

報告書添付資料 目次

添付資料 1. 署名ミニッツ

添付資料 2. 質問票

添付資料 3. 参考資料

参考資料-1 コンテナ再配置計画例

参考資料-2 港湾施設、沖取り荷役作業の現状調査

参考資料-3 キリバスの建設事情

参考資料-4 スクリーニング結果 (JICA ガイドライン)

参考資料-5 キリバス開発申請書様式 (EIA スクリーニング依頼書)

参考資料-6 キリバス国「ベシオ港拡張計画」にかかる IEE について-IEE 決定通知

添付資料 4. 収集資料リスト

添付資料 1. 署名ミニッツ

**Minutes of Discussions
on the Preliminary Study
on the Project for Expansion of Betio Port
in the Republic of Kiribati**

In response to the request from the Government of the Republic of Kiribati (hereinafter referred to as "Kiribati"), the Government of Japan decided to conduct a Preliminary Study on the Project for Expansion of Betio Port (hereinafter referred to as "the Project") and entrusted the study to the Japan International Cooperation Agency (hereinafter referred to as "JICA").

JICA sent to Kiribati the Preliminary Study Team (hereinafter referred to as "the Team"), which is managed by Mr. Kunihiro Yamauchi, Group Director, Project Management Group I, Grant Aid Management Department, JICA, and headed by Mr. Yoshimoto Koyanagi, and is scheduled to stay in the country from August 7 to 30, 2007.

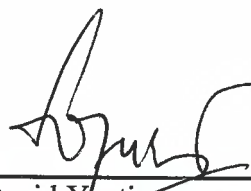
The Team held discussions with the officials concerned of Kiribati and conducted a field survey in the study area.

In the course of the discussions and the field survey, both sides confirmed the main items described in the attached sheets.

Tarawa, August 16, 2007

小柳 桂 泉

Yoshimoto Koyanagi
Preliminary Study Team
Japan International Cooperation Agency



David Yeeting
Permanent Secretary
Ministry of Communications, Transport and
Tourism Development
Republic of Kiribati



Anterea Tawaia
Finance Manager (Officer In Charge)
Kiribati Ports Authority
Republic of Kiribati

ATTACHMENT

1. Objective of the Project

The objective of the Project is to improve the Betio Port facilities and capacity to secure safety and efficient cost effective cargo handling.

2. Project Sites

The Project site is the Betio Port in Tarawa, as shown in Annex-1-1 and 1-2.

3. Responsible and Implementing Organizations

(1) The responsible ministry is the Ministry of Communications, Transport and Tourism Development (MCTTD).

(2) The implementing agency is the Kiribati Ports Authority (KPA).

The MCTTD is in charge of the planning, designing and construction work of the Project in collaboration with KPA. After completion of the construction work, responsibility for operation and maintenance shall be handed over to KPA with the exception of the navigation aid which shall be maintained by the Marine Division of MCTTD.

The organization charts are shown in Annex-2-1 and 2-2 respectively.

4. Items Requested by the Government of Kiribati

After discussions with the Team, the items below were finally requested by the Kiribati side.

- 1) Construction of Pier 200m long*¹
- 2) Construction of Access Trestle 250m long*¹
- 3) Navigation Aid*²
- 4) Cargo Handling Equipment*³

*¹/ Appropriate location and scale shall be examined by the Team after confirmation of the location of the wreck, water depth and shallow spots.

*²/ Current situation of the existing navigation aid shall be checked by the joint survey by the Team, KPA and Marine Division of MCTTD.

*³/ The Team explained to the Kiribati side that the equipment (e.g. top lifter, traylor) in line with the present cargo handling method by the Kiribati side is deemed suitable.

The both sides agreed that the alternative-2 of Annex-1-2, which requires dredging work, is not preferable in consideration of the sedimentation, unavailability of the dredging equipment, and adverse environmental impacts.

5. Japan's Grant Aid Scheme

(1) The Kiribati side understood the Japan's Grant Aid scheme explained by the Team, as described in Annex-3.

(2) The Kiribati side will take the necessary measures, as described in Annex-4, for smooth implementation of the Project as a condition for the Japan's Grant Aid to be implemented.

6. Further Schedule of the Study

- (1) The consultant members of the Team will continue further studies in Kiribati until August 30, 2007.
- (2) When the Project is deemed feasible as the result of the Preliminary Study, JICA will send the Basic Design Study Team subject to the instruction by the Ministry of Foreign Affairs of Japan.

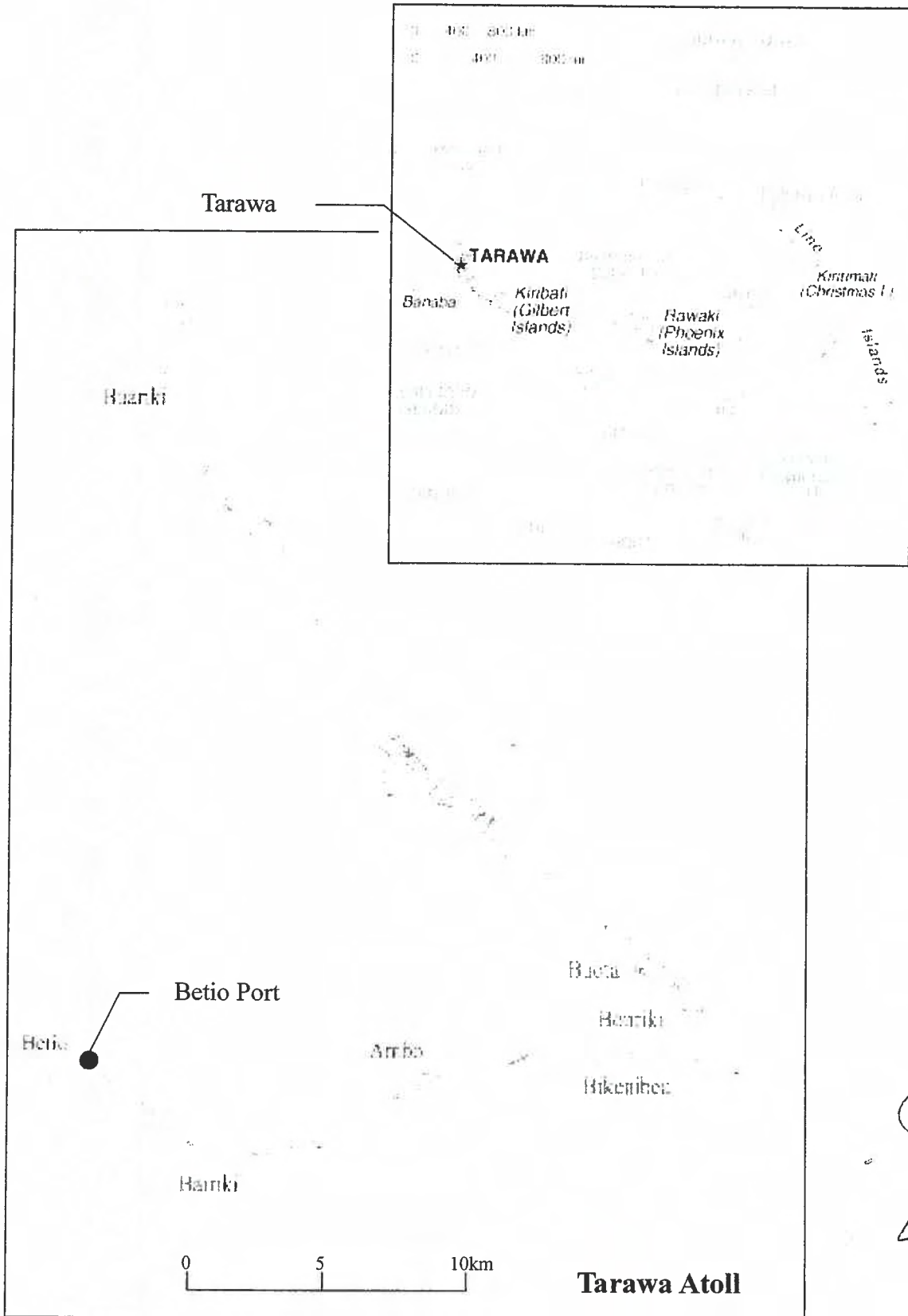
7. Environmental and Social Considerations

- (1) The both sides agreed that development consent is required from the Ministry of Environment, Lands and Agricultural Development (MELAD) for the Project according to the Environment Act 2000 of Kiribati.
- (2) The Kiribati side shall prepare the necessary document for development application (EIA screening request form) and submit it to the MELAD by the end of September, 2007.
- (3) Based on the reply from the MELAD, the Kiribati side shall notify the result, which will be either 1) further environmental study is not required and development consent is issued, 2) IEE (Initial Environmental Evaluation) is required, or 3) EIA (Environmental Impact Assessment) is required, to the Team through the JICA Fiji Office.
- (4) The both sides confirmed that in case IEE or EIA is required, completion of IEE/EIA and development consent issue will be the condition for dispatching the Basic Design Study Team.

