Trim
Permanent Secretary - Department of Physical Development and Urban Renewal

資料-6 海岸からの土砂持ち出し許可 (Sand Permit)

(1) 1st Dredging



GOVERNMENT OF SAINT LUCIA
MINISTRY OF INFRASTRUCTURE, PORTS, TRANSPORT, PHYSICAL DEVELOPMENT
AND URBAN RENEWAL
Department of Infrastructure, Ports and Transport

Communication on this subject
Should be addressed to:

Chief Engineer

Union Office Complex
Union, Castries
Saint Lucia, West Indies
Telephone Number: 1-758-468-4300
Fax Number: 1-758-453-2769
Email: ajnbaptise@gosl.gov.lc

November 8th, 2021

The Permanent Secretary
Ministry of Agriculture, Fisheries,
Food Security and Rural Development
Waterfront
Castries

Dear Sir

Sand Permit

Your letter dated November 3rd, 2021 is acknowledged.

Please be informed that a Permit has been issued to Skelly Construction Services Ltd to extract 3000 cubic yards of sand from the Choiseul Fishing Port.

SAND PERMIT – VALID FOR TWELVE (12) WORKING DAYS WEDNESDAY NOVEMBER 10th TO FRIDAY NOVEMBER 12th 2021, MONDAY NOVEMBER 15th, 2021 TO FRIDAY NOVEMBER 19th, 2021, MONDAY NOVEMBER 22nd, TO THURSDAY NOVEMBER 25th, 2021.

NO	TRUCK REG. NO.	VEHICLE/EQUIPMENT	DRIVER
1	Kmtwa028C79H51314	KOMATSU WA320-5	Candius Lambert
2	TN650	Dump Truck	Celesta L Thomas
3	31584	Excavator	Edland Nivel Dantzie
4	20007	Excavator	Jevain Miguel Hippolyte
5	HHKHU601CL000115	Back Hoe	Marlan Denver William
6	Wa320h21300	Wheel Loader	Skelly Construction Ltd
7	A88069	Excavator	Thomas Asson
8	CAT0321CHKCR00242	Excavator	Skelly Construction Ltd

(SEE ATTACHED INSURANCE DETAILS).

...../2

OUR VISION:

“To be a flagship Ministry critical to the achievement of infrastructural and national development.”

Desilting Works shall be executed between the Hours of 8:00 a.m. and 4:00 p.m. on the Sand Permit valid date/s.

Any damages sustained to the access road shall be repaired at the cost of Skelly Construction Services Ltd. Also, the river front shall be left in a pristine condition on completion of the exercise.

Skelly Construction Services Ltd shall inform Engineer Eddie Parsade 518-7504) and the police of the date and time of commencement of the mining exercise. Ministry can only start when the Police and Engineer have been informed.

Yours faithfully



Albert Jh. Baptiste
CHIEF ENGINEER

cc : Permanent Secretary – Ministry of Infrastructure, Ports, and Transport
Deputy Chief Engineer – Ministry of Infrastructure, Ports and Transport
Commissioner of Police – Attn: Officer i/c Choiseul Police Station
Zonal Engineer – Ministry of Infrastructure, Ports and Transport

OUR VISION:

“To be a flagship Ministry critical to the achievement of infrastructural and national development.”

(2) 2nd Dredging



GOVERNMENT OF SAINT LUCIA
MINISTRY OF INFRASTRUCTURE, PORTS, TRANSPORT, PHYSICAL DEVELOPMENT
AND URBAN RENEWAL
Department of Infrastructure, Ports and Transport

Communication on this subject
Should be addressed to:

Chief Engineer

Union Office Complex
Union, Castries
Saint Lucia, West Indies
Telephone Number: 1-758-468-4300
Fax Number: 1-758-453-2769
Email: ajnbaptise@gosl.gov.lc

April 25th, 2022

The Permanent Secretary
Ministry of Agriculture, Fisheries,
Food Security and Rural Development
Waterfront
Castries

Dear Sir

Sand Permit

Your letter dated April 20th, 2022 is acknowledged.

As per Chapter 6.04 of the Beach Protection Act (Revised Edition, 31 December 2017) permission is hereby granted to Skelly Construction Services Ltd to extract 2000 cubic yards of sand from the Choiseul Fishing Port.

SAND PERMIT – VALID FOR TWELVE (12) WORKING DAYS WEDNESDAY APRIL 27th TO FRIDAY APRIL 29th 2022, TUESDAY MAY 3RD, TO FRIDAY MAY 6TH, 2022, AND MONDAY MAY 9TH, TO FRIDAY MAY 13TH, 2022.

NO	TRUCK REG. NO.	VEHICLE/EQUIPMENT	DRIVER
1	JHEFY1EUK00010599	Truck	Candius Lambert
2	JHEFS1EMK00010052	Dump Truck	Celesta Thomas
3	Wa320h21300	Wheel Loader	Ediand Nivel Dantzie
4	KMTWA028C79H51314	Wheel Loader	Jevain Miguel Hippolyte
5	HHKHU601CL000115	Back Hoe	Skelly Construction Ltd
6	31584	Excavator	Marian Denver William
7	20007	Excavator	Thomas Asson
8	A88069	Excavator	Skelly Construction
9	KMTPC199A04020579		Mgiuel Edison Horne

(SEE ATTACHED INSURANCE DETAILS).

...../2

OUR VISION:

"To be a flagship Ministry critical to the achievement of infrastructural and national development."

Desilting Works shall be executed between the Hours of 8:00 a.m. and 4:00 p.m. on the Sand Permit valid date/s.

Any damages sustained to the access road shall be repaired at the cost of Skelly Construction Services Ltd. Also, the river front shall be left in a pristine condition on completion of the exercise.

