GOVERNMENT OF SOLOMON ISLANDS

SOLOMON ISLANDS PORTS AUTHORITY

Honiara Port Scoping Study, Solomon Islands

February 2012

PRIF Pacific Region Infrastructure Facility

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TABLE OF CONTENTS

Table of Tables

Table of Figures

Appendices

ABBREVIATIONS

ADB	Asian Development Bank
CAF	Currency Adjustment Factor
CAGR	Compound Annual Growth Rate
CBSI	Central Bank of the Solomon Islands
CEMA	Commodity Export Marketing Authority
CEO	Chief Executive Officer
CIF	Cost Insurance and Freight
CPO	Crude Palm Oil
CSO	Community Service Obligation
DWT	Dead weight tonnes
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
FLT	Forklift Truck
FOB	Free On Board
GDP	Gross Domestic Product
GPPOL	Guadalcanal Plain Palm Oil Ltd
GRT	Gross Registered Tonnes
ha	Hectare
IALA	International Association of Lighthouse Authorities
IDP	Infrastructure Development Plan
IMDG	International Maritime Dangerous Goods code
IMO	International Maritime Organization
IPCC	Inter-Governmental Panel on Climate Change
ISPS Code	International Ship and Port Security Code
ISSC	International Ship Security Certificate
JICA	Japan International Cooperation Agency
LOA	Length Overall
m^2	Square Meters
M	Million
MGO	Marine gas oil (diesel)
MoFT	Ministry of Finance and Treasury
MID	Ministry of Infrastructure Development
MOU	Memorandum of Understanding
MV	Motor Vessel
PFSO	Port Facility Security Officer
PIAC	Pacific Infrastructure Advisory Centre
PIANC	International Navigation Association
PICs	Pacific Island Countries
PNA	Parties to the Nauru Agreement
PRIF	Pacific Region Infrastructure Facility
SICED	Solomon Islands Customs and Excise Division
SIG	Solomon Islands Government
SIHU	Solomon Islands Hydrographic Unit
SIMSA	Solomon Islands Maritime Safety Administration
SIPA	Solomon Islands Ports Authority
SOE	State-Owned Enterprise
TEU	Twenty foot equivalent unit (a standard 20’ container)
VDS	Vessel Day Scheme

NOTES

(i) The fiscal year (FY) of Solomon Islands ends on 30 September.

(ii) In this report, "$" refers to US dollars, unless otherwise stated.

Currency Unit – Solomon Dollars (SBD)

SBD$1.00 = US$ 0.127

Executive Summary

This Scoping Study involved a business, operational and infrastructure assessment of the Port of Honiara in the Solomon Islands and its managing authority: The Solomon Islands Ports Authority (SIPA). The Study is designed to identify the need for short-, medium- and long-term improvements to the Port to enhance its performance and allow the Port to become more efficient and serve its customers better, both now and in the future. The report also serves as a basis for future engagement of development partners in investment programs designed to build upon the opportunities identified in the report.

Background

Honiara is the main seaport gateway for the Solomon Islands, accounting for approximately 90% of all freight movements (excluding logging) and fish transshipment. Much of the international freight imports are transferred at Honiara onto coastal vessels for distribution to outlying island populations.

The maritime network in the Solomon Islands comprises two international deep-water ports at Honiara on Guadalcanal Island and Noro on New Georgia Island that are under the control of SIPA and about 86 outlying domestic wharves and jetties and numerous unimproved anchorages throughout the country.

International container shipping arrivals at Honiara are operated by six separate shipping lines that maintain scheduled services from Asia and Australia/NZ to the Solomon Islands and other Pacific Island countries. In addition, frequent arrivals of fuel tankers and bulk charter ships handle the balance of international trade with the Solomon Islands.

The Solomon Islands Government has recently indicated its intention to optimize the economic benefits of its Exclusive Economic Zone (EEZ) tuna resources through further development of onshore fish processing. The Government is currently considering several proposals from foreign investors who wish to establish onshore tuna processing operations in combination with long-term access to the country's tuna resources. It is recognized that improved infrastructure will be required to support the expanded fish processing facilities including marine services and infrastructure.

Situation Analysis

The present state of SIPA is characterised as follows:

- It provides full services for all maritime and cargo operations in-house and bears the full costs associated for such activities;
- The management of SIPA places an emphasis on port operations and infrastructure development;
- SIPA covers its operating costs but does not really act as a commercial entity, which is partly caused by the inherent conflict between its community obligation services and the commercial imperative required under the State Owned Enterprises (SOE) Act; and
- SIPA needs to improve in market and client orientation and lacks clear strategic direction.

SIPA operates as a Public Service Operator under the SOE Act and the Ports Act. A Board of nine members is maintained to oversee the Port's management and a senior management team led by the Chief Executive Officer (CEO) conducts the day-to-day activities. SIPA's management structure consists of four operating departments (or divisions)

based on operating activity, each headed by a director reporting to the CEO. The CEO reports to the SIPA Board of Directors which is designated to meet quarterly. The Board in turn reports directly to the Minister for Infrastructure Development (MID).

Throughout the period of ethnic conflict, SIPA incurred trading losses but during past years, has shown small profits. Margins in the profitable years have not been sufficient to cover the true cost of capital and accumulated losses over the preceding years amounting to SBD18.59 million ($2.4 million). In 2010, SIPA earned a net operating profit of SBD3.0 million from a turnover of SBD42.4 million. In the same period, SIPA reported total assets of SBD76 million and total liabilities of SBD25 million.

High current assets disguise a major liquidity issue resulting from the high level of accounts receivable with the current aging debtor report showing SBD16.9 million outstanding with SBD9.2 million outstanding over 90 days. SIPA has made an ongoing provision of SBD3.4 million for writing off bad debts each year for the last five years, which is an unsustainable policy. Debtor collections are in contrast to payments to creditors which on average are completed within 15 days. Improved port revenue would be gained by increasing the low base of existing port tariffs and modernization of tariff calculation methods.

SIPA has a current loan liability of SBD16.8m resulting from the Solomon Islands Government passing on ADB loans in 1983 and 1988. There is also clear evidence that not all tariffs are being collected, particularly for domestic berth occupancy.

Current Port Infrastructure and Operations

The current deep water port in Honiara is located at Point Cruz, right in the center of Honiara and consists of a single international wharf with a length of 120 meters, a smaller copra wharf, a container terminals yard areas which is limited in size, a large maintenance workshop and several warehouses inside the port area, limited industrial roadway access and it does not avail of a tug or heavy work boat. SIPA also operates multiple coastal wharves and ramps.

Operations at the port are characterized by relatively long dwelling time of ships inside the port, queuing of vessels in the port, unscheduled international vessel arrivals, late submission of clearance documents, limited operation times, congested road access, poor road maintenance and difficulties to handle growing traffic. As ships are becoming larger, berthing operations at the main wharf are becoming more difficult.

Forecast of Demand for Growth

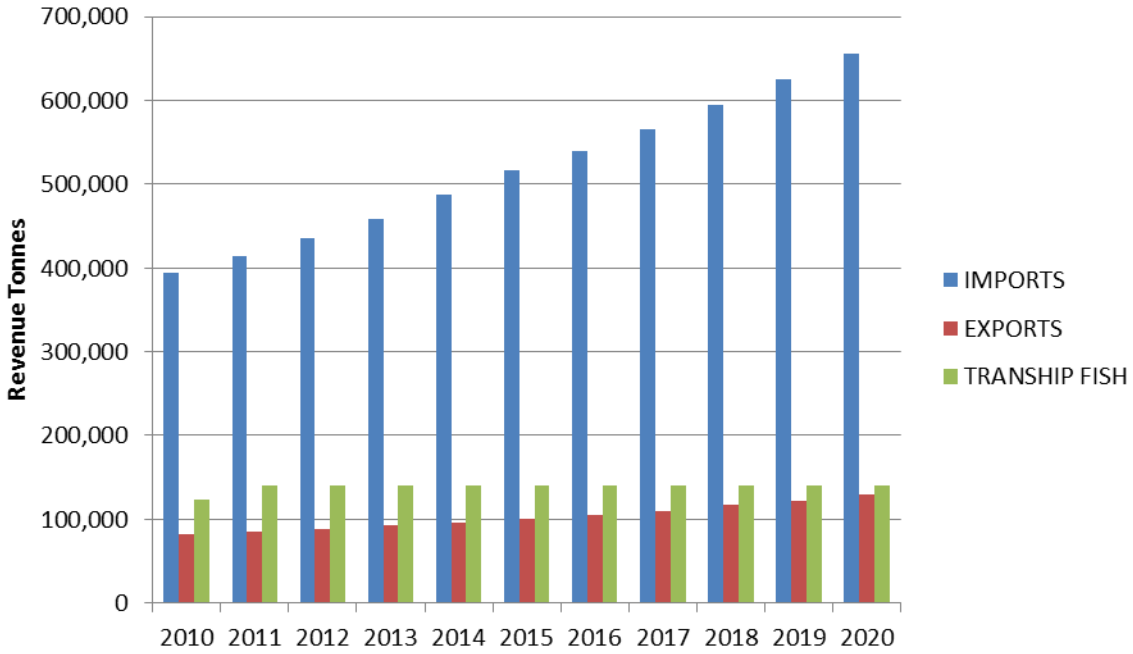
In 2010, statistics obtained from SIPA records have shown that trade volumes for a range of imported and exported commodities amount to:

- 8,600 containers (TEUs) imported;
- 78,200 revenue tonnes of fuels imported;
- 42,600 revenue tonnes of break bulk cargo imported;
- 6,300 containers (TEUs) exported;
- 17,800 revenue tonnes of copra exported;
- 25,700 revenue tonnes of crude palm oil exported;
- 122,700 revenue tonnes of transshipment fish exported.

A detailed analysis of contributing factors has shown that forecast trade growth for the Port of Honiara will be about 5% per year for at least the next 10 years. This growth will be generated by a combination of population growth, increased activity for infrastructure

development and commercial and industrial investment by private enterprise. Fish export quantities are expected to remain close to the 2010 volume.

The following aggregated revenue tonne chart for imports, exports and transshipment fish at anchorage demonstrates the growth forecast for Honiara port from 2010 to 2020.



This forecast growth in trade volumes will need to be accommodated by expansion of the port's facilities and the capacity for SIPA to handle larger volumes of cargo, both incoming and outgoing at the international berth and across the domestic wharves.

Port Improvement Strategy

Both SIPA and the facilities at the port need to be adapted and developed if they are to accommodate the growth projections and demand for improved infrastructure and related services as detailed above. For this purpose, a Port Improvement Strategy needs to be developed, involving the restructuring of SIPA and the improvement and further development of the port. These two components are outlined below.

A. Proposed Restructuring of SIPA

The path forward will require SIPA to evolve into a modern, client oriented, commercial organisation which manages the port under a landlord model, which would allow SIPA to focus on its core tasks of planning and managing of basic port infrastructure, arranging for essential port services, the long term planning and development of the port and the land within the port area and to carry out the regulatory function within the port. The proposed developments could involve:

- Outsourcing of high cost specialised operational activities including stevedoring;
- establishing a new commercial division to add strength for client engagement and deliver needed management focus on strategic business development;
- Improving financial management and accounting including the designation of operating divisions as either cost or profit centers and reporting against budgets;

- Develop a land management plan for the port area to restrict non transport related businesses from occupying port land;
- Lead the development of other maritime business opportunities in the Solomon Islands including off-dock terminals and as provider for marine services to new international port developments, including Doma.
- Preparing an asset revaluation and asset condition report such as has been prepared under other development projects in the Solomon Islands;
- Dividing the tasks of the operations department into one for harbour control (ship operations) and one for cargo operations; and
- Develop a roads and traffic management plan for Honiara Port.