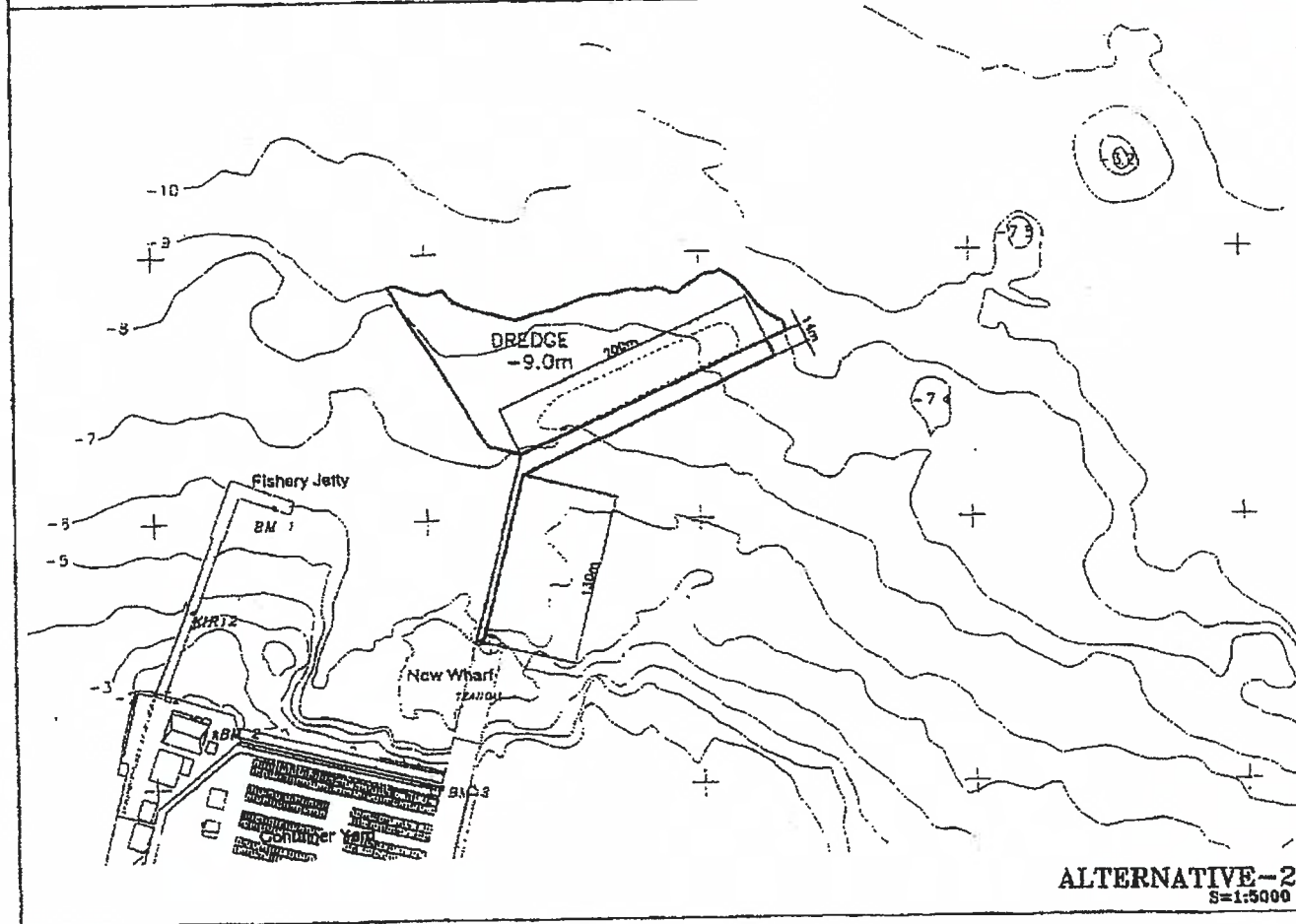
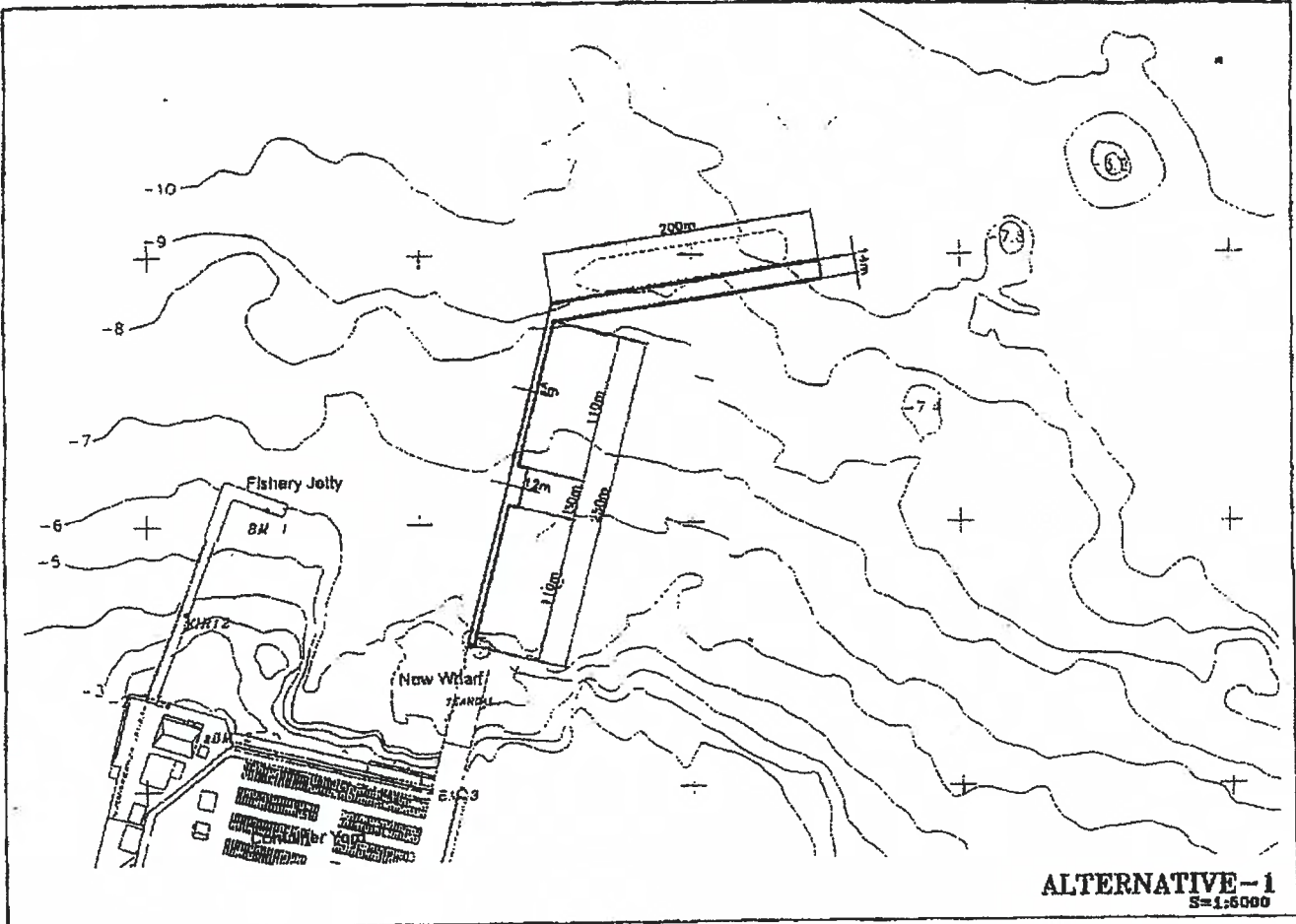
8. Other Relevant Issues

- (1) The Kiribati side shall conduct the necessary coordination with the Ministry of Commerce and Industry to secure the land, which is adjacent to the access road of Betio Port, for a temporary construction work, if required.
- (2) The both sides agreed that the magnetic exploration for the unexploded objects around the Project area shall be conducted by the Japanese side during the Basic Design Study, and that in case such objects are found, the Kiribati side shall dispose/remove those objects before the commencement of construction work.
- (3) The Kiribati side shall submit answers to the Questionnaire to the Team, which the Team handed to the Kiribati side, by August 23, 2007.
- (4) The Kiribati side shall provide necessary number(s) of counterpart personnel to the Team during the field survey in Kiribati.