Skelly Construction Services Ltd shall inform Engineer Eddie Parsade (518-7504) and the police of the date and time of commencement of the mining exercise. Ministry can only start when the Police and Engineer have been informed.

Yours faithfully



Albert Jr. Baptiste
CHIEF ENGINEER

cc : Permanent Secretary – Department of Infrastructure, Ports, and Transport
Deputy Chief Engineer – Department of Infrastructure, Ports and Transport
Commissioner of Police – Attn: Officer i/c Choiseul Police Station
Zonal Engineer – Department of Infrastructure, Ports and Transport

OUR VISION:

“To be a flagship Ministry critical to the achievement of infrastructural and national development.”



SAINT LUCIA AIR AND SEA PORTS AUTHORITY

Connecting People, Partners and the World.

Manoel Street, P.O. Box 651, Castries, Tel: (758) 457 6100, Fax: (758) 457 6190. E-mail: info@slaspa.com www.slaspa.com

November 16, 2021

Mrs. Sarita Williams-Peter
Chief Fisheries Officer
Department of Fisheries
Ministry of Agriculture, Fisheries,
Food Security and Rural Development
Pointe Seraphine
CASTRIES

Dear Mrs. Williams-Peter:

Re: Proposed Infrastructural Development (coastal dredging) Located on Seabed, Choiseul Fishing Port, Choiseul Application Registration Number: 1003/21

Reference is made to the correspondence from the Development Control Authority dated October 21, 2021 regarding the above subject.

In an effort to increase the safety of navigation in Saint Lucia's coastal waters, the Saint Lucia Air and Sea Ports Authority (SLASPA) recommends that the Project Managers and Coordinators take into consideration the safety of navigation to and from the Port facility.

On October 21, 2021, the Division of Maritime Affairs met with the Consulting Engineer, Mr. Kenji Kuroki to discuss the dredging of Choiseul Fishing Port Project. During this discussion, technical specifications for the repositioning of lateral (entrance) lights were provided to the Choiseul Fishing Port.

Consequently, SLASPA anticipates that the Department of Fisheries through its Contractors, reposition the lateral lights to the entrance of the Port. On completion of the project, the Authority expects an increase in safe navigation of seagoing vessels to and from the fishing Port.

Additionally, the Division of Maritime Affairs shall seek to address the following:

- Inform all maritime-related agencies utilizing the facility of the ongoing project including the Marinas;
- Inform the International Hydrographic Office (IHO) of said project and the installation of the lights;

- Maintain communication with the Department of Fisheries on the progression of the project and the safety of navigation.

Should you require further information and/or clarification, please contact the Director of Maritime Affairs, Mr. Christopher Alexander at telephone number (758) 457-6151 or via email christopher.alexander@slaspa.com.

Sincerely,



Daren Cenac
GENERAL MANAGER

Cc: Mr. Barrymore Felicien, Permanent Secretary - Ministry of Agriculture, Fisheries, Food Security and Rural Development
Mr. Christopher Alexander, Director of Maritime Affairs - SLASPA



ECOH CORPORATION

Address: Ueno-Takeuchi Bldg., 2-6-4, Kita-Ueno, Taito-ku, Tokyo 110-0014, Japan
Tel. +81-3-5828-8412 **Fax.** +81-3-5828-2175

November 30, 2021

Attn: Mr. Cristopher Alexander
Director of Maritime Affairs,
Saint Lucia Air and Sea Ports Authority (SLASPA)

Project Title: The Project for Improvement of Choiseul Fishing Port in Saint Lucia
Re: Beacon Lights in Choiseul Fishing Port

Dear Cristopher Alexander:

Your name has been forwarded from Mr. Daren Cenac, General Manager of SLASPA, via letter (Registration Number: 1003/21) issued on November 16, 2021 to Sarita Williams-Peter, Chief Fisheries Officer in the Department of Fisheries.

We have been committed to the subject project, and I am Kenji KUROKI in charge of facility planning and design. As mentioned in the above letter, I had an opportunity to talk to Mr. Wilbur Etienne and Kerwin John, SLASPA in terms of installation of light beacons in the project. They advised me that existing light beacons should be demolished, and new light beacons should be installed on the submerged breakwater and second sand groyne which are constructed in this project.

In the letter, "reposition" of the light beacons are mentioned. We have been wondering which is the correct interpretation of your intention:

- 1) existing light beacons are not demolished but just relocated onto the new port facilities,
- 2) existing light beacons are demolished, and new products are procured and installed onto the new port facilities.

Just for your reminder, existing light beacons are heavily damaged and missing its solar panels, so none of them are working. Therefore, it seems difficult to fix and relocate them.

As shown in Figure-1, the navigation channel of Choiseul fishing port is bent between the existing light beacons colored in green and red.

Therefore, from the technical point of view, the lighting parts of existing light beacons are fixed so that the lights reach approximately 2 miles away. The new light beacons having the stronger lights reaching 5 miles away are newly procured and installed onto the submerged breakwater and second sand groyne. This leads to the safer navigation and operation for fisherfolk.

We appreciate it if you give us your frank comments or opinions about above idea.

Just in case, our proposal is summarized in the following page.

ECOH CORPORATION

<Reference>

B system in IALA (International Association of Lighthouse Authorities)

Existing Light Beacons: to be fixed in the same locations

- 1) Red light beacon: Seen from the sea, light beacon in red is placed on the right side, and its light reaches more than 2 miles away. In the night time, the light colored in red is flashing.
- 2) Green light beacon: Seen from the sea, the light beacon in green is placed on the left side, and its light reaches more than 2 miles away. In the night time, the light colored in green is flashing.