Failure to implement modern seaport management practices and performance benchmarking will have a negative impact on implementing facility improvements as well as constrain the economic growth potential and competitive position of Honiara. A stronger business process focus within the SIPA management is needed to develop an understanding of the commercial aspects of operating this port in the South Pacific region.

To achieve this, the development of a Business Plan is needed to be approved by the SIPA Board, which would involve:

- A review of core tasks for SIPA based on a landlord port model;
- An increased client - and commercial orientation;
- Modernizing and strengthening of SIPA's organization structure;
- Increased accountability of commercial performance from SIPA management;
- Implement management of change.

Improved strategic direction supported by modernization of the organisation structure and active Board involvement would provide the key elements for steering SIPA towards improved trading results and becoming a more robust port business entity.

B. Proposed Port Improvements

A wide range of options for meeting the demand for trade volume growth has been developed, partly from SIPA's capital works program and partly from an objective assessment of the capacity and constraints of the present port location at Point Cruz. These options need to be assessed in a carefully coordinated fashion through a master planning process and based on proper cost benefit analysis, resulting in a Port Master Plan.

The report concludes that there is no potential to develop further processing facilities (such as fish processing) in the current port area. However, SIPA could be involved in the further development of future ports in the Solomon Islands, such as the proposed port at Doma.

With moderate levels of investment, the current port area and facilities are sufficient to meet projected demand for the next 10 – 12 years. To achieve this, the following need to happen:

Development Stage 1 (2012 - 2014): Immediate improvements at a cost of about $1 million and preparation of a 10 year master plan including:

- Prepare phase one of the Port Master Plan covering the years 2012 – 2022;
- Revise the port operating hours to better reflect the requirements of customers;
- Restrict or ban the activity of un-stuffing containers by customers within the secure port area;
- Establish a Working Group with MID to seek improvements in the road network in proximity to the Port;

- Improve the tariff recording and collection for occupancy at the domestic wharves by coastal vessels;
- Improve security surveillance of all secure port entry gates to prevent the entry of unauthorized persons;
- Improve security surveillance of vessel anchorage area to prevent illegal activity or oil spill or other sea pollution;
- Procure and install new fenders and bollards to the main wharf;
- Demolish non-productive and derelict sheds;
- Remove all obsolete and non-productive plant and equipment;
- Install missing perimeter fence;
- Repair yard lighting;
- Complete a structure condition survey of the main wharf;
- Complete a detailed condition survey of the domestic wharves;
- Repair or replace the Pilot Boat;
- Proceed with the Southern Seas Investment Limited jetty (funding already in place).

Development Stage 2 (2014 – 2022): Implement the master plan and the medium term investments at an estimated cost of $10 million, including:

- Construct fire ring mains and hydrants;
- Plan, design and construct a new copra export terminal;
- Continue to extend Point Cruz reclamation (1 hectare);
- Continue with container yard hardstand expansion (1 hectare);
- Plan, design and construct new passenger terminal;
- Grading and sealing domestic wharf operations area;
- Commence a prioritised rolling program of replacing old and unserviceable domestic wharves;
- Procure a multi-purpose work boat;
- Oil pipeline re-route to mooring buoys;
- Proposal for development of an inland container terminal to relieve Honiara's day time traffic volumes. This would entail establishing a container terminal at Ranadi industrial area (east of Honiara) where SIPA could run over night container transport for full /empty containers.
- Prepare phase two of the Port Master Plan and Business Plan – years 2022-2037.

Development Stage 3 (2022 - 2037): In 10-12 years, the capacity of the current port will not be sufficient to meet demand. There are various options, such as:

- Expanding of the current port by reclaiming additional land at the current location at Point Cruz and construction of a second international wharf, which would allow for another 20 years of operations;
- Relocation of part(s) of the port; or
- Relocation of the entire port.

Stage 3 involves substantial investments and a possible relocation strategy to be planned and implemented to bring on-going and continuous improvement to both the port's infrastructure and to the business of operating and managing the Port for long-term benefits to all stakeholders. Within the terms of reference for this Study, this Stage has not been defined in detail. The Master Plan and Business Plan recommended for Development Stage 2 should provide clear direction for this third stage of the port's development. The future expansion of the current port or its possible relocation will, among others, be closely linked to the development of the City of Honiara as a whole, the industrial development in the coastal areas of Guadalcanal and regional transport facilities.

If it is decided to expand the port in its current location, the port footprint will need to be enlarged to the physical limits of Point Cruz, and all non-port activities and functions moved to other locations. In addition, all bulk liquids loading and unloading facilities (for fuels and palm oil) should be moved out of the port. This will free up a total area of at least 8 hectares for expansion of the container and general cargo area, which is forecast to serve the needs of Honiara's trade volumes for about the next 25 years.

Once the enlarged port reaches capacity, a new port will need to be considered to either replace Point Cruz, or supplement the Point Cruz port with additional capacity. It is likely that any new port site will be located east of Honiara to be close to the Ranadi industrial estate and other large port customers located to the east.

1 Introduction

1.1 General Situation

The Solomon Islands is located in the South Pacific, stretching 1,670 km south-east from Bougainville in Papua New Guinea to the Santa Cruz Islands bordering the Republic of Vanuatu. It has a total land area of 28,370 km^2, made up of six large islands, dozens of smaller islands, and hundreds of islets and atolls.

It is a Melanesian island country where over 80% of the population of 516,000 is rural, living in widely dispersed villages of a few hundred persons.

The United Kingdom declared a protectorate over parts of the Solomon Island chain in 1893, extending to cover remaining outlying Islands of the archipelago in 1900. During the early 20^{th} century, British and Australian firms commenced large-scale coconut plantations.

Following the end of World War II, the British colonial government returned. The capital was moved from Tulagi to Honiara to take advantage of the infrastructure left behind by the US military including Henderson airport and various wharves and landing ramps.

The Solomon Islands received its independence on July 7, 1978.

Honiara, located on the island of Guadalcanal, is the capital and the main commercial center hosting the primary international sea port and airport and is the largest city with a population of 66,000. The time zone is eleven hours ahead of Greenwich meantime (GMT). There are 120 spoken languages with Melanesian being the lingua franca. English is the official language but it is spoken by only 1-2% of the population.

The economy is based on primary agricultural commodities, onshore mining, forestry, and fishing. The country is fragile, weakly performing, and still emerging from several years of ethnic conflict from 1999–2003 and 2006. There has been a rehabilitation of the crude palm oil industry and resumption of gold mining activity on Guadalcanal which are both now approaching operating output levels seen in the pre conflict era.

During the conflict era the Solomon Islands' economy contracted by 14.3% in 2000, 9% in 2001 and a further 2.4% in 2002, primarily as a result of the closure of most major industries after June 2000. The Central Bank of Solomon Islands estimated in its Statistics Bulletin of August 2011 that the economy contracted by 4.74% in 2009 mainly due to a reduction in logging receipts. GDP (current prices) is estimated to be approximately $458 million in 2010 representing a 6.74% increase on the prior year. The growth outlook for 2011 is expected to pick up strongly with the Ministry of Finance and Treasury revising up its GDP forecast to around 10% (4.5 points up from initial estimate of around 5.5%). The main reasons for this upward revision include:

- Strong logging output during the first half of 2011;
- The expansion in the mining sector as Gold Ridge Mine has restarted production;
- All agricultural commodities (i.e. palm oil, cocoa, and fish) except for copra recorded an increase in the first half of the year (based on the year on year comparison) resulting from strong demand and high commodity prices; and
- General improvements in business activities as the economy and public sector recover.

The majority of agricultural harvest and production of copra and cocoa takes place in remote island rural areas which contend with limited transport infrastructure and services. Maritime transport is essential to connect the six main islands and smaller island groups in order to facilitate economic and social development.

The maritime network in the Solomon Islands consists of two international deep-water ports at Honiara and Noro and about 86 rural wharves and jetties and numerous unimproved anchorages throughout the country, many locations lack suitable maritime infrastructure and do not receive regular transport services. Honiara is the main seaport gateway for the Solomon Islands accounting for 88% of all freight movements (excluding logging) and transshipment fish. Much of the international general freight arrival is transferred at Honiara onto coastal vessels for distribution to outlying island populations.

International container shipping arrivals at Honiara are operated by six separate shipping lines that maintain scheduled services from Asia and Australia/NZ to the Solomon Islands and other Pacific Island States. In addition, frequent arrivals of fuel and gas tankers and bulk charter ships handle the balance of international trade with the Solomon Islands.

Interisland shipping services are operated currently by about 20 private sector operators, supplemented by a few churches and provincial governments. Some routes are commercially viable because of their proximity to the national capital and comparatively high demand for passenger and cargo services. In contrast, some remote destinations receive only occasional unreliable services due to long distances and low passenger and cargo demand.

In common with other Pacific Island States, Honiara is highly dependent on imports arriving by sea. Honiara international airport can provide access to wide body Boeing 767 aircraft but currently is only serviced by narrow body aircraft on direct services from Brisbane, Nadi and Port Moresby. In addition Honiara International airport has limited freight handling capacity for international airfreight. Latest indicators from 2007 show Australia and Singapore as the main origins of Solomon Islands imports, at 26% and 28% respectively. Imports from Singapore are dominated by bulk liquid petroleum products. The main exports shipped through the port of Honiara include bulk crude palm oil, bulk copra and sawn timber in containers. China is the Solomon Islands' single largest export market at 51% of the total, made up mostly from logging. Korea is a distant second at 9%, while the combined share of Japan, EU and Thailand has dropped to below 20%. Exports of marine products, mainly re-export of fish to Southeast Asian countries, accounts for almost 85% of export revenue.

The scheduled container shipping services operating to Honiara currently incur consequential costs as a result of the trade imbalance by volume and due to recent port congestion from 2010, both of which are reflected in higher freight charges for container shipments.

The efficient and safe operation of the Honiara port facilities is therefore essential to maintaining an unconstrained gateway for the delivery of essential import commodities including fuel, foodstuffs, building materials and manufactured goods and vehicles. Similarly, Honiara port needs to focus on servicing the growing export trade by providing the foundation for competitive commercial transactions with the outside world.

The Solomon Islands Ports Authority (SIPA) is the beneficial statutory owner operator and responsible for the management of the ports of Honiara in Guadalcanal Province and Noro in the Western Province. SIPA operates as a State Owned Enterprise (SOE) under the SOE Act as well as retaining the Ports Act in defining its regulations, duties and constitution.

Honiara port provides facilities and services including berthage, anchorage, pilotage, small workboats, stevedoring and warehousing, storage and international cargo handling. The port of Honiara operates on a 24 hour basis in delivering its international and domestic shipping services through the infrastructure provided.

The Solomon Islands Government maintains compliance for safe and secure sea port operations as a member of the International Maritime Organization (IMO) and a signatory to key parts of the maritime safety, security, and pollution conventions and controls or environment protection treaties. SIPA is also a compliant participant to the International Shipping and Ports Security (ISPS) protocols.

Located at Point Cruz and adjacent to the city, Honiara port has a single deep-water wharf of 120m length with a maximum depth of 9.0m alongside, which is used primarily for international shipping. The wharf was last rehabilitated under the Second Honiara Port Project financed and constructed by ADB in 1991. After this rehabilitation, 74m of the wharf can now be used for container handling. The remaining 46m of wharf is of lesser capacity and incapable of carrying fully loaded container handling equipment. There is no permanent shore based crane at Honiara wharf and visiting ships must use their own cranes.