f



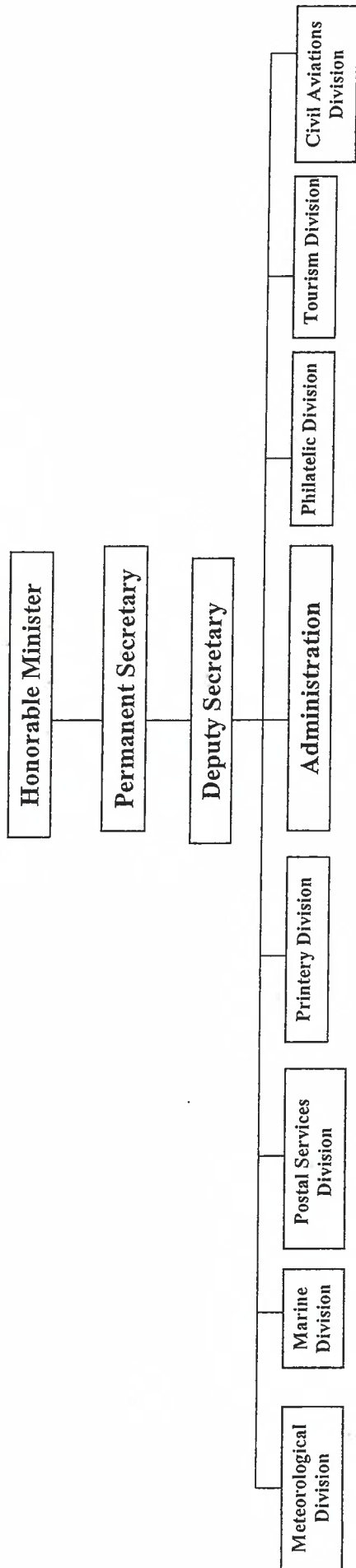
sh



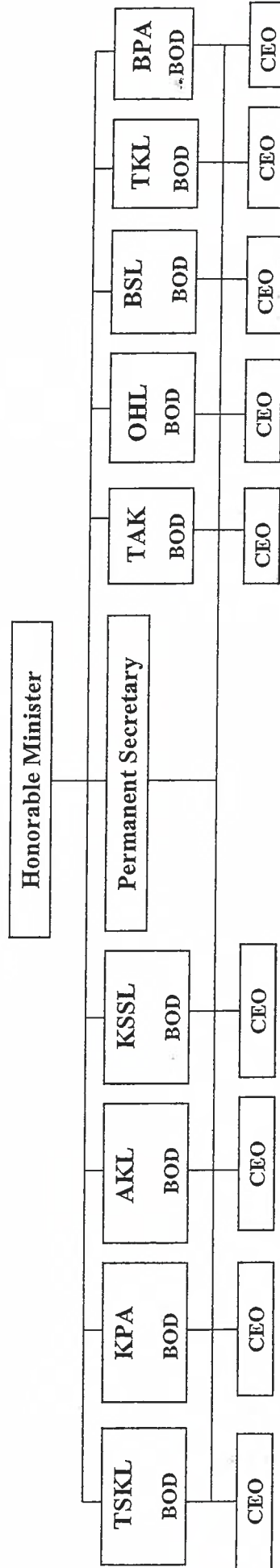
4

Handwritten signature or initials.

Ministry of Communications, Transport & Tourism Development
(MCTTD) Organizational Chart



Organizational Chart of Ministry of Communications, Transport & Tourism
Development with its Public Enterprises



Key:
 TSKL— Telecom Services Kiribati Limited
 KPA— Kiribati Ports Authority
 AKL— Air Kiribati Limited
 KSSL— Kiribati Shipping Services Limited
 TAK— Telecommunications Authority of Kiribati
 OHL— Otintai Hotel Limited
 TKL— Television Kiribati Limited
 BSL— Betio Shipyard Limited
 BPA— Broadcasting Publications Authority
 BOD— Board of Directors
 CEO— Chief Executive Officer

Annex 2-1

JAPAN'S GRANT AID

The Grant Aid Scheme provides a recipient country with non-reimbursable funds to procure the facilities, equipment and services (engineering services and transportation of the products, etc.) for economic and social development of the country under principles in accordance with the relevant laws and regulations of Japan. The Grant Aid is not supplied through the donation of materials as such.

1. Grant Aid Procedures

Japan's Grant Aid Scheme is executed through the following procedures.

Application	(Request made by the recipient country)
Study	(Basic Design Study conducted by JICA)
Appraisal & Approval	(Appraisal by the Government of Japan and Approval by the Cabinet)
Determination of recipient	(The Note exchanged between the Governments of Japan and Implementation country)

Firstly, the application or request for a Grant Aid project submitted by a recipient country is examined by the Government of Japan (the Ministry of Foreign Affairs) to determine whether or not it is eligible for Grant Aid. If the request is deemed appropriate, the Government of Japan assigns JICA (Japan International Cooperation Agency) to conduct a study on the request.

Secondly, JICA conducts the study (Basic Design Study) using (a) Japanese consulting firm(s).

Thirdly, the Government of Japan appraises the project to see whether or not it is suitable for Japan's Grant Aid Scheme, based on the Basic Design Study report prepared by JICA, and the results are then submitted to the Cabinet for approval.

Fourthly, the project, once approved by the Cabinet, becomes official with the Exchange of Notes (E/N) signed by the Governments of Japan and the recipient country.

Finally, for the implementation of the project, JICA assists the recipient country in such matters as preparing tenders, contracts and so on.

2. Basic Design Study

(1) Contents of the study

The aim of the Basic Design Study (hereafter referred to as "the Study") conducted by JICA on a requested project (hereafter referred to as "the Project") is to provide a basic document necessary for the appraisal of the Project by the Government of Japan. The contents of the Study are as follows:

sh

- Confirmation of the background, objectives, and benefits of the Project and also institutional capacity of agencies concerned of the recipient country necessary for the Project's implementation.
- Evaluation of the appropriateness of the Project to be implemented under the Grant Aid Scheme from a technical, social and economic point of view.
- Confirmation of items agreed on by both parties concerning the basic concept of the Project.
- Preparation of a basic design of the Project.
- Estimation of costs of the Project.

The contents of the original request are not necessarily approved in their initial form as the contents of the Grant Aid project. The Basic Design of the Project is confirmed considering the guidelines of the Japan's Grant Aid Scheme.

The Government of Japan requests the Government of the recipient country to take whatever measures are necessary to ensure its self-reliance in the implementation of the Project. Such measures must be guaranteed even though they may fall outside of the jurisdiction of the organization in the recipient country actually implementing the Project. Therefore, the implementation of the Project is confirmed by all relevant organizations of the recipient country through the Minutes of Discussions.

(2) Selection of Consultants

For smooth implementation of the Study, JICA uses (a) registered consulting firm(s). JICA selects (a) firm(s) based on proposals submitted by interested firms. The firm(s) selected carry(ies) out a Basic Design Study and write(s) a report, based upon terms of reference set by JICA. The consultant firm(s) used for the Study is (are) recommended by JICA to the recipient country to also work on the Project's implementation after the Exchange of Notes, in order to maintain technical consistency.

3. Japan's Grant Aid Scheme

(1) Exchange of Notes (E/N)

Japan's Grant Aid is extended in accordance with the Notes exchanged by the two Governments concerned, in which the objectives of the Project, period of execution, conditions and amount of the Grant Aid, etc., are confirmed.

(2) "The period of the Grant Aid" means the one fiscal year, which the Cabinet approves, the Project for. Within the fiscal year, all procedures such as exchanging of the Notes, concluding contracts with (a) consultant firm(s) and (a) contractor(s) and final payment to them must be completed. However, in case of delays in delivery, installation or construction due to unforeseen factors such as national disaster, the period of the Grant Aid can be further extended for a maximum of one fiscal year at most by mutual agreement between the two Governments.

(3) Under the Grant Aid, in principle, Japanese products and services including transport or those of the recipient country are to be purchased. When the two Governments deem it necessary, the Grant Aid may be used for the purchase of the products or services of a third country. However, the prime contractors, namely, consulting, constructing and procurement firms, are limited to "Japanese nationals". (The term "Japanese nationals" means persons of Japanese nationality or Japanese corporations controlled by persons of Japanese nationality.)

(4) Necessity of "Verification"

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

(5) Undertakings required of the Government of the Recipient Country

In the implementation of the Grant Aid Project, the recipient country is required to undertake such necessary measures as the following:

a) To secure land necessary for the sites of the Project and to clear, level and reclaim the land prior to commencement of the Project,

b) To provide facilities for the distribution of electricity, water supply and drainage and other incidental facilities in and around the sites,

c) To secure buildings prior to the procurement in case the installation of the equipment,

d) To ensure all the expenses and prompt excursion for unloading, customs clearance at the port of disembarkation and internal transportation of the products purchased under the Grant Aid,

e) To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which will be imposed in the recipient country with respect to the supply of the products and services under the Verified Contracts,

f) To accord Japanese nationals, whose services may be required in connection with the supply of the products and services under the Verified contracts, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.