New Beacon Lights: to be installed on the submerged breakwater and second groyne

- 3) Red light beacon: This is installed on the submerged breakwater, and its light is stronger reaching more than 5 miles away. In the night time, the light colored in red is flashing. The flashing may take place simultaneously with the existing light beacon in red.
- 4) Green light beacon: This is installed on the second groyne, and its light is stronger reaching more than 5 miles away. In the night time, the light colored in green is flashing. The flashing may take place simultaneously with the existing light beacon in green.

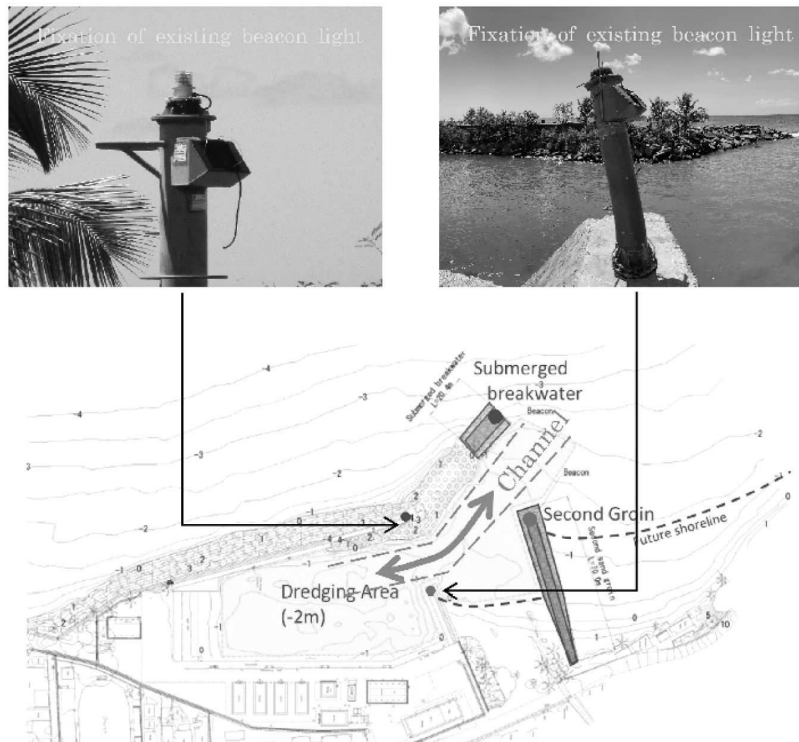


Figure-1 Fixation of existing light beacon and installation of new ones

Sincerely yours,



Kenji KUROKI
Senior Civil Engineer
International Division
ECOH CORPORATION

Cc : Mrs. Sarita (CFO) and Mr. Thomas (Deputy CFO), Department of Fisheries

ECOH CORPORATION

November 30, 2021

Mr. Kenji Kuroki
Senior Civil Engineer
International Division
ECOH Corporation

Dear Mr. Kuroki,

RE: Beacon Light in Choiseul Fishing Port

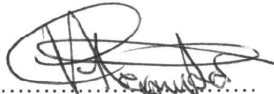
Reference is made to your correspondence dated November 12, 2021, titled **The Project for improvement of Choiseul Fishing Port in Saint Lucia.**

As articulated in your letter which states that **‘the existing lights are heavily damaged, missing their solar panels and need repairing; thus the relocation would prove to be difficult.’**

The Saint Lucia Air and Sea Ports Authority (SLASPA) concurs with this assessment and supports safe navigation that your second proposal, of installing new beacon lights on the submerged breakwater and utilizing the second groyne. As indicated, the proposed jetty lights would be stronger and be seen at a greater distance than the previous lights.

Should you require further clarification, please feel free to contact the undersigned.

Sincerely,



.....
Christopher Alexander
Director of Maritime Affairs

資料-8 モニタリングフォーム(案)

(1) 工事期間中

【大気(緩和策実施状況のモニタリング)】

緩和策	実施状況	備考
散水の実施		随時、実施状況を確認する
作業時間以外の重機のエンジン停止		

【水質】

項目	単位	計測値	ベースライン値 (準備調査時)	基準値	備考 (測定場所、頻度等)
COD	mg/L		1,000 - 1,200	なし(*1)	測定場所: 漁港内外 で計 2 箇所 頻度: 本体工事期間中に 2 回、修正工事期間中には各 1 回
濁り	透明度	NTU	3.2 - 21	なし(*2)	
	浮遊物質(SS)	mg/L	32 - 132	人為的に加えられる SS は 2mg/L 以下 (*3)	

(*1) 「セ」国独自の基準が存在せず、WHO ガイドライン等の参照できる基準も存在しない。また、計測方法の違いから日本の基準も参照できない。

(*2) 「セ」国独自の基準が存在せず、WHO ガイドライン等の参照できる基準も存在しない。

(*3) 「セ」国独自の基準が存在せず、WHO ガイドライン等にも定められていないため、日本の基準(水産用水基準(社団法人日本水産資源保護協会)を参照

【騒音】

項目	単位	計測値	ベースライン値 (準備調査時)	基準値	備考 (測定場所、頻度等)
騒音	Leq(A)dB		79.5 (浚渫中)	70	測定場所: 1 箇所(浚渫および通行車両の影響が及ぶ地点)

(2) モニタリング期間および供用後

【水質】

項目	単位	計測値	ベースライン 値 (準備調査 時)	基準値	備考 (測定場所、頻度 等)
COD	mg/L		< 200	なし(*1)	測定場所:漁港内外 で計 2 箇所 頻度:1 回/3 年
大腸菌群数	CFL/100mL		2,300 - 6,000	1,000 (*2)	

(*1) 「セ」国独自の基準が存在せず、WHO ガイドライン等の参照できる基準も存在しない。また、計測方法の違いから日本の基準も参照できない。

(*2) 「セ」国独自の基準が存在しないため、WHO ガイドラインを参照

資料-9 環境チェックリスト

環境チェックリスト (参照: JICA 環境社会配慮ガイドライン (2010年4月版) 環境チェックリスト「10.港湾」)