The port's fenced terminal land area consisting of six hectares includes numerous equipment storage sheds, bulk tank farms, freight warehouses, workshops, disused equipment sites and administrative sites sharing space with the container yard of approximately three hectares.

The total land area under SIPA jurisdiction as measured is approximately 63,100 m^2 (6.3 hectares) within the secure port area and approximately 1.1 hectares outside the port secure area.

There are dedicated mooring buoys and submarine pipes located away from the main wharf for use by arriving fuel tankers.

Dedicated coastal inter-island shipping facilities are provided for freight and passenger transfer including an 85m wharf with a depth of 3.4m alongside and ten small finger jetties and two small barge ramps on the eastern side of Point Cruz.

According to SIPA, Honiara has the lowest charges of all of the South Pacific ports and also one of the lowest costs per unit processed. The recent increase in supply and demand of goods continues to attract increased numbers of international vessel arrivals and transshipment of containers and freight. There is a compounding increase in trading activities between the islands resulting in congestion at coastal jetties in Honiara. In addition, every year, new local shipping operators are registered and new coastal ships are acquired. Berthing facilities in the Port for inter-island shipping are aged, deteriorating and are becoming unsafe and are in immediate need of improved management and rehabilitation. There is multi-sectoral demand for SIPA to develop Honiara Port however the existing management of land, labour and equipment are just some of the primary difficulties.

Fisheries industries are of great importance to the economy with tuna as the main fish export. Solomon Islands have comparative advantage in fresh and processed (loined or canned) tuna export (second largest export earner), a ready labour supply, and development of preferential trade access to the EU and US markets for its goods.

The Solomon Island Government is keen to optimize the economic benefits of its EEZ tuna resources and at the same time cognizant that improved infrastructure will be required to support the further development of domestic fish processing (e.g., ports, space, power, water, and other support facilities). It is therefore, currently considering several proposals from foreign investors who wish to establish onshore tuna processing operations in combination with long-term access to Solomon Islands' tuna resources. The Government is exploring these proposals by developing a framework against which they can be evaluated to ensure that the economic interest of the country is best served.

There are four current independent proposals each at varying stages for onshore development of fish transfer and processing.

Since 2005, the Solomon Islands Government has been working with the Government of Japan regarding Grant Aid for improvement of Honiara Port Facility. The latest application exchanged in 2011 requests for works on the international wharf (e.g., constructing the seawall, end revetments and mooring dolphin; removal of sunken mooring dolphin and dredging and filling) and container yard, and provision of essential facilities such as water supply and fire-fighting equipment, wharf lights and security fence, and a mobile crane to the approximate total value of $10M. The Japanese government recognizes the necessity of elements of the project but has not accepted the application and the recent natural disaster in Japan may also affect the budget for grant aid in the next 2-3 years.

Inter-island shipping is one of the most important transportation sectors in the Solomon Islands, due to its archipelagic geography. However, this sector has a scarcity of vessels complying with international safety standards, although many vessels more than 200 tonnes have been registered and operated. Berthing facilities at Honiara for inter-island shipping are aged and deteriorating and are becoming unsafe to operate. They are in need of immediate rehabilitation.

It is within the above context that the Solomon Islands Government through the Ministry of Finance and Treasury has approached PIAC to conduct a Scoping Study and deliver a preliminary assessment of the state of the existing Honiara Port infrastructure and SIPA's institutional capacity to respond to the needs of the processed fisheries sector, other commercial port users and the broader shipping and trading industry.

This study has determined the need for, and identified requirements for business planning and institutional developments and infrastructure that needs improvement/upgrading. It also identified longer term alternative port sites in order to support existing and future operations and economic development activities, as well as immediate short-term improvements that need to be undertaken by the Government.

1.2 Terms of Reference

On request of the Ministry of Finance and Treasury of the Solomon Islands, this technical assistance is provided by the Pacific Infrastructure Advisory Center (PIAC) under the umbrella of the Pacific Region Infrastructure Facility.

This "Scoping Study" has been completed by two independent consultants:

- Mr. Adrian Sammons – Business Assessment Expert; and
- Mr. Doug Oldfield – Operations and Engineering Expert.

The Consultants have been engaged under the terms of reference described in the contract documents and as discussed and agreed with representatives from PIAC. The project is entitled "Honiara Port Scoping Study, Solomon Islands" and directly relates to the activities and operation of the port as operated by the Solomon Islands Ports Authority (SIPA), a State-owned enterprise of the Solomon Islands.

This Scoping Study has been conducted in accordance with the Terms of Reference for the Project, a copy of which is in Appendix 1. The Scoping Study essentially focuses upon the following two key areas:

- Business assessment of the existing port facilities and their management, covering identified activities within the port including traffic volume and export and import flow; requirements and associated demand for port services and facilities; preliminary

assessment of port performance (operational, financial, institutional) and institutional analysis of SIPA and public and private sector agencies involved in Honiara port operations and management; and

- Final Port Improvement/Upgrading/Expansion Report covering recommended actions to be undertaken by the Government in the short and medium term in terms of specific port infrastructure improvements and related costs; employment impact that can be gained from increased commercial activities in the port; draft terms of reference, and next actions/steps.

The terms of reference called for the consultants to conduct consultations with key Government officials and commercial establishments using the port and other relevant stakeholders. A list of all organizations met is shown in Appendix B.

1.3 Situation Reference and Prior Studies

SIPA was established under the Ports Act of June 1956 (Chapter 161) with the latest amendment done 1996. SIPA is responsible for the ports of Honiara and Noro being the two main international declared ports under the Act. In 2007 the State Owned Enterprises Act (No.7 of 2007) came into force under Solomon Islands Government legislation. The State Owned Enterprises Act became an overarching legislative determination for SIPA in particular aimed at defining its accountability through to Ministerial level and its Community Service Obligations. The Ports Act 1996 is also retained providing detail on regulatory affairs relative to maritime aspects of navigation, pilotage and harbour limits.

SIPA has a board of directors which have a term of two years consisting of nine members that are required to meet quarterly. Ministerial reporting lines altered from the Ministry of Commerce to the Ministry of Infrastructure Development (MID) in 2009.

1.4 Structure of the Report

This report is structured to provide the following:

Table 1 - Report Structure

Section	Title	Description
2	Objectives of the Study	The objectives of the Study, based on the terms of reference
3	Port Operations	Description of the present shipping operations and services provided by SIPA, the scope of operational processes and how they are delivered to users. A description of current shipping lines and other users, a description of their activities and vessels operating in the port of Honiara. A description and assessment of the efficiency of the operational arrangements and services supplied to port users directly and indirectly by SIPA.
4	Existing Infrastructure	Description and assessment of the existing port and port-related infrastructure and facilities. This includes the wharf area, office buildings and the Port land under SIPA control and its usage under lease and concession arrangements. A physical and desktop assessment of safety and accessibility of the harbour based on current and projected vessel usage. A review and assessment of supporting infrastructure and facilities including bulk liquids delivery pipeline, work boat, pilot boat and line boat deployment, navigation aids, security and fencing and

		safety services.
5	Institutional and Organizational Assessment	Review and description of the institutional framework and laws creating SIPA and their scope of legislative authority and controls. Review and description of the inter-relationship of SIPA and Government authorities on a SIG national level as it relates to SIPA seaport governance and management. Review and report on the organizational capacity and capability of the SIPA relative to its policy setting, strategic planning and commercial approach, and the supporting analysis undertaken to support the proposed improvement program. A review of financial controls and management systems, accuracy of reporting and procedures for evaluating performance and budget planning.
6	Financial Assessment	Review and assessment of current revenue and tariff structures. Review and assessment of current costs and budget planning processes. Financial assessment of SIPA operations and performance and scope for improvement. Analysis of key financial ratios and scenario testing of activity against financial variables including debt servicing. Identification of constraints and recommended areas for improvement.
7	Trade Activity	Analysis of past and current trade volumes to establish trends and forecasts of trade against known changes in activity. Research and evaluation of potential growth in trade and likely future trading patterns over 5, 10 and 25 year forecasts. Establishment of a base case for future trade growth and the drivers behind this.
8	Options to Meet Future Demands	Evaluation of potential options to satisfactorily meet future demand by improving current port and cargo operations, and by upgrading existing port and supporting infrastructure. Delivery of capital cost estimates for each option.
9	Preliminary Cost Benefit Analyses	A preliminary financial and economic cost-benefit analysis to assess the financial viability of recommended infrastructure improvements. Assessment of the financial and fiscal sustainability projections of improvements.
10	Climate change and Social Issues	Assessment of climate change impacts relative to the current and future operations and access of Honiara seaport. Assessment of social and community direct and indirect impacts likely to occur on the basis of seaport infrastructure expansion. Discussion of other relevant issues including potential community relocations.
11	Port Improvement Strategy	Strategic options for short- medium- and long-term (Development Stages 1, 2 and 3) port improvements that assist in the mitigation of significant constraints presently confronting port operations, service delivery and organizational performance. These include operational strategies, infrastructure projects, governance, organizational strengthening and financial strategies.
12	Conclusions	Presentation of likely preferred stages and options. Summary of institutional and financial performance findings and options for improvements.

2 Objectives of the Study

The Honiara port scoping study aims to deliver a broad assessment of the state of the existing port facility and its capacity to respond to the needs of the commercial and processed fisheries sector and the broader based shipping industry and port users. The study will also determine the need for, and identify possible areas of the port that requires improvements or upgrading or identification of alternative port sites in order to support existing and future operations and economic development activities, as well as recommendations of short term actions to be undertaken by the Government.

Research will identify the commercial activities within the port of Honiara including vessel traffic volume and export and import flow. This will translate through to assessment of the requirements and associated demand for port services and facilities. Preliminary assessment of port performance will be provided with particular focus on core matters of SIPA institutional capacity, operational efficiency and financial controls.

In researching and evaluating the demand and drivers of sea borne trade moving through the Port of Honiara a forecasting model will provide data for assessment for the future case behind any needed port upgrading or infrastructure capital developments. The study will prioritise a list of required port infrastructure improvements and provide a set of quantifiable recommendations for a port improvement strategic plan designed to deliver more productive and efficient services for current and projected trade volumes.

The study aims to provide an initial assessment of alternative options available and their facility for improving port logistics and operational facilities at Honiara, focused upon the fisheries and agricultural sector, general cargoes, containers, bulk liquid fuels and the improved access for safe transfer of passengers and freight for coastal trading vessels calling at Honiara.

The study also aims to deliver a preliminary institutional analysis of SIPA and considered recommendation covering organizational and institutional strengthening with emphasis on accountability and performance outcome measures targeted at providing port users a more reliable and consistent service. Alongside this deliverable is the targeted objective of lifting financial performance based around optimizing performance at operating levels, improving management of capital expenditure and aligning budget and planning controls as protocols for standardising management activity and business direction.

The scoping study recommendations and target strategies are delivered with the intent to optimize port handling capability and management systems to better serve the national economic development needs for the next 5 years. Targets will be defined that are aimed at enhancing port productivity and efficiency to meet current and future demands.