(6) "Proper Use"

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

(7) "Re-export"

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

(8) Banking Arrangements (B/A)

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

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

(9) Authorization to Pay (A/P)

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

(End)

Major Undertakings to be taken by Each Government

No.	Items	To be covered by Grant Aid	To be covered by Recipient Side
1	To secure land		●
2	To clear, level and reclaim the site when needed		●
3	To construct gates and fences in and around the site		●
4	To bear the following commissions to a bank of Japan for the banking services based upon the B/A		
	1) Advising commission of A/P		●
	2) Payment commission		●
5	To ensure unloading and customs clearance at the port of disembarkation in recipient country		
	1) Marine (Air) transportation of the products from Japan to the recipient country	●	
	2) Tax exemption and customs clearance of the products at the port of disembarkation		●
	3) Internal transportation from the port of disembarkation to the project site	●	
6	To accord Japanese nationals whose service may be required in connection with the supply of the products and the services under the verified contract, such facilities as may be necessary for their entry into the recipient country and stay therein for the performance of their work.		●
7	To exempt Japanese nationals from customs duties, internal taxes and other fiscal levies which may be imposed in the recipient country with respect to the supply of the products and services under the verified contracts		●
8	To maintain and use properly and effectively the facilities constructed and equipment provided under the Grant Aid		●
9	To bear all the expenses, other than those to be borne by the Grant Aid, necessary for construction of the facilities as well as for the transportation and installation of the equipment		●

(B/A: Banking Arrangement, A/P: Authorization to pay, N/A: Not Applicable)

添付資料 2. 質問票

Questionnaire

In order to clarify the necessity, appropriateness and urgency of the Project, please provide the information and data described in the following questionnaire for JICA Study Team.

Thank you for your commitment and cooperation.

1. General

- (1) Socio-economic condition and statistic data of the state, including
 - Industrial output and rate of economic growth
 - Major products, export products, and import products
 - Latest census
- (2) National development plan and policy for the next 5 or 10 years
- (3) Fiscal year and budgeting procedure
- (4) Position of the port in the national development strategy
- (6) Detailed site map and/or drawing with the precise port boundary
- (7) Ownership of land of the project site and property right registration documents

2. Port Activities

- (1) Master plan, including private port (if any) and fishery port
 - (2) Organization and budget of the counterpart (C/P), including
 - Name of counterpart (C/P) of this project
 - Number of the staff
 - Organization chart including branch offices
 - Major works
 - Responsibilities and authorities of C/P for harbor construction and operation
 - (3) Nos. of ship call and type/size of ships for the last 10 years
 - (4) Cargo handling volume by each type of ships for the last 10 years (for both domestic and international cargoes)
 - (5) Operation and cargo handling method
 - (6) Balance sheet of operation and management agency
 - (7) Movement of passenger (if any)
 - (8) Berthing priority among vessels and queuing system (if any)
 - (9) Any difficulties in port operation
 - (10) Information on the private port (if any)
 - (11) Maintenance organization and budget
 - (12) Navigational responsibility of harbor master (if any)
 - (13) Profile of any on-going or envisaged project by other donors (e.g. ADB, Australia Government)
- ### 3. Natural Conditions in the project site area (facilities)
- (1) Meteorological data during the past 10 years.

- ❑ Rainfall (precipitation): monthly, and yearly period
 - ❑ Temperature: mean, high, and low temp, monthly period
 - ❑ Wind: wind velocity (m/s), wind direction diagram
 - ❑ Cyclone: route, scale.
- (2) Oceanographic data
(Tidal observation data)
- ❑ Tide table at Betio ports.
 - ❑ Tidal current velocity, tidal range and direction diagram during the past 10 years.
(Wave or swell observation data)
 - ❑ Wave height, period, and direction diagram during the past 10 years.
- (3) Topographical data
- ❑ bottom sounding data map
 - ❑ Topographical map, scale 1/50,000, 1/25,000, 1/500
 - ❑ Marine chart, Bathymetrical maps
 - ❑ Bench marks, survey base points (coordinates and elevation)
- (4) Geotechnical data
- ❑ Geological maps and profile, sea and land area of ports
 - ❑ Soil investigation records
 - ❑ Boring data, position, geological analysis, N value
- (5) Coastal area
- ❑ Littoral drift, siltation, Erosion
 - ❑ Maintenance dredging of navigation area and wharf
 - ❑ Storm surge and sedimentation record of the port.
- (6) Seismic data
- ❑ seismic center, seismic intensity
 - ❑ scale of earthquake disaster

4. Existence of a criteria and standard

Regulated by GOK on port sector (the construction of port facilities, environment) and its content.

5. Existing Facilities (facilities)

- (1) List of the existing port facilities in this port.
 - ❑ location and present condition
- (2) As-built Drawing and / or Shop Drawing of existing facilities;
 - ❑ Wharf, jetty / pier, slipway, seawall, breakwater.
 - ❑ Container terminal, crane.
 - ❑ Cargo handling equipment.
 - ❑ Fuel and water distribution facilities, seepage and septic tank, drainage.
 - ❑ Building, the ports & harbor office, customs, toilet, and security fencing facilities, fire protection at the Project site.
- (3) As-built Drawing and / or wiring diagram

- ▣ Piping diagram of existing Utilities, such as electricity, water, sewage and supply.
- (4) The past Borehole Reports in the project site (if you have)
- (5) The tug boat and pilot boats and lighterage.

6. Existing Condition of ports (facilities)

Please describe concretely about the existing conditions and problem of ports

- (1) Condition of ports
 - ▣ Concrete structure such as wharf, jetty / pier, slipway, seawall, breakwater.
 - ▣ Navigation pass.
 - ▣ Cargo handling equipment.
 - ▣ Accidents during operation.
 - ▣ Problem of lighterage operation.
- (2) Rehabilitation of the port
 - ▣ Repair works at facilities of the port.
 - ▣ Condition of land subsidence at back area of the port.

7. Construction companies, machines and materials (facilities)

- (1) Registered Local Construction Companies and Consulting Firms
 - ▣ List of major construction companies (Registered and/or Authorized by the Government).
 - ▣ List of the researching companies (consultant).
 - ▣ Company name, Address, Capital, experiences and etc.
- (2) Others
 - ▣ List of concrete manufacturing companies.
 - ▣ List of aggregate and sand manufacturing companies.
 - ▣ List of the procurement agencies for machinery, vehicle, and its spare parts.

8. Unit Prices (facilities)

- (1) Standardized unit price (if any)
 - ▣ Prevailing unit price of major construction materials such as Structural steels, Re-bars Cement, sand and stone for concrete, etc.
- (2) Equipment rental charge without fuel
 - ▣ Bulldozer, Shovel / Excavator, Loader, Truck, Dump, Crane, Concrete Equipment etc.
- (3) Labor force
 - ▣ Common Labor, Skilled Labor, Carpenter, Concrete Worker, Steel Bender, Welder, Mechanic, plumber, Painter, Heavy Equipment Operator, Driver, Foreman, Technician, Guard etc.

9. Environment

- (1) Laws, Regulations and Guidelines
 - ▣ List of Environmental Laws and Regulations
 - ▣ Environmental Impact Assessment Laws, Regulations and Guidelines

- ▣ Social consideration guidelines
- ▣ Land acquisition guidelines
- ▣ Strategic environmental assessment (SEA) Laws, Regulations and Guidelines
- ▣ Affiliation of international conventions
- (2) Policies and Plans
 - ▣ Environmental preservation policy
 - ▣ Environmental action plan
 - ▣ Chart of environmental organizations
- (3) Data and Maps
 - ▣ Environmental Maps
 - ▣ List and maps of environmental projects
 - ▣ Number of EIA reviewing for the past 5 years
 - ▣ List of environmental consultants (Address, Capital, Experiences, Personal costs, etc.)
 - ▣ List of environmental NGOs
- (4) Reports
 - ▣ List of EIA reports
 - ▣ List of the reports of public participation
 - ▣ Reports of environmental monitoring
 - ▣ Reports on environmental situation
- (5) Information on environment in and around project sites
 - ▣ Plan or experience of resettlement
 - ▣ Existence of illegal settlers
 - ▣ Main industries or source of income of residents
 - ▣ Distribution of schools, hospitals, religious facilities, etc.
 - ▣ Cultural property or archaeological sites
 - ▣ Solid waste collection/disposal system
 - ▣ Wastewater treatment system
 - ▣ Social networks, social organization and NGOs and PAPs (Project Affected Persons)
 - ▣ Land use
 - ▣ Location of particular areas officially protected such as national parks and natural parks
 - ▣ Location of environmentally vulnerable areas such as wetland
 - ▣ Distribution of important historical spots, landscape and scenery
 - ▣ Vegetation
 - ▣ Present conditions of air quality, water quality, soil contamination, noise and vibration
 - ▣ Number of pollution grievances

添付資料 3. 参考資料

参考資料-1 コンテナ再配置計画例

参考資料-1 コンテナ再配置計画例

Slot-layout study (for reference only) 26-AUG-2007

1. Required nos. of slot (1)

(1) Loaded container to be discharged from ships

Nos. of loaded container to be discharged per annum = 3,800 boxes (teus)

Duration of stay in yard = 20 days

Stacking layer = 2 layers

(2) Required nos. of slot

$$3,800 \times 20 / 365 / 2 = 104 \text{ slots}$$

2. Required nos. of slot (2)

(1) Empty container to be discharged from container yard

Nos. of empty container to be discharged per annum = 3,800 boxes (teus)

Duration of stay in yard = 30 days

Stacking layer = 3 layers

(2) Required nos. of slot

$$3,800 \times 30 / 365 / 3 = 104 \text{ slots}$$

3. Total nos. of required slot

Total nos. of required slot = 104 + 104 = 208 slots

Slot-layout is as shown on the sketch and total nos. of provided slot is as tabulated below.