分類	環境項目	主なチェック事項	Yes: Y No: N 該当なし: N/A	具体的な環境社会配慮 (Yes/Noの理由、根拠、緩和策など)
1 許認可・説明	(1) EIA および 環境許認可	a) 環境アセスメント報告書(EIA レポート)等は作成済みか。 b) EIA レポート等は当該国政府により承認されているか。 c) EIA レポート等の承認は付帯条件を伴うか。付帯条件がある場合は、その条件は満たされるか。 d) 上記以外に、必要な場合には現地の所管官庁からの環境に関する許認可は取得済みか。	a) N/A b) N/A c) N/A d) N	a) EIA 取得は必要とされない。 b) EIA 取得は必要とされない。 c) EIA 取得は必要とされない。 d) 工事に先立ち、建設許可および浚渫土砂移動に係る許可が必要となる。
	(2) 現地ステークホルダーへの説明	a) プロジェクトの内容および影響について、情報公開を含めて現地ステークホルダーに適切な説明を行い、理解を得ているか。 b) 住民等からのコメントを、プロジェクト内容に反映させたか。	a) Y b) Y	a) 第1次、第2次現地調査時ともにステークホルダー協議を実施し、関係者の理解を得た。 b) ステークホルダー協議およびアンケート調査で聴取した意見をプロジェクトに反映させた。
	(3) 代替案の検討	a) プロジェクトの計画の複数の代替案は(検討の際、環境・社会に係る項目も含めて)検討されているか。	a) Y	a) 代替案の比較検討において、環境面に関する項目についても比較し、最適案を選定した。
2 汚染対策	(1) 大気質	a) 船舶・車輦・付帯設備等から排出される硫酸化物(SOX)、窒素酸化物(NOX)、煤じん等の大気汚染物質は、当該国の排出基準、環境基準等と整合するか。大気質に対する対策はとられるか。	a) N	a) NO2 および SO2 ともに WHO 基準値を超過していたが、考えられる原因は本プロジェクトと直接的な関係はないと推測される。PM2.5 および PM10 については、基本的には基準値内におさまっている。ただし、定期的な散水および作業時間以外は重機のエンジンなどを切るなどして粉塵等の発生を抑制する。

	<p>a) 関連施設からの一般排水は、当該国の排出基準、環境基準等と整合するか。</p> <p>b) 船舶・付帯設備等(ドック等)からの排水は、当該国の排出基準、環境基準等と整合するか。</p> <p>c) 油、有害物質等が周辺水域に流出・排出しない対策がなされるか。</p> <p>d) 水際線の変更、既存水面の消滅、新規水面の創出等によって、流況変化・海水交換率の低下等(海水循環が悪くなる)が発生し、水温・水質の変化が引き起こされるか。</p> <p>e) 埋め立てを行う場合、埋立地からの浸透水が表流水、海水、地下水を汚染しない対策がなされるか。</p>	<p>a) N/A</p> <p>b) N/A</p> <p>c) Y</p> <p>d) N</p> <p>e) N/A</p>	<p>a) 施設からの排水は発生しない。</p> <p>b) 船舶や設備等からの排水は発生しない。</p> <p>c) 浚渫時に濁りが広範囲に拡散しないようシルトフェンスを設置する。</p> <p>d) 将来的には漁港北側の海浜で汀線(水際線)が前進することが見込まれるが、これによる水温・水質の変化は発生しない。</p> <p>e) 埋め立ては発生しない。</p>
(3) 廃棄物	<p>a) 船舶、関連施設からの廃棄物は当該国の規定に従って適切に処理・処分されるか。</p> <p>b) 浚渫土・沖捨ての投棄が周辺水域に影響を及ぼすことがないよう、当該国の基準に従って適切に処理・処分されるか。</p> <p>c) 有害物質が周辺水域に排出・投棄されないよう対策がなされるか。</p>	<p>a) N/A</p> <p>b) Y</p> <p>c) N/A</p>	<p>a) 船舶からの廃棄物は発生しない。</p> <p>b) 本プロジェクトで生じる浚渫土は漁港北側に留置される。これは、本来の漂砂系へ砂を戻す行為であるため、周辺水域へは影響を及ぼさない。なお、サンドパイプスの考え方は、浚渫土は廃棄物とは認識されない。</p> <p>c) 浚渫土に有害物質は含まれていない。</p>
(4) 騒音・振動	<p>a) 騒音・振動は当該国の基準等と整合するか。</p>	<p>a) N</p>	<p>a) 騒音については、浚渫期間中に行った計測で基準値をわずかに超過した。振動について、当該国では ISO 基準を用いており、本調査で実施された浚渫前、浚渫期間中、ともに大幅に下回る結果となった。</p>
(5) 地盤沈下	<p>a) 大量の地下水汲み上げを行う場合、地盤沈下が生じる恐れがあるか。</p>	<p>a) N/A</p>	<p>a) 大量の地下水汲み上げは発生しない。</p>
(6) 悪臭	<p>a) 悪臭源はあるか。悪臭防止の対策はとられるか。</p>	<p>a) N</p>	<p>a) 悪臭源はないため、対策は講じない。</p>