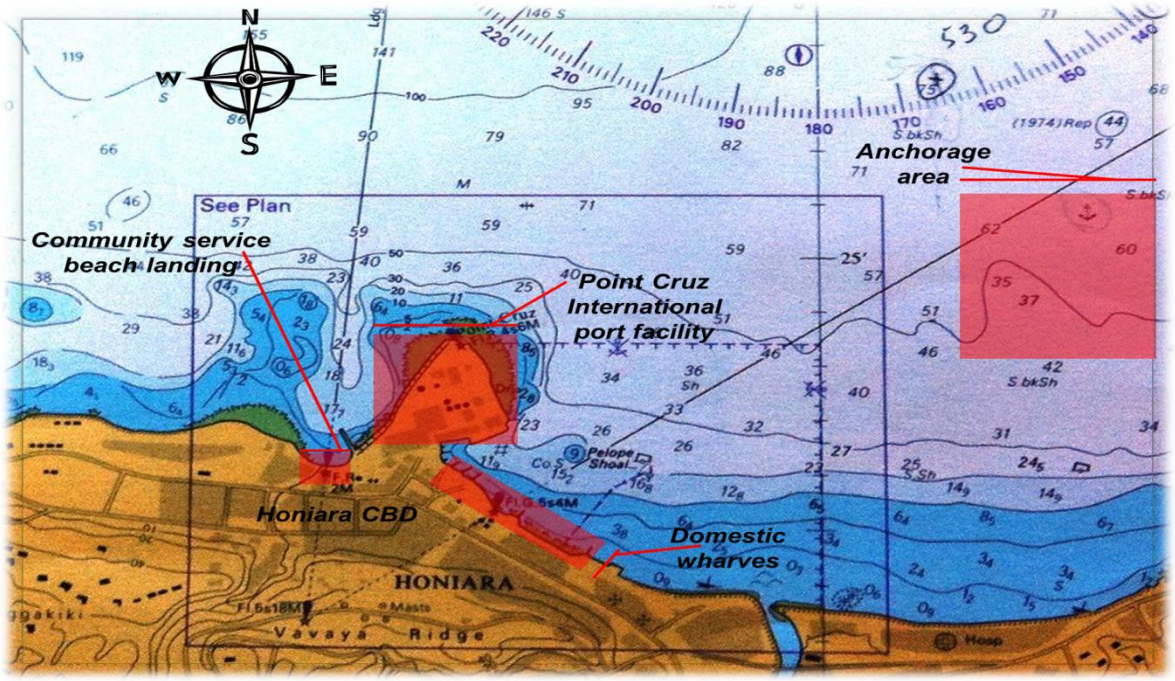
The Honiara Port Scoping Study also sets out to provide recommendations towards sustaining a safe navigable channel and secure harbour for mooring and operations of port user’s vessels and associated industrial and support industries within port limits, which is essential to maintaining safety and security of Honiara Port’s sea transportation linkages.

3 Port Operations

3.1 Existing Port Operations

Honiara Port is readily accessible for ships approaching from both the east and the west. There are no navigation channels to negotiate to approach the port, and berthing operations are not tug-assisted. Most of the larger ships visiting Honiara are equipped with bow thrusters which are commonly used to assist with swinging the ship to be berthed port alongside. The bow faces outwards so that a vessel can quickly depart the berth in the event of an emergency. Since the berth is only 120m in length, vessels longer than this must overhang their bow beyond the end of the wharf. This means that any cargo or containers which are stowed in the forward holds must be double-handled to get them unloaded on the wharf. Some ships have stern quarter ramps; however, for the ships visiting Honiara these are located on the starboard quarter and therefore cannot be used; see Figure 1 showing details of port approach, operational areas and SIPA community service obligation landing.

Figure 1 - Honiara port approach and operational areas



SIPA does not have a suitable pilot boat available and uses an open aluminum coastal boat with an outboard motor, no safety gear, and no backup for security or surveillance operations. SIPA removed the inboard diesel engine from its large pilot boat and used it as a replacement for container yard equipment.

All bulk petroleum products arrive from Singapore on a twice-monthly cycle. Tanker vessels discharge liquid bulk fuels via a pipeline along the seabed and underground to the two bulk fuel tank farms. Tankers moor at a dedicated Mediterranean mooring comprising three anchored mooring buoys located to the east of the main wharf.

International cruise ships visit Honiara irregularly, up to six times a year, with the majority of vessels arriving from other Pacific ports. There are no dedicated facilities to cater for cruise ships and the policy to actively attract larger numbers of cruise liners is in the early planning phase. These vessels vary in size and passenger numbers, and tend to be the smaller “boutique” cruise ships operating in the region.

Both long-line and purse-seine fishing vessels use the port of Honiara, but none use Honiara as their operational home base. Foreign purse-seine vessels transfer their catch to reefer fish carrier ships, ‘motherships’, while at anchor within the harbour limits. An average of 30 purse-seine vessels uses the port each year, with a normal stay of five days. The ‘motherships’ usually remain in port at anchorage awaiting transfer of catch for six to eight weeks, sometimes longer. Neither the purse seine fishing vessel or reefer fish carriers use the international wharf at Honiara for operational reasons.

Domestic shipping services within Solomon Islands are provided entirely by the private sector, and operate from the domestic wharves located within the Port of Honiara.

Figure 2 shows the layout of the port.

Figure 2 - Port of Honiara layout

3.2 Present Shipping Operations and Services

International shipping services calling at Honiara have returned capacity and frequency which was evident in the pre conflict era. There are currently seven separate and competing providers of container and break-bulk services that schedule regular direct calling vessels to Honiara. The combination of regular container vessels provides an annualised average of nine direct calls per month at Honiara (see Appendix F - Vessel arrivals Honiara main wharf Sept 2011) which shows an unusually high number of vessel arrivals for the month of September 2011 at 18, of which, 12 are container vessels. The largest vessel calling at Honiara is 185 m long with a total deadweight of 23,000 tonnes being in contrast to the smallest vessel operating direct services at 62m long and 1,720 deadweight tonnes. It is considered that the maximum sized vessel capable of safely berthing at the 120m main wharf in Honiara needs to be less than 200m in length overall.

Fuel oil tankers, LPG gas tankers, bulk crude palm oil tanker charters and bulk copra charters also feature as regular calling vessels at Honiara which use a combination of dedicated mooring buoys and the main wharf for cargo operations.

Coastal shipping is by far the most prolific in number of vessel arrivals and berthing activity at Honiara. The numerous services operated include regular passenger and freight services centered on Honiara to outlying populations and remote communities at outlying islands. The condition of vessels plying coastal routes departing from Honiara, range from; second hand refurbished foreign fishing boats to modern high speed catamarans with capacity for 120 passengers. Estimates of coastal fleet direct calls at the Honiara local jetties exceed 3,500 per annum.

The Solomon Islands is a signatory to a range of international maritime conventions, protocols and agreements as described under the International Maritime Organization (IMO) convention list. As at 30 August 2011, the Solomon Islands has acceded to 9 of 63 IMO conventions and amendments. There are concerns about the extent to which the Solomon Islands have fulfilled its obligations under those conventions to which it has acceded. For instance, past reports have noted that obligations to maintain navigational aids and accurate charts have not yet been fulfilled[1]. However, recent reforms have focused on developing Solomon Islands' ability to discharge its obligations. Many new regulations required to support conventions have been passed or drafted.

Reform has been achieved with the establishment in July 2010 of the Solomon Islands Maritime Safety Administration (SIMSA), enabled by the Maritime Safety Administration Act 2009. SIMSA has replaced the Marine Division of the Ministry of Infrastructure and Development as the regulatory body for sectoral leadership in maritime matters. Its regulatory responsibilities include provision and maintenance of navigational aids, vessel safety and certification, vessel registration, officer and crew registration, organization of search and rescue operations and future marine protection and oil spill response activity and port state / flag state vessel inspections. Under, the enabling legislation, SIMSA will resume responsibility for hydrographic survey and navigation charts, which has rested with the Department of Lands & Survey for several years. A hydrographic unit (SIHU) is being

[1]Tuomi, 2006. Diagnostic Assessment of Interisland Transport, ADB TA 4527.

established (October 2011) and Solomon Islands is pursuing membership with the International Hydrographic Organization and its regional commission in the South West Pacific (SWPHC).

The Ports of Honiara and Noro became International Ship & Port Security Code (ISPS Code) compliant on 1 July 2004. The ISPS code has since been drafted under the Solomon Islands Shipping Act 1998/2004, as the Maritime Security Regulations 2004. Through this regulation, it has become necessary for SIPA to comply with the requirements of the ISPS Code. New regulations before parliament (October 2011) will establish SIMSA's regulatory responsibility for ISPS, and redefine SIPA as responsible for implementation. SIPA delivers compliance activities under the ISPS code for the protection of people, port facilities and international ships at anchorage, moorings and berths within its designated port limits. All foreign vessels in Solomon Islands waters to which the IMO SOLAS convention applies including local cargo vessels which are more than 500 Gross Registered Tonnes (GRT) must have a valid International Ship Security Certificate (ISSC) to berth at the Honiara or Noro International Wharf. This also applies to fishing vessels both local and overseas which are greater than 12m in length fishing in the Solomon Islands EEZ. It is a requirement that 24 hours' notice of vessel arrival is given to the Port Facility Security Officer (PFSO) by shipping agents. International vessels arriving on maiden voyage are required to be boarded and inspected by the PFSO once berthed at the Port of Honiara. All vessels must supply crew lists to the security guard house to have access in and out of the Port.

The Port of Honiara serves a range of shipping vessels shown in Table 2.

Table 2 – International vessel statistics for Port of Honiara

Vessel Arrivals (see notes)	**2008**	**2009**	**2010**
International vessel arrivals (a)	577	617	503
Vessels berthed main wharf (b)	188	196	197
Vessels worked main wharf (c)	107	103	108
Tanker vessels (d)	43	37	38
Fisheries related vessels (e)	362	388	295
Cruise ship arrivals	7	6	6
War ship arrivals	2	7	1
Other (f)	56	75	55

Notes:
a: Includes all international vessels calling main wharf, at anchor and at single point moorings (excludes coastal vessels).
b: Includes vessels berthing alongside Main Wharf at Honiara only (excludes single point mooring and coastal).c: Includes all vessels worked by SIPA Stevedores (containers, break-bulk and copra) d: Includes all Crude Palm Oil tanker, fuel tankers and LPG Gas Tankers (Gas tankers berth at SPM at Ranadi).
e: Includes all purse seine, long line and reefer fish carrier vessel arrivals (at anchorage and alongside main wharf)
f: Includes other vessels such as international flag logging vessels at anchorage whilst being cleared by customs, immigration and quarantine.

The main import trades to Honiara include:

- General cargo: containers, mining equipment, motor vehicles and break-bulk;
- Bulk Petroleum Fuels, LPG; and
- Frozen fish transshipment at anchorage.

The main export trades from Honiara include:

- Crude palm oil in liquid bulk;
- Copra in bulk;
- Sawn timber in containers;
- Scrap metal in containers;
- Personal and household effects;
- Palm kernel expeller in containers; and
- Empty containers.

Export commodities have for many years been limited to the four main industries of transshipment: frozen fish, bulk copra, logging and sawn timber, and liquid bulk crude palm oil. The export tonnage volumes have fluctuated greatly in the past ten years due to ethnic tensions and conflicts resulting in the closure of the Gold Ridge mine, the Guadalcanal Plains Palm Oil Plantation crushing mill, Russell Island Palm Plantation crushing mill and export facility, and disruption to the supply chain and storage for bulk copra exports.

The imbalance of full import versus full export containers at Honiara creates a substantial empty back loading requirement for empty containers. An assessment of this average imbalance ratio indicates that for the past five years, 81% of all full import containers have been evacuated empty from Honiara. This empty repositioning is factored into the cost of servicing the port of Honiara by the shipping lines inbound container freight charges.

It was reported by several shipping lines and agents serving Honiara port that in 2009-2010, the ability of SIPA to service the back loading of empty containers has diminished due to equipment failures and lack of yard space. Several shipping lines commented they were not able to back load sufficient empty containers from Honiara and made complaints to SIPA that it was causing substantial on-costs to fleet operations by having hundreds of their empty containers lying idle at Honiara port when they are required at demand ports elsewhere in their schedule for loading of freight.