Location No	Status of lot	Nos. of slot		Total nos. of boxes		Remarks
		Breakdown	Total	Layer	TEU	
1	Empty	23+24+24	71	3	213	
2	Loaded	22	22	2	44	
3	Loaded	22	22	2	44	
4	Loaded	22	22	2	44	
5	Loaded	22	22	2	44	
6	Loaded	22	22	2	44	
7	Loaded	22	22	2	44	
8	Empty	10+10+10	30	3	90	Equip. park'g
Total			233		567	

4. Concepts of layout plan

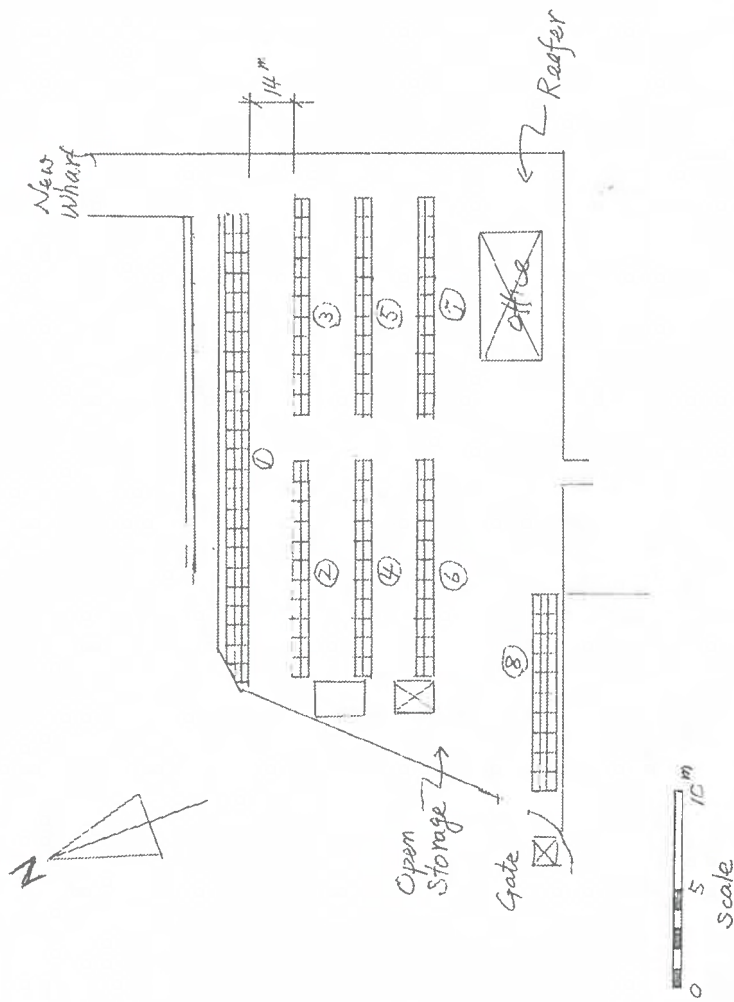
(1) Pavement of whole area is assumed completed.

(2) In order to minimize double-handling when de-vanning, loaded containers are laid in 2 rows. Whereas, empty containers will be stocked in lots according to shipping

company and therefore can be laid in 3 rows.

(3) When being de-vanned, loaded container must be put down next to slot and transported to empty container stocking lot after being evacuated.

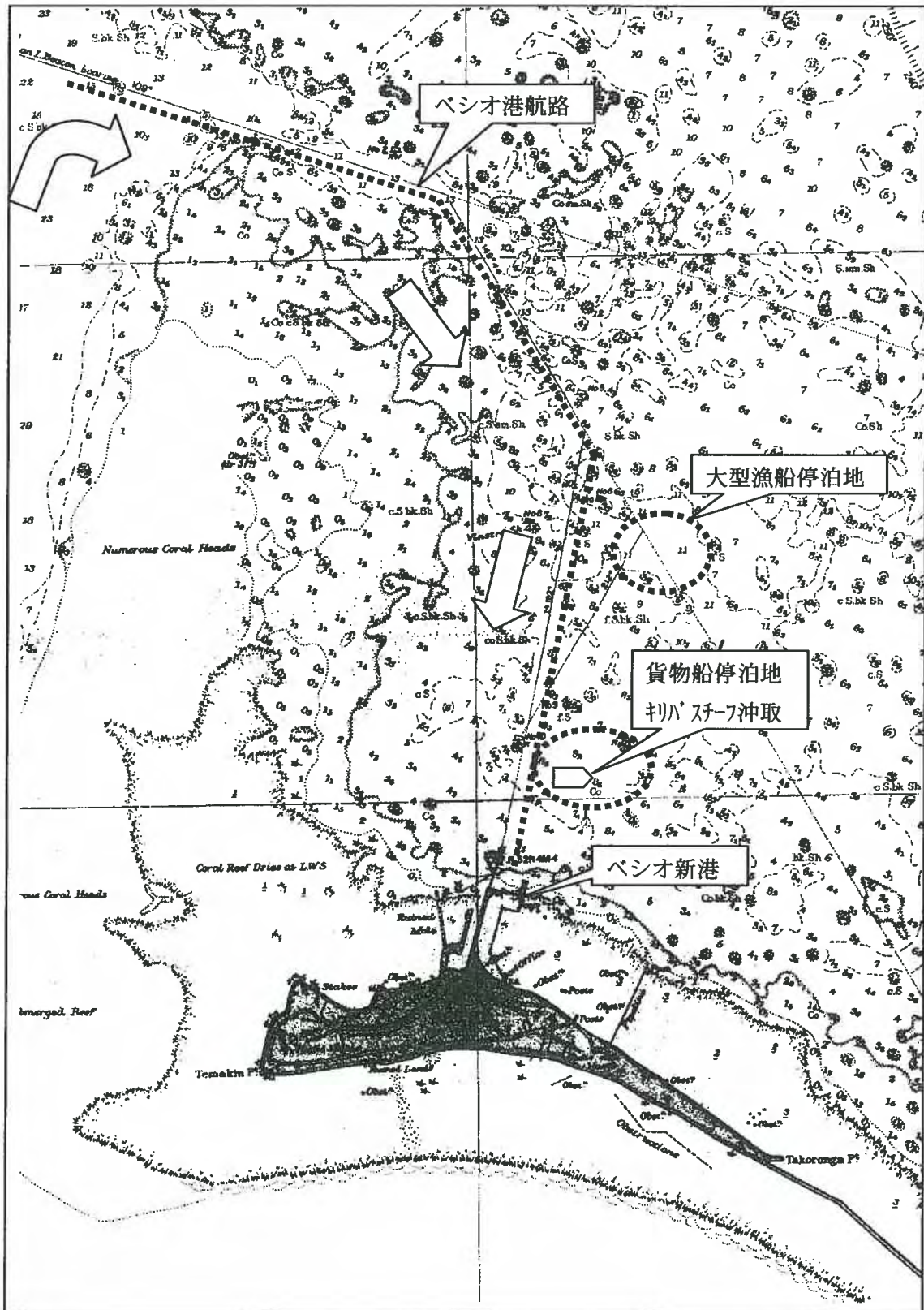
(4) Path width is 14m, based on the radius of forklift.



SLOT-LAYOUT (For Ref. Only)

参考資料-2 港湾施設、沖取り荷役作業の現状調査

参考資料-2 港湾施設、沖取り荷役作業の現状調査



ベシオ港海図

キリバスチーフ入港時（2007/8/22～8/25）コンテナ沖取り作業の現状を海上及び陸上から観測し作業効率を主にまとめた。

①作業経過、

- ・ 8/22（水） 9:30 アンカレジに移動停泊、
東～東北東の風、2.0～5.0m/s、波向東北東、波高風浪 0.3～0.7m
- ・ 曳船テラオイ、エンジントラブル使用不可。曳船リキ、操舵装置トラブル。
12時から作業開始。
- ・ 8/23（木） 24時間体制作業
- ・ 8/24（金） 14:00 陸揚げコンテナ約90%完了、曳船リキトラブル。
- ・ 8/25（土） クリスマスにより空コンテナ積込。
- ・ 陸揚げコンテナ 310TEU（予定 310TEU）
- ・ 空コンテナ積込 360TEU（予定 300TEU）
- ・ 8/26（日） 8:30 キリバスチーフ出航。