	(7)底質	a) 船舶及び関連施設からの有害物質等の排出・投棄によって底質を汚染しないよう対策がなされるか。	a) N	a) 本プロジェクトでは、既存の漁港および航路において浚渫作業が発生する。しかし、本調査において底質に有害物質は含まれず、関連施設等からの排出も確認されなかった。
3 自然環境	(1)保護区	a) サイトは当該国の法律・国際条約等に定められた保護区内に立地するか。プロジェクトが保護区に影響を与えらるか。	a) N	a) サイトは保護区内に位置しない。サイトの約3.5km北側には世界遺産であるピトメンジメントエリアが位置しているが、工事は小規模であり、影響は見込まれない。
	(2)生態系	a) サイトは原生林、熱帯の自然林、生態学的に重要な生息地(珊瑚礁、マングローブ湿地、干潟等)を含むか。 b) サイトは当該国の法律・国際条約等で保護が必要とされる貴重種の生息地を含むか。 c) 生態系への重大な影響が懸念される場合、生態系への影響を減らす対策はなされるか。 d) 水生生物に悪影響を及ぼす恐れはあるか。影響がある場合、対策はなされるか。 e) 沿岸域の植生、野生動物に悪影響を及ぼす恐れはあるか。影響がある場合、対策はなされるか。	a) N b) N c) N/A d) N e) N	a) 原生林、熱帯の自然林、生態学的に重要な生息地は含まない。 b) 本調査における生態系調査(目視調査)の結果、サイトには希少種は生息していない。 c) 生態系への重大な影響は懸念されない。 d) 水生生物への悪影響は見込まれない。 e) 沿岸域の植生、野生動物への悪影響は見込まれない。
	(3)水象	a) 港湾施設の設置による水系の変化は生じるか。流況、波浪、潮流等に悪影響を及ぼすか。	a) Y	a) 既存漁港および跳堤の建設後、港内に砂が堆積しやすい状況条件である。本プロジェクトは、これを本来の漂砂系に戻す機能を持つものである。そのため、負の影響はなく、さらには埋没対策の観点からも有効なものである。
	(4)地形・地質	a) 港湾施設の設置による計画地周辺の地形・地質の大規模な変化や自然海浜の消失が生じるか。	a) Y	a) 浚渫によって、港内および港口部の水深が確保される。また、第2防砂堤の北側の汀線が前進し、新たなビーチが創出される。いずれの地形変化も漁業従事者、周辺住民にとって正の影響である。

<p>4 社会環境</p>	<p>a) プロジェクトの実施に伴い、非自発的住民移転は生じるか。生じる場合は、移転による影響を最小限とする努力がなされるか。 b) 移転する住民に対し、移転前に補償・生活再建対策に関する適切な説明が行われるか。 c) 住民移転のための調査がなされ、再取得価格による補償、移転後の生活基盤の回復を含む移転計画が立てられるか。 d) 補償金の支払いが移転前に行われるか。 e) 補償方針は文書で策定されているか。 f) 移転住民のうち特に女性、子供、老人、貧困層、少数民族・先住民等の社会的弱者に適切な配慮がなされた計画か。 g) 移転住民について移転前の合意は得られるか。 h) 住民移転を適切に実施するための体制は整えられるか。十分な実施能力と予算措置が講じられるか。 i) 移転による影響のモニタリングが計画されるか。 j) 苦情処理の仕組みが構築されているか。</p> <p>(1)住民移転</p>	<p>a) N/A b) N/A c) N/A d) N/A e) N/A f) N/A g) N/A h) N/A i) N/A j) N/A</p>	<p>a) 非自発的住民移転は生じない。 b) 非自発的住民移転は生じない。 c) 非自発的住民移転は生じない。 d) 非自発的住民移転は生じない。 e) 非自発的住民移転は生じない。 f) 非自発的住民移転は生じない。 g) 非自発的住民移転は生じない。 h) 非自発的住民移転は生じない。 i) 非自発的住民移転は生じない。 j) 非自発的住民移転は生じない。</p>
<p>(2)生活・生計</p>	<p>a) プロジェクトによる住民の生活への悪影響が生じるか。必要な場合は影響を緩和する配慮が行われるか。 b) プロジェクトにより周辺の水域利用(漁業、レクリエーション利用を含む)が変化して住民の生計に悪影響を及ぼすか。 c) 港湾施設が住民の既存水域交通及び周辺の道路交通に悪影響を及ぼすか。 d) 他の地域からの人口流入により病気の発生(HIV等の感染症を含む)の危険はあるか。必要に応じて適切な公衆衛生への配慮が行われるか。</p>	<p>a) N b) N c) N d) N</p>	<p>a) 住民の生活への負の影響は見込まれない。港口部の埋没が改善すれば、漁業振興に寄与する。 b) 住民の生計への悪影響は見込まれない。工事期間中に港口部を閉鎖する場合には、仮設棧橋を利用することで漁業活動を継続できる。 c) 既存水域交通、周辺の道路交通への悪影響は見込まれない。替堤および第2防砂堤の設置により、航路が屈曲するものの、ピーコンの設置により安全な操業が確保できる。 d) 人口流入による病気の発生は見込まれない。工事規模が小さく、工期も短いため、工事期間に他地域から大規模な人口流入は発生しない。</p>
<p>(3)文化遺産</p>	<p>a) プロジェクトにより、考古学的、歴史的、文化的、宗教的に貴重な遺産、史跡等を損なう恐れはあるか。また、当該国の国内法上定められた措置が考慮されるか。</p>	<p>a) N</p>	<p>a) 考古学的、歴史的、文化的、宗教的に貴重な遺産、史跡を損なう恐れはない。</p>