This is understood to be the current background for SIPA investigating the purchase of additional container handling plant equipment and the declared intent to increase the number of workshop and maintenance staff in its cargo operations division.

International liner services maintaining regular scheduled direct calls at Honiara have increased in recent years following the decline of demand resulting from the ethnic conflict era which saw many shipping lines withdraw services from calling Honiara port.

SIPA claims that in 2010 the un-forecast ‘sharp increase’ in foreign vessel arrivals was the main cause behind service failures at Honiara to supply cargo services sufficient to cater for vessel and cargo movement volumes. Between 2007 and 2010 there was an addition of only 13 international vessels working at Honiara main wharf. Table 3 details the current shipping lines and vessel specifications providing regular direct services to Honiara.

Table 3 - Shipping Lines servicing Honiara

SERVICE ROUTE	OPERATOR	FREQUENCY	VESSEL NAMES	VESSEL TYPE / SIZE
Kaohsiung / Tokuyama / Busan / Kobe / Nagoya / Yokohama / Honiara / Port Vila / Noumea / Lautoka / Suva / Apia / Pago Pago / Papeete **/ Honiara** / Noro / Kaohsiung	Kyowa Shipping Co Ltd / Mitsui OSK Lines / NYK-Hinode Line Ltd **(trading as : Greater Bali Hai)**	Twice monthly	*Tropical Islander South Islander*	Multi-Purpose - Ro-Ro: 960 TEU (plus car deck for 720 vehicles); 2 x 40 tonne cranes 17,800–18,174 GRT Draft 9.35m / 161m LOA
Port Klang / Singapore / Jakarta / Port Moresby / Lae / Port Vila / Santo / **Honiara** / *Noro / Rabaul / Madang / Davao / Port Klang (*Noro on inducement)	MBf Holdings Sdn Bhd **(trading as: Carpenters Shipping)**	Twice monthly	*Pac Antlia Turtle Bay Pac Aquila*	Multi-Purpose 858 TEU 2x 45 tonne cranes 13760 GRT Draft 9.5 m / 154 m LOA
Busan / Xingang / Shanghai / Ningbo / Hong Kong / Lae / Rabaul / Port Moresby / **Honiara** / Bussan	Schoeller Holdings Ltd **(trading as: New Pacific Line)**	Twice monthly	*Cape Nassau Cape Nati*	Multi-Purpose 900 TEU 2 x 55 tonne cranes 18326 GRT Draft 10.9m / 175 m LOA
Melbourne / Port Kembla / Brisbane / Port Moresby / Lae / Madang / Lihir / **Honiara** / Melb	China Navigation Co Ltd **(trading as: Swire Shipping)**	Twice monthly	*Coral Chief Kokopo Chief Highland Chief Papuan Chief*	Multi-Purpose 650 TEU 3 x 45 tonne cranes 10350 GRT Draft 9.4 m / 158 m LOA
Map Ta Phut / Sri Racha / Port Kelang / Singapore / Jakarta / Benete Bay / Port Moresby / Darwin / **Honiara** / Various Aust ports / various South east Asian	China Navigation Co Ltd **(trading as: Swire Shipping)**	Twice monthly	*Pacific Discoverer Pacific Voyager Pacific Resolution Pacific Explorer*	Multi-Purpose 950 TEU 3x26 2x31 1x22 tonne cranes 18391 GRT Draft 10.9 m / 185 m LOA
Tauranga / Auckland / Brisbane / Townsville / Port Moresby / Lae / Lihir / **Honiara** / Port Vila / Tauranga	Sofrana Unilines N.Z. Ltd **(trading as: SOFRANA)**	Twice monthly	*Sofrana Tourville Sofrana Surville*	Multi-Purpose 550 TEU 2 x 45 tonne cranes 7870 GRT Draft 8.5 m / 142 m LOA
Brisbane / Port Vila / **Honiara** / Nauru / Brisbane	Roll Global LLC **(trading as: Neptune Pacific Line)**	Monthly	*Scarlet Lucy*	Multi-Purpose 225 TEU 2 x 25 tonne cranes 3972 GRT Draft 5.9 m / 98 m LOA
Suva / Nauru / *Noro / **Honiara** / Suva (*Noro on inducement)	Reef Group Ltd **(trading as: Reef Shipping)**	Monthly	*Southern Reef*	Multi-Purpose 62 TEU 2 x 20 tonne cranes 1185 GRT Draft 4.27 m / 62 m LOA

3.3 Operational Arrangement

3.3.1 Harbour control

Honiara port provides common user access to international vessel arrivals on a first come first served basis at arrival pilot station. In the past, SIPA offered a berth reservation scheme

where vessel agents could pre-book the international wharf for a cost, with seven days clear notice of arrival. This scheme was suspended by SIPA in early 2010. The Harbourmaster operates within SIPA to control all vessel movements within the port limits. This control includes:

- All vessels arriving and departing;
- Allocation of berths to arriving vessels;
- Maintenance of navigation aids within the Port Limits;
- Surveillance of vessels occupying the anchorage; and
- Management of pilots who meet arriving and departing vessels.

Vessels less than 500 GRT do not require compulsory pilotage.

The steps for controlling an arriving vessel are:

- When the vessel reaches the pilot station (located approximately three miles to the north), the vessel advises Harbour Control;
- Harbour Control then requests a pilot to attend;
- Harbour Control delivers the pilot, using a SIPA boat, to the arriving vessel; and
- The pilot delivers the vessel to the wharf, and berths the ship.

On departure, the procedure is reversed. Having berthed bow-out, turning the vessel is not required. An arriving vessel is always turned adjacent to the main wharf on arrival, so that loading/unloading is all across the port side.

No tug assistance for berthing is available at Honiara. Most visiting vessels are equipped with bow thrusters. In addition, the larger vessels sometimes utilise their bow anchor to help control the vessel while maneuvering in the turning basin. The bow thrusters, together with SIPA line boats (to run mooring lines ashore), mooring lines and ship's winches are then used to bring the vessel alongside to the berth. Once at the berth, vessels typically use 3 head lines, 3 stern lines and 2 or 3 spring lines for mooring.

North-east winds can create problems for arriving vessels. Conversely, south-west winds cause problems for departing vessels and assist berthing for arriving vessels.

Vessels using the anchorage are normally the reefer fish carrier ships and the accompanying purse seiners. Log carrier vessels and other foreign vessels not calling direct at Honiara port wharf will use the anchorage as the first landfall at Solomon Islands to undertake immigration, customs and quarantine clearance formalities. On occasions other cargo ships will use the anchorage if the main wharf is occupied. The pilot is responsible for positioning a vessel within the anchorage. Vessels are anchored by bow anchor only, thereby permitting swinging on the anchor cable.

3.3.2 Operating vessels

Table 3 provides details of the vessels which visit the port of Honiara on a regular schedule. From 2005 to 2011 there has been an increase of 55% in international tanker and general cargo vessel arrivals at Honiara and an increase of 108% in fisheries related vessels at anchorage over the same period. The main increase has been through vessels using the international wharf for purposes other than cargo operations including taking on fresh water, bunker oil (supplied by road tanker) and for statutory clearance formalities. Vessel numbers working at the main international wharf in Honiara have increased from 95 in 2007 to 108 in 2010, being a change of only 13. International vessels servicing Honiara also continue to increase in physical size and capacity. In 1977, the typical general cargo vessel was 80m LOA at 3,500 GRT compared to 2011 with ships of 160m LOA at 10,000 GRT.

3.4 Current Cargo Operations and Services

3.4.1 Port secure area

The port secure area is operated by SIPA and has an area of 63,100 m^2 (6.31 hectares). Within this secure area a range of facilities and users occupy about half of the total area, as shown in Table 4. Most of the remaining area is occupied by the container yard.

Table 4 - Facilities within the Port secure area

Description	Area, m^2
Foxwood copra shed	1,900
Guadalcanal Plains Palm Oil Limited	3,500
Copra shed	1,850
Transit shed no. 1	950
Transit shed no. 2	950
SIPA plant maintenance workshop	3,500
Northern reclaimed area (no function)	17,700
Total Area	**30,350**

3.4.2 Container yard

The container yard, which occupies much of the remaining area within the port secure area, is approximately 30,000m^2 (3.0 hectares) in area (Figure 3). The container yard pavement surface comprises reinforced concrete pavement, in reasonable condition. SIPA has been replacing panels of this pavement where excessive repetitive loading has damaged the concrete.

Figure 3 - Point Cruz container terminal - Honiara port

For handling containers, SIPA operates three large forklift trucks for handling loaded containers, and three smaller forklift trucks, for handling empty containers. Tractors and trailers are occasionally used in addition to the forklift trucks for moving containers around the yard. Ship loading/unloading is all by ship's gear. No land-based craneage is used for loading ships, except for the case where copra is loaded into dedicated bulk copra vessels using the port's mobile crane for lifting bulk copra bins into the ship.

Typically, containers are unloaded from the ship and removed to the stack for later collection by the customer. Occasionally a customer will collect a container as it is unloaded. Container stacking does not appear to occur with any clear plan or arrangement. Containers are normally stacked two-high, with some three-high stacking. Empties are stacked up to four-high. The forklift trucks and top-loader can stack up to four-high. Retrieving a particular container from the stacks for a customer therefore appears to be a cumbersome task of locating and identifying the target container then extracting it from its location within the stacks.

On average 93 containers are unloaded and 68 loaded (mostly empty containers) on each cargo vessel voyage. Other break bulk cargo and general cargo such as motor vehicles are also unloaded. Motor vehicles and large cargoes are unloaded using ship's cranes since the quarter ramp normally available on ships carrying motor vehicles is not accessible from the wharf. The average time in port for general cargo vessels was 26 hours in 2010.

The two cargo transit sheds are used for unpacking containers and for storing small consignments of break bulk cargoes which need to be protected from the weather while waiting to be collected. Both sheds are under-utilised and do not appear to be serving a useful purpose.

3.4.3 Stevedoring operations

All stevedoring operations are conducted by a division of SIPA, and up to 90 permanent staff, 55 casual staff and employees are engaged by SIPA directly for these stevedoring services. Along with this workforce, SIPA provides all cargo-handling plant and equipment, and operates a comprehensive maintenance facility for this plant. A detailed listing of all stevedoring plant equipment is provided in Section 4.2.2.

Hours of operation are 0730 – 1130 meal break - then resume at 1300 – 1600. SIPA classifies these times as normal operating hours and anything outside are classified as overtime where users pay for extra attendance fees and overtime allowances for receiving and delivering freight and accessing the terminal for ship operations.

The stevedoring division provides a full stevedore service, including loading and unloading ships, transferring cargoes to and from the ship from the container yard, storage and transfer of cargoes to customers. One activity which the stevedore does not participate in is the un-stuffing of containers within the secure port area (Figure 4). This activity is frequently conducted by import customers, outside of ISPS protocols apparently with the direct permission of SIPA. A fee is usually charged for this operation.

Separate areas are designated for stacking loaded and empty containers, and containers for export are kept separate from imported containers awaiting collection. Management of containers within the container yard relies on a manual system of dockets, and accordingly it is difficult to track the movement of containers within the yard. A number of clerks are employed to operate this manual system.

Figure 4 – Un-stuffing import containers inside port area by non-port employees

3.4.4 Bulk fuel imports

Bulk liquid fuels imported into Honiara include motor spirit, diesel and aviation gasoline. A dedicated set of offshore mooring buoys are used to moor the bulk liquid vessels in a Mediterranean mooring arrangement. Fuels are discharged by flexible seabed pipeline to two separate fuel tank farms in Honiara. Ships delivering bulk fuels to Honiara are typically in the Medium Range (MR) tanker size (25,000 to 50,000 DWT).