②使用船舶機械

（海上作業）

- ・ キリバスチーフ、シップギア 3基
- ・ 曳船リキ、自航台船クリスマス。
- ・ 台船、KPA-No. 1、 KPA-No. 2

（埠頭作業）

- ・ トラッククレーン 80t 吊
- ・ トレーラー+シャーシ 2台
- ・ フォークリフト 25t, 6t

③作業体制

- ・ 2交代（7時～19時）24時間体制（陸上、海上作業とも）。
- ・ 曳船 3名、台船各 3名作業員乗込み。

④取扱い貨物量予定

- ・ 荷降しコンテナ 310TEU、空コンテナ積込 300TEU

⑤使用船舶詳細（キリバス港湾公社所有曳船）

名称	①リキ	②クリスマス
長さ (m)	12.2	15.0
幅 (m)	3.7	8.0
喫水 (m)	1.0	(高さ) 2.0
馬力 (HP)	210	推定 200
製造年	1976	2007
備考	曳船	自航式台船、積載 3TEU



⑥使用船舶詳細（キリバス港湾公社所有台船）

名称	①KPA No. 1	②KPA No. 2
長さ (m)	28.0	28.0
幅 (m)	7.0	7.0
高さ (m)	3.0	2.0
製造年	2004	2007
最大積載	10TEU	10TEU
備考	A\$300,000	8/20 進水、新造台船



1) コンテナ船アンカレジに停泊（新港沖、北 1.5km の指定地）

作業中に通過する旅客船



2) 台船をコンテナ船に横付け（舳いロープ船上係船柱に取付）



3) コンテナ船シッブギアにて、コンテナを台船に荷降し



4) コンテナ満載した台船を曳船にて新港まで曳航



5) 台船を新港に接岸



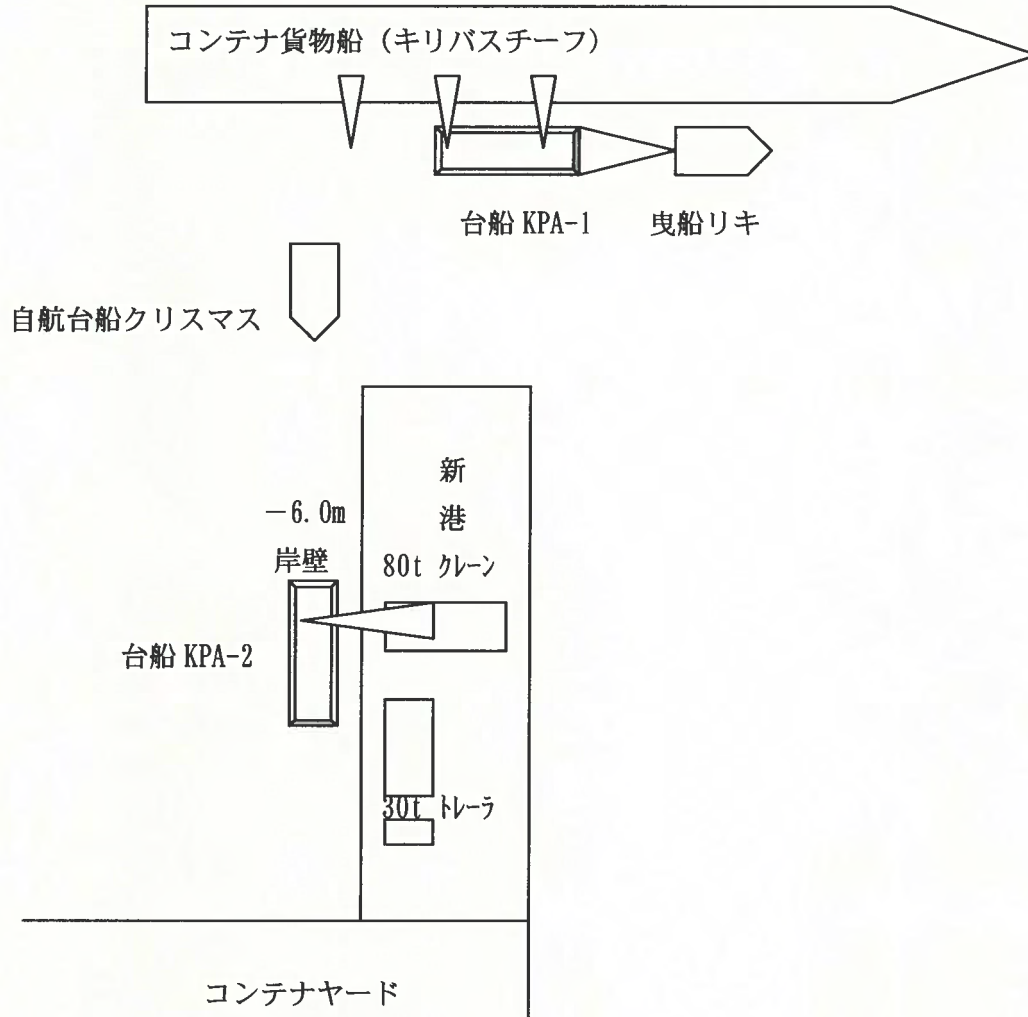
6) トラッククレーン(最大吊上げ荷重 80t)によりコンテナを陸揚げ
コンテナを直接トレーラに積込、コンテナヤードにコンテナを運搬



7) フォークリフトによりコンテナ所定位置に小運搬



(沖取り作業船団構成)



コンテナ貨物沖取り作業、標準サイクル調査

作業内容	標準サイクルタイム	備考
空台船曳航	10分	曳船リキ使用
台船固定	5分	キリバステーフ固定
台船への実コンテナ積込	50分	10TEU 当り
コンテナ積込台船曳航	20分	10TEU 当り
台船岸壁固定	5分	新港-6m 岸壁
実コンテナ陸揚げ	40分	トレーラ直積、10TEU 当り
		コンテナヤード配送含む。
計	130分	10TEU

作業内容	サイクルタイム	備考
1 曳船 + 1 台船	4.6TEU	時間当り
2 曳船 + 2 台船	9.2TEU	時間当り

参考資料-3 キリバスの建設事情

参考資料-3 キリバスの建設事情

(1) 建設資材

キリバス国内には建設産業はなく、あらゆる建設関連資材は輸入に頼っているのが現状である。過去の無償協力援助事業における建設資材の調達先を以下に示す。かつては路盤材、粗骨材、捨石等を現地調達したが、現在は強度、空隙の問題から使用していない。

建設資材	規格	調達先
砂	コンクリート細骨材	フィジー、オーストラリア
骨材	コンクリート粗骨材	フィジー
セメント		フィジー
木材	型枠用	フィジー
石材	捨石、被覆石	フィジー
鉄筋・鋼材	異型棒鋼、仮設H鋼	日本
鋼管杭	栈橋杭径 700 以上	日本
防舷材・係船柱	栈橋	日本

(2) 建設機械

キリバス公共事業局は道路維持管理するための、モーターグレーダ、振動ローラー、タイヤローラーなどを所有する。しかし他の民間企業で建設機械を所有する企業はない。

建設機械	規格・目的	調達先	備考
杭打船	フライングリーダー	日本	スパッド台船
クレーン台船	80t クローラー	日本	スパッド台船
揚錨船	1000HP	日本	スパッド装備ない台船
潜水土船	磁気探査	日本	
警戒船		日本	
バイブロハンマー	45KW	日本	
ディーゼルハンマー	6.0t	日本	
バッチャープラント	コンクリート製造	日本	
骨材プラント	骨材製造	日本	
コンクリートポンプ	コンクリート圧送	日本	
アジテータ車	コンクリート運搬	日本	
移動式発電機		日本	

(3) 建設関連産業

キリバス国内の建設産業は一般住宅建築の企業は数社あるが、一般土木、港湾土木会社はもちろん存在しない。そのため調査会社もなく、現地再委託は第三国に頼るしかない。

参考資料-4 スクリーニング結果 (JICA ガイドライン)

Screening Format

Name of a Proposed Project: Expansion of Betio Port

Project Executing Organization: Kiribati Ports Authority (KPA)

Name, Post, Organization and Contact Point of a Responsible Officer

Name: Mr. Bonteman Tabera

Post: Operations Manager

Organization: Division of Operations Management, KPA

Tel: 26972

Fax: 26164

E-Mail: om@kpa.com.ki

Date: 17th August, 2007

Signature: 

Check Items

Question 1 Address of a project site: Betio Town, Tarawa (About 15 minutes car ride from capital of Bairiki Town)

Question 2 Outline of the project

2-1 Does the project come under following sectors?

Yes No

If yes, please mark the corresponding items.

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <input type="checkbox"/> Mining development <input type="checkbox"/> Industrial development <input type="checkbox"/> Thermal power (including geothermal power) <input type="checkbox"/> Hydropower, dams and reservoirs <input type="checkbox"/> River/erosion control <input type="checkbox"/> Power transmission and distribution lines <input type="checkbox"/> Roads, railways and bridges <input type="checkbox"/> Airports | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Ports and harbors <input type="checkbox"/> Water supply, sewage and waste treatment <input type="checkbox"/> Waste management and disposal <input type="checkbox"/> Agriculture involving large-scale land-clearing or irrigation <input type="checkbox"/> Forestry <input type="checkbox"/> Fishery <input type="checkbox"/> Tourism |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

2-2 Does the project include any of the following items?

Yes No

If yes, please mark following items that the project includes.