	(4)景観	<p>a) 特に配慮すべき景観が存在する場合、それに対し悪影響を及ぼすか。影響がある場合には必要な対策はとられるか。</p>	a) N/A	a) サイトには特に配慮すべき景観は存在しない。
(5)少数民族、先住民族	<p>a) 少数民族、先住民族の文化、生活様式への影響を軽減する配慮がなされているか。 b) 少数民族、先住民族の土地及び資源に関する諸権利は尊重されるか。</p>	<p>a) 少数民族、先住民族の文化、生活様式への影響は見込まれない。 b) 少数民族、先住民族の土地及び資源に関する悪影響は見込まれない。</p>	a) N/A b) N/A	<p>a) 少数民族、先住民族の文化、生活様式への悪影響は見込まれない。 b) 少数民族、先住民族の土地及び資源に関する悪影響は見込まれない。</p>
(6)労働環境	<p>a) プロジェクトにおいて遵守すべき当該国の労働環境に関する法律が守られるか。 b) 労働災害防止に係る安全設備の設置、有害物質の管理等、プロジェクト関係者へのハード面での安全配慮が措置されているか。 c) 安全衛生計画の策定や作業員等に対する安全教育(交通安全や公衆衛生を含む)の実施等、プロジェクト関係者へのソフト面での対応が計画・実施されているか。 d) プロジェクトに関係する警備要員が、プロジェクト関係者・地域住民の安全を侵害することのないよう、適切な措置が講じられているか。</p>	<p>a) 「セ」国の労働環境に関する法律が遵守される。本プロジェクトの施工業者には労働環境に関する法律の遵守を求めらる。 b) 安全設備の設置、有害物質の管理、ハード面での安全配慮が措置される。それらは、本プロジェクトの施工業者にも求められる。 c) 安全衛生計画の策定や作業員等に対する安全教育の実施等、ソフト面での対応が計画・実施される。それらは、本プロジェクトの施工業者にも求められる。 d) 警備要員が関係者・地域住民の安全を侵害することのないよう入札図書等で措置を取る。</p>	a) Y b) Y c) Y d) Y	<p>a) 「セ」国の労働環境に関する法律が遵守される。本プロジェクトの施工業者には労働環境に関する法律の遵守を求めらる。 b) 安全設備の設置、有害物質の管理、ハード面での安全配慮が措置される。それらは、本プロジェクトの施工業者にも求められる。 c) 安全衛生計画の策定や作業員等に対する安全教育の実施等、ソフト面での対応が計画・実施される。それらは、本プロジェクトの施工業者にも求められる。 d) 警備要員が関係者・地域住民の安全を侵害することのないよう入札図書等で措置を取る。</p>
5 その他	(1)工事中の影響	<p>a) 工事中の汚染(騒音、振動、濁水、粉じん、排ガス、廃棄物等)に対して緩和策が用意されるか。 b) 工事により自然環境(生態系)に悪影響を及ぼすか。また、影響に対する緩和策が用意されるか。 c) 工事により社会環境に悪影響を及ぼすか。また、影響に対する緩和策が用意されるか。</p>	a) Y b) N c) Y	<p>a) 浚渫に伴い発生が見込まれる濁りを抑制するためシルトブレンスをを用いる。また、工事中の粉塵を抑制するためにサイトでの散水を行う。騒音・振動による影響は発生しないと考えられるが、周辺住民への配慮として、作業時間以外は重機のエンジン音を切る、夜間工事を行わない。 b) 生態系への悪影響は見込まれない。 c) 工事用車両が住宅街や狭隘な道路を通行する。事故の発生を防ぐため、交通整理員を配置する。</p>

6	留意事項	<p>a) 上記の環境項目のうち、影響が考えられる項目に対して、事業者のモニタリングが計画・実施されるか。</p> <p>b) 当該計画の項目、方法、頻度等はどのように定められているか。</p> <p>c) 事業者のモニタリング体制(組織、人員、機材、予算等)とそれらの継続性は確立されるか。</p> <p>d) 事業者から所管官庁等への報告の方法、頻度等は規定されているか。</p>	<p>a) Y</p> <p>b) Y</p> <p>c) Y</p> <p>d) Y</p>	<p>a) 大気、水質、騒音に関してモニタリングを実施する。なお、大気に関するモニタリングは緩和策の実施状況の確認である。</p> <p>b) 本体工事期間に2回(修正工事期間には1回)行う。調査地点は漁港内外の計2箇所とする。</p> <p>c) 水産局のモニタリング体制は確立される。水産局から調査を受託した調査会社が調査を実施し、JICA 事務所へ報告するものとする。工事期間中は、コンサルタントが調査の実施を支援する。</p> <p>d) 調査実施ごとに、適宜、報告する。</p>
6	環境チェックリスト使用上の注意	<p>a) 埋立地造成、港湾の掘込み等による地下水系への影響(水位低下、塩化)や地下水利用による地盤沈下等の影響についても必要に応じて検討される措置が講じられる必要がある。</p> <p>b) 必要な場合には、越境または地球規模の環境問題への影響も確認する(廃棄物の越境、酸性雨、オゾン層破壊、地球温暖化の問題に係る要素が考えられる場合等)。</p>	<p>a) N/A</p> <p>b) N/A</p>	<p>a) 埋立地造成や地下水系への影響、地下水利用による地盤沈下などは見込まれない。</p> <p>b) 工事規模が小さく、越境または地球規模の環境問題への影響は見込まれない。</p>