Fuel ships visit on average every two weeks, which is essential due to limitations in the onshore storage capacity and monthly consumption of fuels. The total storage capacity of the two distributors is approximately 20 million litres, and the annual consumption of all fuels supplied through Honiara amounts to 120 million litres. This comprises diesel (65%), aviation fuel (20%), and petrol (15%).

3.4.5 Bulk agricultural exports

Agricultural exports including cocoa, copra and palm and kernel oil are regarded as one of the main stays of the Solomon Island economy contributing as much as 18% to the country's GDP. These established industries were severely affected during the course of the ethnic conflict and in some cases production completely ceased owing to destruction of the facilities or the business owners relocating away from the Solomon Islands.

Copra production peaked at 42,000 tonnes in 1984/85, and has since declined, partly due to poorer yields resulting from the age profiles of coconut stands throughout the country. The export volume reported in 2010 was approximately 18,000 tonnes. The copra export supply chain is fragmented with production based throughout the country's Islands. Smallholder yields are then transported in 80kg bags by coastal vessel for sale in Honiara to wholesale merchants and traders. When exporters have sufficient volume accumulated at storage facilities in and around Honiara, they then charter international vessels to load at the international wharf at Point Cruz. The charter vessel loading operations are arranged by the exporter with SIPA who provides machinery to transfer the bulk copra from the exporter's facility to ship's side and using customized skips to tip the product into the ship's hold. The average load per copra charter vessel is approximately 4,000 tonnes per ship (Figure 5).

Figure 5 - Bulk copra loading at Honiara using mobile crane and skips

Cocoa production is also dominated by smallholder producers since the restructure of the Commodity Export Marketing Authority (CEMA) in 2002 as a regulator and policy advisor rather than an exporter. Cocoa production fell from approximately 3500 tonnes per annum to about 1,000 tonnes per annum during the ethnic conflict period. Cocoa export volume in 2010 was reported at 9,600 tonnes and the Solomon Islands Government has indicated an aspirational production target of up to 20,000 tonnes annually by 2013. The cocoa supply chain also features a fragmented elements with smallholder production occurring mainly in Guadalcanal and Malaita where harvesting and processing of crop occurs from April to July followed by centralization of smallholders' production to Honiara for sale to traders and subsequent packing into containers for export.

Palm and kernel oil production is a specialised industry that requires major capital for investment in crushing, extraction and oil processing mills and intensive plantation management to achieve high yields of harvest. Crude palm oil (CPO) production has been in existence in the Solomon Islands since the 1970s with 6,000 hectares under plantation management providing export yields in excess of 40,000 tonnes per annum of crude palm oil. During the ethnic conflict era the owners of the plantation and mill evacuated all resources and the mill was ransacked and destroyed. Post the conflict era, New Britain Palm Oil Limited (NBPOL) backed by Malaysian conglomerate Kulim Industries purchased the residual operation and plantations and began rehabilitation of operations in 2005. GPPOL have expanded plantation size to 7,200 hectares and in 2010 exported 25,675 tonnes of bulk CPO and 3,000 tonnes of crushed palm kernel.

Guadalcanal Plains Palm Oil Limited (GPPOL) has limited storage facility at the processing site and need to truck CPO by road tanker to their storage facility at Point Cruz in Honiara (leased site inside SIPA port area – Figure 6) which hosts a small tank farm with a capacity of 5,000 tonnes. Due to limited storage capacity GPPOL must fix charter tankers to load small volumes of approximately 2,500-4,000 tonnes of CPO every month. Loading operations are by way of a pumping station owned and operated by GPPOL within their leased area which achieves a nominal rate of 220 tonnes per hour when loading tankers at the main wharf.

Figure 6 - GPPOL Bulk CPO Tank farm at Point Cruz

The nature of such small fixtures (volume) carries with it financial risks resulting from loading delays where the charterer bears the demurrage charge of vessel idle time. This occurred during the study team's field trip to Honiara in September where the tanker M.V Ludovica (47,000 DWT) was delayed 48 hours due to port congestion resulting in demurrage penalty to GPPOL. The Solomon Islands government and GPPOL have aspirational plans to double the area under oil palm by 2015 to around 15,000 hectares, which could see CPO production exceed 70,000 tonnes per annum. Additional storage capacity would need to be an integral part of this plan.

3.4.6 Fish transshipments

The Solomon Islands licenses foreign industrial distant water fleets to fish in the country's 200 nautical mile EEZ. As a signatory to the Parties to the Nauru Agreement (PNA) the Solomon Islands operates a Vessel Day Scheme (VDS) for purse seine vessels to fish in its waters where a total number of days for fishing are set for the PNA area, and then divided between the eight PNA ocean states which can also trade days between.

The majority of tuna caught in the Solomon Islands EEZ is transferred at anchorage in Honiara port limits from purse seine fishing vessels to refrigerated mother vessels (Figure 7), for transfer back to the home flag state (mostly SE Asia and North Asia) for processing.

The total transfer of transshipment of tuna at Honiara recorded by SIPA in 2010 was 122,700 tonnes, down by 38.5% on the previous year's record of 199,000 tonnes. Due to residual catch from other EEZ zones, the figures relating to purse seine anchorage transfer do not necessarily equate to the figures recorded by the various fisheries administrations responsible for monitoring catch in Pacific countries' EEZ, including the Western and Central Pacific Fisheries Commission (WCPFC) and Pacific Islands' Forum Fisheries Agency (FFA).

The licensing of foreign distant water fleets to fish in the Solomon Islands EEZ and Honiara port anchorage transfer of tuna is a focus issue for the Solomon Islands Government that has declared their intention to link licensing of tuna fishing in Solomon Islands EEZ to onshore processing of catch. The timing and development of onshore processing facilities capable of handling such volumes could be between 10-15 years in the future at which time Honiara anchorage transfers will be minimal.

Figure 7 - Honiara anchorage fish catch transfer operations

3.4.7 Timber exports

Honiara port does not handle the export of logs but receives significant throughput of export sawn timber in containers. In both 2009 and 2010 the total volume of export timber in containers loaded at Honiara port was 15,000 tonnes per annum.

The forestry and logging sector plays a significant role in the Solomon Islands' rural and broader economy. Timber exports make up 73 per cent of total exports in 2006 and 67 per cent in 2007, and 24 per cent of GDP in 2006 and 27 per cent in 2007[2]. Non-Government organisations have been warning that the current rate of logging is far above the natural replacement rate. The Central bank of the Solomon Islands (CBSI) stated that 'the current rate of log extraction is completely unsustainable'[3]. Significant volumes were exported in all quarters of 2007 except for the second quarter when international log prices were at their lowest. The bulk of the logs came from Western province with smaller production activities in Choiseul, Malaita, Guadalcanal, Isabel, and Makira provinces. The major export destinations for logs are China and Korea, while sawn timber is generally destined for Australia, New Zealand and China.

Under the Solomon Island Forestry Bill 2004, the processing in the Solomon Islands of timber harvested under commercial licenses requires at least 20% of the volume of logs exported per year by a licensee is to be processed either by the licensee, or another person or company that buys the logs from the licensee. This has led to increased volumes of sawn timber exports and establishment of saw mills and storage facilities in the Ranadi district of Honiara (Figure 8). A National Forest Assessment in 2007 concluded that by 2013 there will be no significant stock of natural logs left[4].

[2] ADB, 2008. Pacific Monitor: Solomon Islands.
[3] CBSI, 2007. Annual Report.
[4] The Australian National University, 2008. *Pacific Economic Bulletin* Volume 23, Number 3.

Figure 8 - Barges at Ranadi unloading sawn timber for export

3.5 Customs, quarantine and security procedures

The primary role of the Solomon Islands Customs and Excise Division (SICED) is to facilitate collection of excise revenue and protect the border from the illegal movement of goods and people. The Customs and Excise Division staff based at Honiara port is responsible for:

- Controlling incoming and outgoing vessels from international waters including boarding and granting of clearance and undertaking any rummage activity required to clear both incoming and outgoing vessels;
- Granting of clearance to incoming and outgoing pleasure boats/yachts;
- Undertaking risk assessment of incoming cargo to determine any interest for customs and excise;
- Processing of documentation of imported cargo and arranging for the delivery of import and export goods at the Customs Control Area;
- Overseeing the release of cargo clearance; and
- Collection of any revenue shortfall associated with importations.

There is a section in Customs called Private Warehousing that looks after the daily operation of private bonded warehouses. A private warehouse is a secured building provided by a trader, being privately owned, approved by the Comptroller by notice, in which either imported goods liable to Customs duty or locally manufactured goods liable to excise duty may be deposited without payment of duty until they are either delivered for home consumption whereby duty is payable, or delivered for export.

There are about 16 private warehouses operating mostly in Honiara. The main activities for customs officers working in warehousing are to:

- Manage and control private bonded warehouses;
- Process warehouse entries and data capture;
- Attend cargo delivery at bonded warehouses;
- Process and sign duty exemptions under customs tariff; and
- Analyse data, manage records and publish reports.

3.6 Assessment and Efficiency

3.6.1 Harbour Control

Control of vessels to, from and within the harbor generally works well. Practices which hinder or restrict efficient harbor control include:

- No suitable pilot boat for open sea operation, and inadequate availability of safety equipment (life preservers, flares, back-up motor, safety briefing) on the small open boats being used as pilot boats;
- No suitable line boats or mooring line handling equipment (boat hooks) to transfer lines from berthing vessels to the quay;
- No facility for international berth reservations (SIPA suspended this service in 2010);
- Few controls over berthing and occupancy of coastal berths; and
- No security or environmental patrols of anchorage or mooring areas.

3.6.2 Vessel navigation and berthing operation

Vessel numbers working at the main international wharf in Honiara have increased from 95 in 2007 to 108 in 2010, with a change of only 13. International vessels servicing Honiara also continue to increase in physical size and capacity. In 1977, the typical general cargo vessel was 80m LOA and 3,500 GRT compared to 2011 with ships of 160m LOA and 10,000 GRT.

The navigation and berthing operation for most ships visiting Honiara is generally safe and straight-forward. Occasionally, when a strong easterly or north-easterly wind is blowing, larger ships can be difficult to handle when berthing, and in these conditions it is often necessary for the bow anchor of the ship to be lowered to provide additional holding to prevent the ship from overshooting the inner (western) end of the main wharf and running aground in the vicinity of the copra berth.

3.6.3 Vessel berthing arrangements – international

As international ships get larger in the future, as predicted (refer Section 3.3.2) the berthing operation at the main wharf is likely to become more difficult. This will be the case when the strong north-easterly winds are blowing, which tend to push the ship onto the berth. The presence of a small but distinct coral shoal (Pelope Shoal) about 170 m east of the main berth, with a minimum depth of 9 m also creates a hazard to berthing for the larger vessels using the main wharf.

Some assistance to larger ships from a small push boat would be advantageous. The services of a large tug boat are not considered to be warranted at this time.

3.6.4 Vessel berthing arrangements – domestic

At the seven domestic wharves and two domestic loading ramps, considerable congestion of domestic coastal ships creates a situation of continuous hazard, especially when one or more passenger vessels are berthed (Figure 9). Coastal vessels typically berth bow-in at these domestic wharves and often raft up to allow all vessels to berth.

The condition of some of these domestic wharves is poor, and in most cases the old rubber or timber fenders no longer exist. Mooring bollards are also typically in poor condition.