- Involuntary resettlement (scale: households persons)
- Groundwater pumping (scale: m³/year)
- Land reclamation, land development and land-clearing (scale: hectares)
- Logging (scale: hectares)

2-3 Description of the Project:

(Scale and/or Basic Information)

Contents of the requested components are enumerated as follows:

	Item	Description
1	Construction of Pier	Depth -9m, L200m, B14m Piled Pier
2	Construction of Access Trestle	L250m, B5m Piled Pier
3	Navigation Aid	Buoy and Navigation Light
4	Cargo Handling Equipment	Crawler Crane, Top Lifter etc

The construction of access trestle and pier are planned to extend from existing new wharf toward the offshore to obtain a natural water depth of -9.0m.

2-4 Is the project consistent with the higher program/policy?

Yes: Please describe the higher program/policy.

Upgrade air and sea port facilities and associated utilities at locations where natural and human resources can combine in viable economic activity. (National Development Strategies 2004-2007)

No

2-5 Did the proponent consider alternatives before this request?

Yes: Please describe outline of the alternatives

Construction of access trestle with length of 130m and pier including dredging work

No

2-6 Did the proponent have meetings with related stakeholders before this request?

Yes No

If yes, please mark the corresponding stakeholders.

Administrative body NGO
 Local residents Others

Question 3

Is the project a new one or an on-going one? In case of an on-going one, have you received strong complaints, etc., from local residents?

New On-going (there are complaints) On-going (there are no complaints)
 Others

Question 4 Name(s) of laws or guidelines:

Is Environmental Impact Assessment (EIA) including Initial Environmental Examination (IEE) required for the project according to the laws or guidelines in the host country?

Yes No

If yes, please mark corresponding items.

Required only IEE (Implemented, on going, planning)
 Required both IEE and EIA (Implemented, on going, planning)
 Required only EIA (Implemented, on going, planning)
 Others:

Question 5

In the case when EIA steps were taken, was the EIA approved by the relevant laws in the host country? If yes, please mark date of approval and the competent authority.

<input type="checkbox"/> Approved: without a	<input type="checkbox"/> Approved: with a	<input type="checkbox"/> Under appraisal
----------------------------------------------	-------------------------------------------	------------------------------------------

supplementary condition	supplementary condition	
-------------------------	-------------------------	--

(Date of approval: Competent authority:)

Not yet started an appraisal process

Others:()

Question 6

If the project requires a certificate pertaining to the environment and society other than the EIA, please indicate the title of that certificate.

Already certified Required a certificate but not yet done

Title of the certificate :()

Not required

Others

Question 7

Are any of the following areas located inside or around the project site?

Yes No Not identified

If yes, please mark corresponding items.

National park, protected area designated by the government (coast line, wetlands, reserved area for ethnic or indigenous people, cultural heritage), and areas being considered for national parks or protected areas

Virgin forests, tropical forests

Ecological important habitat areas (coral reef, mangrove wetland, tidal flats)

Habitat of valuable species protected by domestic laws or international treaties

Likely salts cumulus or soil erosion areas on a massive scale

Remarkable desertification trend areas

Archaeological, historical or cultural valuable areas

Living areas of ethnic, indigenous people or nomads who have a traditional lifestyle or special socially valuable areas

Question 8

Does the project have adverse impacts on the environment and local communities?

Yes No Not identified

Reason: Serious impacts are not expected.

Question 9

Please mark related environmental and social impacts, and describe their outlines.

Air pollution Local economy such as employment and

- Water pollution
- Soil pollution
- Waste
- Noise and vibration
 - Ground subsidence
 - Offensive odors
 - Geographical features
- Bottom sediment
- Biota and ecosystem
 - Water usage
- Accidents
 - Global warming
 - Involuntary resettlement

livelihood etc.

- Land use and utilization of local resources
- Social institutions such as social infrastructure and local decision-making institutions
- Existing social infrastructures and services
- The poor, indigenous or ethnic people
- Misdistribution of benefit and damage
- Local conflict of interests
- Gender
- Children's rights
- Cultural heritage
- Infectious diseases such as HIV/AIDS etc.
 - Others (■ Sanitation, ■ Soil Erosion ■ Hydrological Situation, ■ Coastal Zone (Coral reefs), ■ Landscape)

Outline of related impacts: See attached "Checklist for Scoping".

Question 10

Information disclosure and meetings with stakeholders

10-1 If environmental and social considerations are required, does the proponent agree on information disclosure and meetings with stakeholders in accordance with JICA Guidelines for Environmental and Social Considerations?

■ Yes ▫ No

10-2 If no, please describe reasons below.

Checklist for Scoping

No.	Impact item	Rating	Reason
Social Environment: *Regarding the impacts on “Gender” and “Children’s Right”, might be related to all criteria of Social Environment.			
1	Involuntary Resettlement		Neither housing nor stores, and no existence of illegal settlers in the project site.
2	Local economy such as employment and livelihood, etc.		Positive impact is expected such as creation of employment.
3	Land use and utilization of local resources		The project does neither occupy the existing land nor utilize local resources such as sand, stone, woods, water, etc.
4	Social institutions such as social infrastructure and local decision-making institutions		Low accessibility to social institutions is not caused because the project is carried out inside a port area.
5	Existing social infrastructures and services		The project does not use large quantity of infrastructure services such as power and water beyond local demand.
6	The poor, indigenous and ethnic people		No squatters occupies around the port. Most people of Kiribati are Micronesians and the others are Polynesians and Europeans etc.
7	Misdistribution of benefit and damage		The project is for the profit of people nationwide, not for that of a specific group.
8	Cultural heritage		No cultural heritage exists in the site.
9	Local conflict of interests		The project is for the profit of people nationwide, not for that of a specific group.
10	Water Usage or Water Rights and Rights of Common		No fishing right is established in the port. Port facilities are constructed away from the beach.
11	Sanitation	B	Possible deterioration of public health and sanitary conditions owing to generation of garbage and increase of vermin.
12	Hazards (Risk) Infectious diseases such as HIV/AIDS	B	Infectious diseases such as HIV/AIDS may be introduced due to immigration of workers associated with the project.
Natural Environment			
13	Topography and Geographical features		No important geographical features
14	Soil Erosion	B	Beach erosion may occur due to construction of port facilities.
15	Groundwater		No possibility of lowering of groundwater table because groundwater is not overused.
16	Hydrological Situation	B	The project may cause changes in hydrological and/or seabed conditions around the area concerned due to construction of port facilities.
17	Coastal Zone (Mangroves, Coral reefs, Tidal flats, etc.)	B	The project site is located on coral reefs (Tarawa Atoll).
18	Flora, Fauna and Biodiversity	B	Some impact of offshore works on marine organisms is expected.
19	Meteorology		The project does not change meteorological conditions such as temperature, precipitation, winds, etc. as the results of construction of port facilities, etc.

No.	Impact item	Rating	Reason
20	Landscape	B	The project may deteriorate aesthetic harmony in the area concerned by installation of construction of man-made structures.
21	Global Warming		The project does not include factors that may cause the problem of global warming.
Pollution			
22	Air Pollution	B	The project may cause air pollution by exhaust gas and/or toxic gas from construction vehicles and boats employed during construction.
23	Water Pollution	B	There is a possibility of minor accidental spills of fuel and other oil products from construction equipment.
24	Soil Contamination	B	Some possibility is expected due to dust from stockpiles of construction materials.
25	Waste	B	Generation of construction waste and general waste is expected.
26	Noise and Vibration	B	Impacts of noise and vibration on residents are expected, when construction equipment and/or vehicles is operated on the land.
27	Ground Subsidence		The project does not include excessive groundwater pumping to cause ground subsidence.
28	Offensive Odor		The project does not use offensive odor materials such as dredged sludge, etc.
29	Bottom sediment	B	The project may cause the contamination of bottom sediments by discharges or dumping of materials, such as hazardous materials from workboats and the related facilities.
30	Accidents	B	There may be any risks of accidents such as handling of hazardous materials, spills fire, explosion, traffic accidents and exposure of the project to natural disasters (high waves, strong wind, etc).

Rating:

A: Serious impact is expected.

B: Some impact is expected.

C: Extent of impact is unknown (Examination is needed. Impacts may become clear as study progresses.)

No mark: No impact is expected. IEE/EIA is not necessary.