資料-10 水質・底質結果一覧

(1) 水質調査結果

No.	項目	項目名	単位	計測結果								基準値 (mg/L)	
				1回目(下げ潮、11/12) 浚渫実施前				2回目(上げ潮、12/10) 浚渫期間中				WHO	日本(*2)
				W1	W2	W3	W4	W1	W2	W3	W4		
3 1	temperature	温度	°C	28.8	28.9	28.5	28.7	28.7	28.8	28.5	28.5		
3 1	salinity	塩分濃度	mg/L	34	34	34	35	33	35	35	35		
3 2	pH	水素イオン濃度	units	8.23	8.12	8.1	8.09	8.16	8.09	8.06	8.08		7.8 - 8.4
3 3	SS	浮遊性物質	mg/L	35	59	144	39	32	85	132	26		2 (人為的)
3 4	COD	化学的酸素要求量	mg/L	<200	<200	<200	<200	1200	1120	1000	1050		8 or less
	Biochemical Oxygen Demand	生物化学的酸素要求量	mg/L			1.7				5.2			5 or less
3 5	DO	溶存酸素量	mg/L	8	8.2	7.9	8	8	8.2	7.9	8		6 or more
3 6	Coliform bacilli	大腸菌群数	CFU/100mL	6000	3400	2300	96	7400	2800	1300	86	1000 (*1)	
3 7	n-Hexane Extraction Substance	n-ヘキサン抽出物質 (油分等)	mg/L	<15	<15	<15	<15	<15	<15	<15	<15		
3 8	Transparency	透明度	NTU	2.36	7.72	19.3	0.28	3.2	14	21	0.35		
3 9	Total Nitrogen	全窒素	as N mg/L	<3	<3	<3	<3	<3	<3	<3	<3	1000	1
3 10	Total Phosphorus	全リン	mg/L	0.08	<0.03	0.04	<0.03	3.3	3.3	3.9	3.1	20	0.09
3 11	Total Cadmium	カドミウム	mg/L	<0.0003	<0.0003	0.00003	<0.0003	0.0001	<0.00003	0.0002	0.0001	0.06	0.03
3 12	Total cyanide	全シアン	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	10	ND
3 13	Total Lead	鉛	mg/L	<0.0009	<0.0009	<0.0009	<0.0009	0.0028	0.0004	0.0004	0.0005	0.2	0.01
3 14	Hexavalent chromium	六価クロム	mg/L	<0.006	<0.006	<0.006	<0.006	<0.01	<0.01	<0.01	<0.01	1	0.05
3 15	Total Arsenic	砒素	mg/L	0.004	0.003	0.004	<0.002	0.0022	0.002	0.002	0.0021	0.2	0.01
3 16	Total mercury	総水銀	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.01	0.01	<0.01	0.01	0.12	0.0005
3 17	Alkyl mercury	アルキル水銀											ND
3 18	PCBs	PCB	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.00004	<0.00004	<0.00004	<0.00004	0.01 (*1)	ND
3 19	Dichloromethane	ジクロロメタン	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.4	0.02
3 20	Carbon tetrachloride	四塩化炭素	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.08	0.002
3 21	1,2-Dichloroethane	1,2-ジクロロエタン	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	0.6	0.004
3 22	1,1-Dichloroethylene	1,1-ジクロロエチレン	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		0.1
3 23	Cis 1,2-Dichloroethylene	シス1,2-ジクロロエチレン	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		0.04
3 24	1,1,1-Trichloroethane	1,1,1-トリクロロエタン	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		1
3 25	1,1,2-Trichloroethane	1,1,2-トリクロロエタン	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		0.006
3 26	Trichloroethylene	トリクロロエチレン	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		0.01
3 27	Tetrachloroethylene	テトラクロロエチレン	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		0.01
3 28	1,3-Dichloropropene	1,3-ジクロロプロペン	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	0.4	0.002
3 29	Thiram	チウラム	mg/L										0.006
3 30	Simazine	シマジン	mg/L	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.04	0.003
3 31	Thiobencarb	チオベンカルブ	mg/L										0.02
3 32	Benzene	ベンゼン	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.2	0.01
3 33	Selenium	セレン	mg/L	0.0005	<0.0004	0.0007	<0.0004	<0.00004	0.0002	<0.00004	0.0005	0.2	0.01
3 34	Nitrate nitrogen & nitrite nitrogen	硝酸性窒素および亜硝酸性窒素	mg/L	<6	<6	<6	<6	<6	<6	<6	<6	Nitrate (as N) 20	10
3 35	Fluoride	フッ素	mg/L	0.9	0.91	0.9	0.89	0.9	0.88	0.89	0.91	30	0.8
3 36	Boron	ホウ素	mg/L	4.09	4.46	4.7	4.4	4.29	4.62	4.37	4.69	48	1
3 37	1,4-Dioxane	1,4-ジオキサン	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	1	0.05