Although the Harbourmaster is responsible for recording all berth occupancies at the domestic berths, this is not done with complete accuracy, and it is likely that potential berth charges income is not collected as a result. It has also been observed that on regular

occasions coastal vessels remain at their allocated berth for a number of days, although not directly engaged in loading or unloading cargo over the entire period. This contributes to unnecessary congestion at the berths.

To effect a more efficient utilisation of domestic wharves, the Harbourmaster needs to more strongly enforce berth usage so as to ensure that all berth dues are collected, and that any ship operator who fails to pay the charges is denied access to a berth, forcibly if necessary.

Figure 9 - Congestion at coastal berths

3.6.5 Security – port and harbour

SIPA delivers compliance activities under the ISPS code for the protection of people, port facilities and international ships at anchorage, moorings and berths within its designated port limits. All foreign vessels in Solomon Islands waters to which the IMO SOLAS convention applies including local cargo vessels which are more than 500 GRT, must have a valid ISSC to berth at the Honiara or Noro International Wharf. This also applies to fishing vessels local and overseas, greater than 12m in length, and fishing in the Solomon Islands EEZ. It is a requirement that 24 hours' notice of vessel arrival is given to the PFSO by shipping agents. International vessels arriving on maiden voyage are required to be boarded and inspected by the PFSO Officer once berthed at the Port of Honiara. All vessels must supply crew lists to security guard house to allow access in and out of the Port of Honiara.

SIPA also provides security surveillance inside and at the boundaries of the port secure area, and security officers monitor all entry and exit activities at the port entry and exit gates. Although there are only two permanent points of entry/exit to the port, other ISPS-registered gates exist within the perimeter fence, and occasional breaches of security appear to occur through these gates. In addition, a significant length of the perimeter of the port is not contained by a perimeter fence, and breaches of port security by unauthorised persons across this boundary have been reported to occur from time to time. This should be rectified by installing a new perimeter fence along the northern boundary of the port.

The Port of Honiara currently operates as a general cargo port, to provide import and export of a wide range of goods. In summary, the port operations are characterised by:

- A single overseas berth;
- A number of small domestic berths;
- A "Mediterranean mooring" for bulk fuel imports;
- An offshore anchorage to accommodate commercial fishing vessels;

- A secure port operating area of 6.3 hectares;
- A total of 1,140 vessels visited the port in 2010;
- Export trades include palm oil, bulk copra, sawn timber, scrap metal, palm kernel expeller and empty containers;
- Import trades include general cargoes, mining equipment, motor vehicles, bulk fuels, LPG and frozen (transhipment) fish;
- Stevedoring is operated by SIPA;
- Vessel navigation is not constrained by channels or accessibility to the port;
- Vessel berthing is somewhat constrained by only one overseas berth being available, which occasionally causes some international vessel queuing; and
- Domestic vessel berthing is extremely congested, possibly due in part to inadequate collection of berthing dues and enforcement of berth occupancy.

4 Existing Infrastructure

4.1 Port Infrastructure and Facilities

4.1.1 Tides

According to the Admiralty Marine Chart No. 1750 prepared in 1995 (Figure 10 below), the tides at Honiara are diurnal (there is one tide cycle per day) and the tide heights above Chart Datum are:

Table 5 - Tide table Honiara

Tide State	Height (m)
Mean Highest High Water (MHHW)	+1.0
Mean Sea Level (MLS)	+0.7
Mean Lowest Low Water (MLLW)	+0.5
Lowest Astronomical Tide (LAT) (Tide Datum)	0.0

Note: For this Study, Chart Datum has been used for all levels cited.

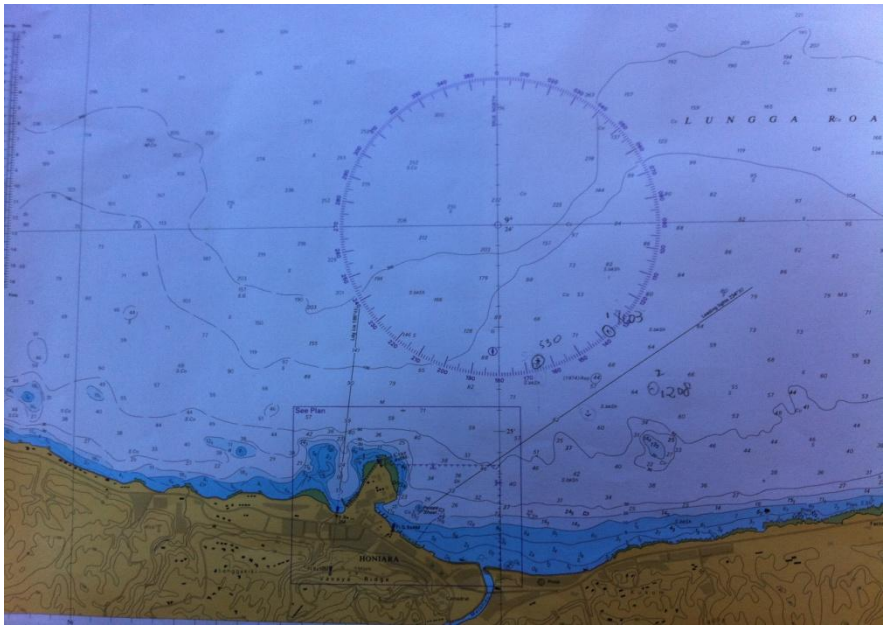
4.1.2 Currents

The Second Honiara Port Development Project in 1988 made comprehensive measurements of the currents during both ebb and flood tides in the vicinity of the main wharf. Measurements showed that current speeds typically do not exceed 0.6 km/hour with the direction of current flows being predominantly from south to north during both ebb and flood tide cycles.

4.1.3 Marine Chart

Honiara harbour is shown on the Admiralty Marine Chart 1750 titled, “Honiara Harbour and Anchorages in Guadalcanal Island” (Figure 10).

Figure 10 - Marine Chart 1750



4.1.4 Port Limits

The seaward port limits are defined by:

Boundary	Latitude	Longitude
North	9° 24' S	-
East	-	160° 01'E
West	-	159° 56' E

The landside port limits are defined by a number of documents which show boundaries defined at various times during the port's evolution. No one legal or statutory document defines the entire landside boundary of the port limits. This has created some uncertainty with the administration of commercial leases and the overall management of the Port's land.

SIPA management has provided a drawing to show the current status of the landside port limits. This drawing is assumed to be accurate although it is not supported directly by statutory documentation.

4.1.5 Approach Channel

The approaches to the port of Honiara are from both the east and the west along the north coast of the island of Guadalcanal. The eastern approach is through the Sealark Channel, which has a minimum width of 1.6nm (3,000m). The minimum depth within this channel is approximately 165m. The approach from the west is via the main shipping lanes either between Guadalcanal and Savo Island or between Savo Island and Florida Island further to the north. Depths exceed 700m.

In the vicinity of the Port of Honiara, the navigable depth of the approach is approximately 23m. A small but distinct coral shoal (Pelope Shoal) exists about 170m east of the main berth, with a minimum depth of 9m. This shoal is a hazard to berthing for the larger vessels using the main wharf. No dredging is required to maintain navigable depths within the port limits.

At the domestic berths located along the shoreline east of the main berth, depths alongside the wharves is typically no less than about 2m.

4.1.6 Anchorage

The present anchorage located to the north-east of the port within Iron Bottom Sound is a well situated area where a large number of vessels can anchor safely. The usable area of the anchorage is approximately 16 km^2. The general depth of the anchorage ranges from about 35m to as deep as 100m. Iron Bottom Sound is up to 700m or more in depth. The pilot decides where in the anchorage a vessel is to be located.

The anchorage is a very significant natural asset for the Port of Honiara, which adds considerable value for attracting fishing vessels to Honiara for transshipment of catch, as well as providing mooring space for cargo vessels waiting to berth at the main berth.

4.1.7 Swing basin and berth box

There is adequate space directly in front of the main berth to swing vessels to moor them bow-out at the main wharf. There is, however, no formal swing basin shown on the chart. No significant influence from currents exists in the area where vessels are turned. The approach to the main wharf can sometimes be difficult when the wind is blowing from the north-east.

However, berthing of vessels is always completed without the assistance of tugs. Most overseas vessels visiting Honiara are equipped with bow thrusters which assists the berthing manoeuvre. The study team observed the reliance on line boats to run first bow mooring line to the mooring dolphin after which the vessel swings onto the berth (Figure 11). The chart shows a minimum depth at the berth of 9.0m below Chart Datum.

Figure 11 - International vessel using line boat during mooring at Honiara main wharf

4.1.8 Main wharf

The main wharf comprises two distinct sections. The inner (western) section was constructed in 1983 and comprises a reinforced concrete deck supported by a grid of steel segmental piles. This section is 46m in length and has limited load capacity of 15tonne axle load. This limited capacity is inadequate for carrying loaded container-handling equipment such as loaded forklift trucks. However, tractor/trailers can be used to move full container across this section of the wharf.

The outer (eastern) section of the main wharf was constructed in 1989/91, is 74m in length and comprises a concrete apron supported fill which in turn is retained by a front row of steel tube secant piles, restrained by steel wire tie-back anchors. The wharf structure is backfilled with general fill material and a 250mm thick concrete slab pavement surface.

The complete wharf is 120m long with a declared depth at the berth of 9.0m below MSL.

The deck level at the berth line is +2.23m above Chart Datum, which is assumed to be Lowest Astronomical Tide (LAT). Pairs of rubber arch fenders, type V500H, 1.65m long, in pairs at 7.74m centers, were installed along the berth face, with larger fenders installed at the outer (eastern) corner of the berth. None of the fenders remain and used rubber truck and tractor tyres supported on chains and attached to the bollards are now used as fendering for the berth (Figure 12). The 50 tonne bollards are provided at 15.5m intervals along the wharf. Along the inner (western) section of the berth, rubber tyres are used for fendering, and horn bollards of indeterminate capacity are provided.

A single mooring dolphin is located at the outer (eastern) end of the berth, which has an estimated capacity of 100 tonnes of line pull load. A second mooring bollard is located further to the north of the eastern end of the berth, for mooring larger vessels.

SIPA provided archival copies of old reports covering previous ADB and other port project studies. These include the Second Honiara Port Project Inception Report (ADB, July 1986),

and the Honiara Port Development Project Feasibility Study Report (Japan Transport Cooperation Association, December 2005). These reports provide valuable historical information regarding the development of the port in the last 30 years.

Construction drawings showing the Second Honiara Port Project (1988) were also provided. This set of drawings shows all details of the existing 74m length of the outer (eastern) section of the main wharf structure, constructed in 1991.

Figure 12 – Used earth moving tyres used as fenders at Main international wharf

4.1.9 Coastal/Domestic and passenger wharves

A total of 10 domestic wharves and landings are located to the east of the main wharf, for use by a wide range of domestic and coastal vessels carrying both cargoes and passengers to and from other islands and locations across the Solomon Islands. These wharves are 30 to 35 m long.

One jetty, toward the eastern end (between Vaukei Wharf and the Island Wharf) has recently been constructed, together with a concrete revetment to absorb wave energy adjacent to the wharf (Figure 13).