Official Use ONLY	
Received	
Reviewed	
Site Visited	
Completed	
Collected	
Expiring date	



GOVERNMENT OF KIRIBATI
 MINISTRY OF ENVIRONMENT LANDS AND AGRICULTURAL DEVELOPMENT
 P.O. Box 234, Bikenibeu, Tarawa, Republic of Kiribati
 Tel. No. (686) 28593 / Fax: (686) 28334 / e-mail: cia.ccd@melad.gov.ki or
ciaa.ccd@melad.gov.ki

DEVELOPMENT APPLICATION (EIA SCREENING REQUEST FORM)

DA /06

To: Vice President and Honourable Minister, MELAD
This Ministry/Division/Council/Business/Church Group/Organization

hereby requests, as required under Section 14 of the Environment Act 2000, Screening of the following project (name of project):

to determine whether the proposed development will be awarded an immediate Development Consent, or whether an Initial Environmental Evaluation (IEE) or Environmental Impact Statement (EIS) is required before a Development Consent is awarded. We hereby provide the following statutory information:

I. Type of Project¹

II. Location of Project²

¹ Infrastructure, Natural Resources (e.g. Fisheries or Agriculture), Industry, Power, Tourism, Transport or Other (please state)

III. Scale (size) of Project³

IV. Proposed Implementation Dates:

V. Any Other Relevant Information⁴:

This Ministry/Organisation/Enterprise will provide all necessary support to the Vice President and Honourable Minister for the determination of the level of assessment required. In return, the Vice President and Honourable Minister will give a decision on the project within the 15 days required under Section 14, sub-section (2)(a) of the Environment Act

Signed by:

Project Coordinator (please print name):

Contact Address and Telephone Number

³ Actual site and map reference for proposed development (provide maps where possible)

³ Physical size, level of finance required, area covered, number of people likely to be affected, number of employees (if relevant), etc

⁴ The more information provided to the EIA/O, the less time needed to make a decision. Supply as much information as possible to ensure a quick response to your Screening request. Attach supplementary information if available.

FJ/6A



MINISTRY OF COMMUNICATIONS, TRANSPORT & TOURISM DEVELOPMENT

*Address correspondence to Permanent Secretary
P.O. Box 487, Betio, Tarawa, Republic of KIRIBATI
Telephone: + (686) 26003; Facsimiles: + (686) 26193
Email: mict@net.ki; Cable: MINICT BETIO*

File Ref.: 3/74

Date: 11 September 2007

To Mr. Wakasugi
JICA Fiji Office

Subject: Betio Expansion Project- Decision on Development Application Form

This is to inform you that, with regards to the Betio Expansion Project, we have submitted the Development Application form to MELAD (Ministry of Environment, Lands and Agricultural Division) and have also received their response. MELAD's decision for the project was that an IEE report is necessary prior to the issuing of a Development Consent.

Attached please find all relevant documents with regards to MELAD's decision on the Development Application as well as the guidelines for the IEE report.

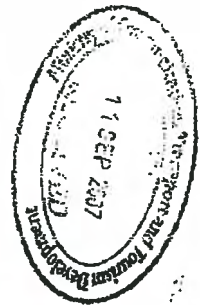
Ko rabwa,

Yours Sincerely,

Tion Uriam
For Secretary, Ministry of Communications Transport & Tourism Development.

Encl: As stated

CC: OIC, KPA



**GOVERNMENT OF KIRIBATI
MINISTRY OF ENVIRONMENT, LANDS
and AGRICULTURE DEVELOPMENT**

P.O BOX 234, BIKENIBEU TARAWA
Telephone Number: (686) 28647, 28211, 28507 Fax Number (686) 28334,
e-mail: information@meland.gov.ki

File ref: MELAD 3/103 B

Date: 3 September 2007

General Manager
Kiribati Ports Authority
BETIO

cc: Secretary for Communications, Transport and Tourism Development, BETIO

Dear Sir,

Re. Betio New Wharf Extension
Initial Environment Evaluation Report

I write with reference to the application submitted by the Kiribati Ports Authority for a Development Consent for the proposed extension of the new wharf at Betio being processed for the Japan International Cooperation Agency (JICA) funding.

I wish to advise that from our internal assessment of the application an Initial Environment Evaluation Report (IEER) is required for the proposed development. I attach a copy of the instruction for the IEER, issued by the Minister. Also attached is a copy of the format and information requirement for the IEER under the applicable regulation.

It should be noted the IEER should be done by an independent body, outside of the Kiribati Ports Authority.

We will await the production of the IEER before further consideration of the proposed development can proceed.

Yours sincerely,

ON
Ple deal

Tebwe Ietaake
Secretary for Environment, Lands and Agriculture Development

attach:





GOVERNMENT OF KIRIBATI
 MINISTRY OF ENVIRONMENT LANDS AND AGRICULTURAL DEVELOPMENT

P.O. Box 234, Bikenibeu, Tarawa, Republic of Kiribati. Phone: 686 28000. Fax: 686 28334
 Email: eia.ecd@melad.gov.ki or eiaa.ecd@melad.gov.ki

DECISION
ON
DEVELOPMENT APPLICATION
(EIA Screening Form)

Category of Development Type:	Betio Port Expansion
Proposed by (name of agency):	Kiribati Port Authority (KPA)
MELAD Proposal Number:	DA042/07

In accordance with Section 14, subsection 2 of the Environment Act 1999, I, the Vice President and Honourable Minister for Environment Lands and Agricultural Development hereby notify you, that the above proposal:

Requires an Initial Environment Evaluation (IEE) as stated within Section 14, sub-section (2)(a) of the Act

A Development Consent will be issued only upon submission and approval of the Initial Environment Evaluation Report (IER).

Signed this 31st day of August 2007.

Teima Onorio
 Hon. Teima Onorio

If you require a further information on the decision supplied above, please contact the EIA Officer, MELAD 125 000

Schedule Six

Initial Environmental Evaluation Report Form

(Section 24 and Regulation D)

Initial Environmental Evaluation Report

A proposal of an existing or proposed prescribed development may be registered if it is in accordance with the provisions of sections 14 and 15 of the Environment Act.

1. Applicant's details

Applicant's name
 Name of the project manager
 Contact address and telephone number of the Applicant and project manager
 Is the prescribed development an existing or proposed development?

2. Describe the development including:

- (a) purpose and objectives of the existing or proposed development; and
- (b) location, size and design of the development: please attach designs, maps and plans.

3. Describe the aspects of the proposal having or likely to have a substantial or important impact on the environment including:

- (a) quantities of materials needed during construction (in the case of a proposed development) and operation of the development (whether existing or proposed); and
- (b) the nature of any production processes intended to be employed during construction (in the case of a proposed development) and the operation of the development (whether existing or proposed).

4. Indicate the potential or actual impact of the development on the environment including:

- (a) identify the impact of the development on the environment including environments;
- (b) the magnitude of the impacts, that is, how much are they expected to change the environment;
- (c) the geographic area over which the impacts are expected or occurring; and
- (d) the duration in time that the impacts are expected to last.

5. Describe any reasonable alternatives to the development including any enhancement of the environment including:

- (a) any reasonable alternative proposals to the one being submitted; and
- (b) the reasons for the choice of the proposed development.

6. State any intended investigations or studies of the possible impact on the environment before the prescribed development is implemented.
7. Describe and assess the effectiveness of any safeguards of standards intended to be adopted or applied for the protection of the environment including:
 - (a) how the expected impacts will be avoided or mitigated by effective management of the prescribed development;
 - (b) assessment of the effectiveness of the safeguards or standards which will be applied for the protection of the environment; and
 - (c) any remedial plans for the decommissioning of the prescribed development.
8. State any intended monitoring and reporting of the impact of the prescribed development including:
 - (a) any monitoring program of data collection for important environmental parameters so that information on performance of the project can be collected and analysed.

9. Address any further matters that the Minister, acting in accordance with the advice of Cabinet has specified.

Signed by

Project Coordinator (please print name):

Submission of this form- Please submit five bound copies of this form to
The Environmental Impact Assessment Officer
Environmental Protection and Conservation Division
Ministry of Environment and Social Development
PO Box 214, Bikanero
Tirane

添付資料 4. 収集資料リスト

No.	資料の名称	形態	サイズ	ページ数	オリジナルまたはコピー	発行機関または入手先
1	National Development Strategies 2004-2007	パンフレット	A4	47	オリジナル	財務・経済開発省
2	KIRIBATI Visitors Guide Book	パンフレット	A4	7	オリジナル	通信・運輸・観光開発省
3	CENSUS 2005 (部分)	報告書	A4	47	コピー	財務・経済開発省
4	Budget, 2005 - 2007		A4	各 70	オリジナル /コピー	通信・運輸・観光開発省
5	KPA Balance Sheet, 2000 - 2005	報告資料	A4	各 5	コピー	港湾公社
6	GDP by Industry, 1991 - 2006 (部分)	データ	A4	3	コピー	通信・運輸・観光開発省
7	Balance of Trade, 1972 - 2005 (部分)	データ	A4	9	コピー	通信・運輸・観光開発省
8	TARAWA 1:50,000 タラワ環礁地形図	地形図	A1	1	オリジナル	環境・土地・農業開発省、土地管理部
9	BETIO ANCHORAGE 1:30,000 ベシオ港海図	海図	A3	1	コピー	英国水路部
10	TARAWA ISLAND TIDE TABLES 潮汐表	文書	A4	17	コピー	キリバス港湾公社
11	タラワ気象データ 気温・降雨・風速風向	文書	A4	50	コピー	ベシオ気象観測所
12	Environment Act (No.9 of 1999)	法令集	A4	29	コピー	環境・土地・農業開発省
13	Environment Regulations 2001	法令集	A4	22	コピー	環境・土地・農業開発省