*1 米国環境保護庁 (USEPA: United States Environmental Protection Agency) の基準を参照

*2 日本の基準: 水質汚濁に係る環境基準 (日本) および水産用水基準 (社団法人日本水産資源保護協会) を参照

(2) 底質調査結果

			単位	計測結果			基準値 (µg/g)				基準値 (µg/g)		
				I回目(下げ潮、11/12) 浚渫期間前			微量金属類					有機性汚染物質	
				W1	W2	W3	NOAA (*1)	ANZECC (*2)	EC(*3)	Hong Kong ISQV (*4)		Hong Kong ISQV & ANZECC	日本 (*5)
3	1	Specific Gravity	比重		1.8	1.9	1.7						
3	2	Sieve Analysis (*6)	ふるい分け試験 (*6)	µm	147	204	176						
3	3	Unit Weight	単位堆積重量	kN / m ³	12.7	13.2	11.7						
3	4	Alkyl mercury compound	アルキル水銀化合物										ND (*7)
3	5	Mercury or its compound	水銀又はその化合物	µg / g	<0.05	<0.05	<0.05	0.15	0.15	0.13	0.28		0.025
3	6	Cadmium or its compound	カドミウム又はその化合物	µg / g	<0.05	<0.05	<0.05	1.2	1.2	0.68	1.5		0.1
3	7	Lead or its compound	鉛又はその化合物	µg / g	3.4	4.6	3.9	46.7	47	30.2	75		1
3	9	Hexavalent chromium compound	六価クロム化合物	µg / g	<0.2	<0.2	<0.2						0.5
3	10	Arsenic or its compound	ヒ素又はその化合物	µg / g	6.3	7.6	7.5	8.2	20	7.24	8.2		0.15
3	11	Cyanide compound	シアン化合物	µg / g	<0.001	<0.001	<0.001						1
3	12	Polychlorinated biphenyl (PCB)	ポリ塩化ビフェニル (PCB)	µg / g	<0.3	<0.3	<0.3					34.1	0.003
3	13	Trichloroethylene	トリクロロエチレン	µg / g	<0.05	<0.05	<0.05						0.3
3	14	Tetrachloroethylene	テトラクロロエチレン	µg / g	<0.05	<0.05	<0.05						0.1
3	8 & 15	Organophosphorus compound / Organochlorine compounds / organic chlorine compound	有機リン化合物 / 有機塩素化合物										3-8は1.0 3-15は4.0
		aldrin	アルドリン	µg / g	<0.05	<0.05	<0.05						
		alpha-chlordane	αクロルデン	µg / g	<0.02	<0.02	<0.02						
		gamma-chlordane	γクロルデン	µg / g	<0.02	<0.02	<0.02						
		chlordane (total)	全クロルデン	µg / g	<0.05	<0.05	<0.05					4.5	
		o,p-DDD	o,p-DDD	µg / g	<0.02	<0.02	<0.02						
		DDD (total)	DDD	µg / g	<0.05	<0.05	<0.05					3.54	
		o,p-DDE	o,p-DDE	µg / g	<0.02	<0.02	<0.02						
		pp-DDE	pp-DDE	µg / g	<0.02	<0.02	<0.02						
		DDE (total)	DDE	µg / g	<0.05	<0.05	<0.05					1.42	
		op-DDT	op-DDT	µg / g	<0.02	<0.02	<0.02						
		pp-DDT	pp-DDT	µg / g	<0.02	<0.02	<0.02						
		DDT (total)	DDT	µg / g	<0.05	<0.05	<0.05						7
		dieldrin	ディルドリン	µg / g	<0.05	<0.05	<0.05						2.85
		gamma-BHC	γBHC	µg / g	<0.01	<0.01	<0.01						
		endosulfan I	エンドスルファン I	µg / g	<0.02	<0.02	<0.02						
		endosulfan II	エンドスルファン II	µg / g	<0.02	<0.02	<0.02						
		endosulfan (total)	全エンドスルファン	µg / g	<0.04	<0.04	<0.04						
		endrin	エンドリン	µg / g	<0.04	<0.04	<0.04						2.67
		heptachlor	ヘプタクロル	µg / g	<0.01	<0.01	<0.01						0.6
		heptachlor epoxide	ヘプタクロルエポキシサイド	µg / g	<0.01	<0.01	<0.01						
		hexachlorobenzene	ヘキサクロロベンゼン	µg / g	<0.01	<0.01	<0.01						
		hexachlorobutadiene	ヘキサクロロブタジエン	µg / g	<0.01	<0.01	<0.01						
		hexachloroethane	六塩化エタン	µg / g	<0.01	<0.01	<0.01						
3	16	Dichloromethane	ジクロロメタン	µg / g	<0.05	<0.05	<0.05						0.2
3	17	Carbon tetrachloride	四塩化炭素	µg / g	<0.05	<0.05	<0.05						0.02
3	18	1,2-Dichloroethane	1,2-ジクロロエタン	µg / g	<0.05	<0.05	<0.05						0.04
3	19	1,1-Dichloroethylene	1,1-ジクロロエチレン	µg / g	<0.05	<0.05	<0.05						0.2
3	20	Cis-1,2-Dichloroethylene	シス-1,2-ジクロロエチレン	µg / g	<0.05	<0.05	<0.05						0.4
3	21	1,1,1-trichloroethane	1,1,1-トリクロロエタン	µg / g	<0.05	<0.05	<0.05						3
3	22	1,1,2-trichloroethane	1,1,2-トリクロロエタン	µg / g	<0.05	<0.05	<0.05						0.06
3	23	1,3-Dichloropropane	1,3-ジクロロプロパン	µg / g	<0.05	<0.05	<0.05						0.02
3	24	Thiuram / Thiram	チウラム										0.06
3	25	Shimazine	シマジン	µg / g	<0.05	<0.05	<0.05						0.03
3	26	Thiobencarb	チオベンカルブ										0.2
3	27	Benzene	ベンゼン	µg / g	<0.02	<0.02	<0.02						0.1
3	28	Selenium or its compound	セレン又はその化合物	µg / g	<0.7	<0.7	<0.7						0.1
3	29	Dioxins	ダイオキシン類										
		TCDD	TCDD	pg / g	ND	ND	ND						
		PeCDD	PeCDD	pg / g	ND	ND	ND						
		HxCDD	HxCDD	pg / g	ND	ND	ND						
		HpCDD	HpCDD	pg / g	ND	ND	ND						
3	30	Copper or its compound	銅又はその化合物	µg / g	8.2	8.4	7.9	34	34	18.7	65		10
3	31	Zinc or its compound	亜鉛又はその化合物	µg / g	31	31	29	200	200	124	200		20
3	32	Fluoride	フッ化物	µg / g	45	39	43						15
3	33	Beryllium or its compound	ベリリウム又はその化合物	µg / g	0.29	0.38	0.35						2.5
3	34	Chromium or its compound	クロム又はその化合物	µg / g	12	11	9.9	81	81	52.3	80		2
3	35	Nickel or its compound	ニッケル又はその化合物	µg / g	3.2	3.3	3.2	21	21	15.9	40		1.2
3	36	Vanadium or its compound	バナジウム又はその化合物	µg / g	21	23	20						1.5

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*2 オーストラリア・ニュージーランド環境保護協議会 (ANZECC: Australia and New Zealand Environmental Conservation Council)

*3 カナダ環境省 (EC: Environment Canada)

*4 香港底質基準値 (Hong Kong ISQV: Hong Kong Interim Sediment Quality Value)

*5 掃廃法 (廃棄物の処理及び清掃に関する法律)

*6 ふるい分け試験結果は中央粒径(D50)を記載

*7 ND: Not Detected (非検出)