Figure 13 - Recent constructed coastal jetty

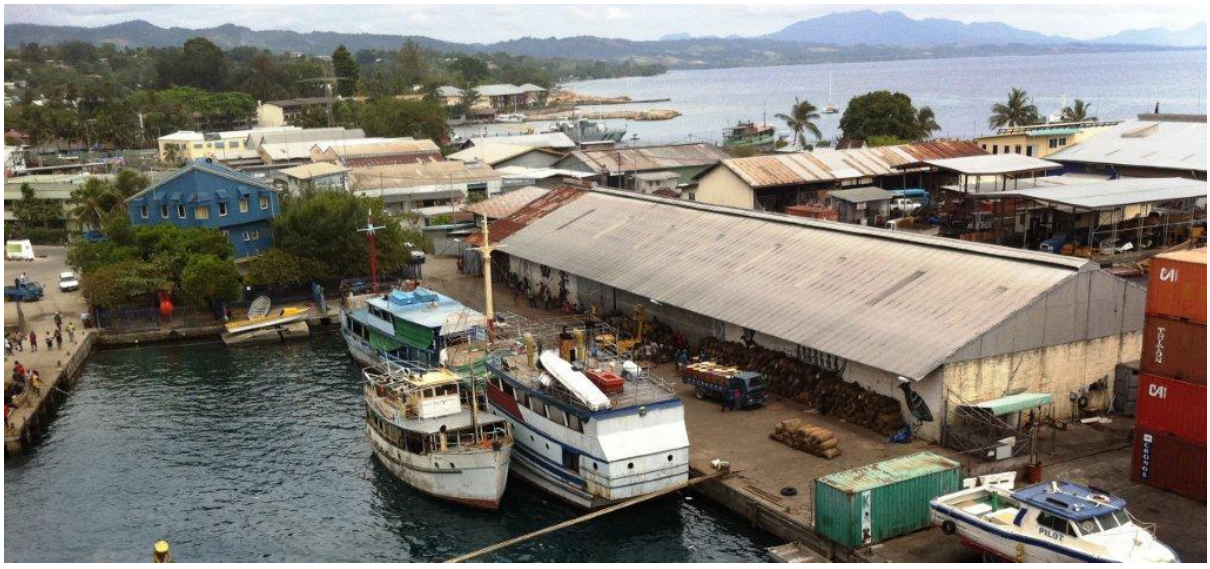
These domestic wharves are backed by a wide area of roadway which serves as a delivery and set-down area for domestic cargoes and passengers. This area extends approximately 340m to the east from Commonwealth Avenue, and between the South Pacific Oils fence line and the shoreline, the width of which is approximately 30-45m. This roadway is not sealed and can get very dusty during periods of heavy vehicle traffic.

Because the back-up area behind the domestic wharves is unsealed, there is no line marking and no control of road traffic. Both ends are open so road traffic comes and goes with no control. In addition, foot traffic is common, especially during periods when passenger ferry vessels are berthed at the Island Jetty at the eastern end.

The first domestic berth is located directly inshore of the main overseas wharf, and serves as the primary berth for unloading copra from domestic vessels bringing copra from plantations across the Solomon Islands (Figure 14). The berth is 82m in length, although, because it is set back from the fender line of the main berth, the copra berth is limited to berthing vessels of maximum length of about 40m. One of the copra sheds (there are three within the port limits) is located directly adjacent to this copra berth.

Apart from a dedicated wharf for passenger vessels, no facilities for passengers such as shelters or ticket booths exist at the port.

Figure 14 - Copra berth and Copra shed Honiara port



4.1.10 Bulk fuels moorings

All bulk fuels are imported by discharging from bulk tanker vessels moored at a dedicated set of three mooring buoys located about 350 m south-east of the main wharf. Bulk fuel vessels moor stern-to to these buoys (Mediterranean mooring), with bow anchors set offshore (Figure 15). A submarine pipeline is used to unload bulk fuels to either the South Pacific Oil's tank farm or the Markwarth tank farm. An underground pipeline is used to deliver fuels to both these tank farms, for on-distribution to customers.

Figure 15 - Tanker at mooring buoys in Honiara discharging petroleum products

4.1.11 Port land

The total area of the container yard operated by SIPA's stevedoring division, amounts to approximately 30,000m^2 (3.0 ha). The container yard is paved with concrete ground slab across the entire area. Additional land inside the port secure area amounts to approximately 30,350m^2 (3.0 ha), which is utilised for a range of purposes cited in Table 6:

Table 6 - Non-container storage areas inside the secure port limits

Area	Use	Useable area, m^2
4. Northern reclamation	Storage of scrap and obsolete plant, partially vacant	17,700
5. Copra shed (Foxwood)	Copra receival, unpacking and bulk copra storage	1,900
10. GPPOL tank farm	Palm oil receival and storage	3,500
12. SIPA plant workshop	Repair and maintenance of SIPA plant and equipment	3,500
13. Transit shed	Empty	950
14. Transit shed	Short-term storage of loose imported cargoes	950
15. Copra shed	Copra receival, unpacking and bulk copra storage	1,850
	Total Area of Non-Container Storage	**30,350**

A further area of approximately 10,850m^2 (1.1 ha) within the port limits but outside the port secure area is leased to private commercial enterprises or are utilised for other Port administration purposes for a wide range of commercial and other activities (Table 7).

Table 7 - Non-container storage areas outside the secure port limits

Area	Use	Useable area, m^2
7. Container unpacking yard	Unpacking import containers by customers	4,200
8. Customs	Customs and border security head office	1,700
9. SIPA head office	Port administration	950
10. Copra shed	Copra receival, unpacking and bulk copra storage	2,000
12. Mixed businesses	Port workshop, meals area	2,000
	Total Area of Non-Container Storage	10,850

4.1.12 Terminal services and utilities

Services provided directly behind the main wharf are limited to a single water point. Floodlighting is provided from a number of poles located across the full extent of the container storage area; however, none of these lights appears to be in operating order. There is no fire main or other fire service available within the Port secure area.

Two cargo sheds are operated, to store general cargo from imported containers awaiting collection by customers. However, one of these sheds is not being used and the other is under-utilised. Both sheds are in sound condition and do not require any major maintenance.

4.1.13 Other berth structures

A finger jetty located at the far western end of the port area, adjacent to the yacht club, is used by the Royal Solomon Islands Police as a base for their patrol vessels and their coastal surveillance operations. An operations building is located adjacent to the jetty, together with other operations equipment including a radio mast. This police jetty is understood to be outside the Port limits, and as such is not included in the deliberations of this Study.

4.2 Supporting Infrastructure, Plant and Facilities

4.2.1 Port offices

A main office building was, according to the Port asset register, constructed in 1994 to accommodate SIPA administration personnel. A separate building adequately accommodates the Harbourmaster and his staff. These buildings are in reasonable condition.

4.2.2 Stevedoring plant and equipment

Cargo-handling equipment owned and operated by SIPA includes both fully operational equipment and equipment which is unserviceable and should be scrapped and removed from the asset registers or replaced with new equipment, if required. Operational equipment, which includes a number of items currently being repaired, is shown in Table 8.

Table 8 - Container-handling equipment

Item	Capacity, tonnes	Age, years
Hyster H32.00C FLT	32	21
Omega 48D FLT	48	7
Omega 54E FLT	54	5
Omega 4ECH FLT	16	1
TCM FD70Z8 FLT	7	2 (second-hand)
Hino tractor/tug	-	17
Sisu tractor, 2 no.	-	13
Mercury tractor	-	1 (second hand)
Skeletal trailer	20 ft.	1
Skeletal trailer	40 ft.	1
PPM 530ATT mobile crane	38	2 (second hand)
Copra dozer, 3 no.	-	2, 6, 23

FLT = forklift truck

In addition, SIPA owns a fleet of earthmoving equipment, for use in reclamation works and general site maintenance (Table 9).

Table 9 - Earthmoving equipment

Item	Capacity, tonnes	Age, years
Cat 914G wheeled loader	-	2 (second hand)
Hino tipper truck, 3 no.	8 (estimated)	not known
Komatsu D85A dozer	-	not known
Komatsu JV100WA smooth drum roller	11	not known
Ingersoll Rand SD 150D sheepsfoot roller	15	not known
Komatsu PC 150 excavator,	15	not known
Komatsu GD521A grader	-	not known

All of SIPA's plant and equipment is serviced and maintained in-house by SIPA's Operations Department in a large maintenance area consisting of workshops and parts storage which occupies 3,500m^2 within the port secure area (Figure 16).

Figure 16 - Plant workshops in secure port operations area

4.2.3 Port work vessels

SIPA possesses one aluminum runabout which is used as a service boat for pilot use. This boat is not equipped with any safety equipment, such as life preservers, flares, auxiliary engine, tow rope, buoyancy tanks, navigation lights, etc. A large fibreglass pilot boat was being used until 2010 (Figure 17). This vessel became inoperable when its motor was removed and used as a replacement motor in the old Hyster 32T FLT.

The Harbourmaster has advised that a new pilot boat has been ordered and is waiting to be delivered to SIPA at a cost of SBD2 million.

Figure 17 - Pilot boat (original engine removed) laid-up inside Honiara terminal

4.2.4 Navigation aids

SIPA maintains a small number of navigation aids within the port of Honiara. Nationally, SIMSA has responsibility for the provision and maintenance of navigation aids. The navigation aids within Honiara Port are working well and are adequately maintained.

4.2.5 Ship repair

No significant facilities for ship repair are available in the port. There are no slipway facilities, nor vessel servicing facilities or capability. There is, however, a commercial slipway and ship repair facility (Sasape Marina) at Tulagi, approximately 23nm (42km) north-east of Honiara across Iron Bottom Sound.

4.2.6 Safety and security

The Safety and Security (S&S) Division administers port and terminal security, in particular, providing access control at the main entry and exit gates to the port terminal. Simple procedures for admitting visitors and trucks comprise signing-in at the gate and issue of a temporary pass (refer to Section 3).

The S&S Division Manager reported that perimeter fence breaches and entry from the sea where a perimeter fence does not exist are a constant problem, resulting in extensive pilfering of cargo.

Security and pollution control surveillance at the anchorage is virtually non-existent, except when the pilot and attending pilot boat visit this area. A suitable surveillance patrol boat is not available which would allow security personnel to make regular patrols of the anchorage.

4.3 Other Off-Port Infrastructure

4.3.1 Port access roads

The main port access road is Commonwealth Avenue, which connects with Mendana Avenue, the main coastal road through Honiara, in the center of the Honiara central business district. Commonwealth Avenue provides direct access for virtually all vehicles to both the domestic and passenger wharves as well as to the secure port area via Dowling Drive (Figures 18 and 19). Both Commonwealth Avenue and Dowling Drive are sealed public roads administered and maintained by the Ministry of Infrastructure Development (MID). A small volume of port traffic uses a non-declared unsealed roadway (Savo Street) running from Mendana Avenue west of Commonwealth Avenue, past the Yacht Club to Dowling Drive. This road also provides direct access to the Markwarth fuel terminal and to a number of small port-related and other businesses in the area west of the Port.

Figure 18 - Dowling Street looking north - access to port terminal

Figure 19 - Exit gate on Dowling Street

The entry gate to the port secure area (ISPS Gate 1) is located at the end of Dowling Street. The exit gate (ISPS Gate 2) is also located on Dowling Street.

Access to the domestic and passenger wharves is open to the public and comprises a large unsealed access area measuring about 340m in length and 30m wide, along the Honiara foreshore (Figure 20). Another unsealed access road, which is currently the subject of a Government proposal for gazetting as a port road, is located at the far eastern end of the domestic wharf area, adjacent to the eastern boundary of the South Pacific Oil terminal. This road provides additional access directly to Mendana Avenue close to the Honiara market. The total area of this access to the domestic wharves is approximately 10,000m^2.

Figure 20 – Access road to coastal jetties and ramps – looking east

Large volumes of both port and non-port traffic using Commonwealth Avenue and Dowling Drive have been observed. In addition, the domestic wharf access area handles large volumes of small truck and taxi traffic, which are active in domestic cargo loading and

unloading, as well as delivering and taking a large number of passengers when passenger vessels are arriving and departing.

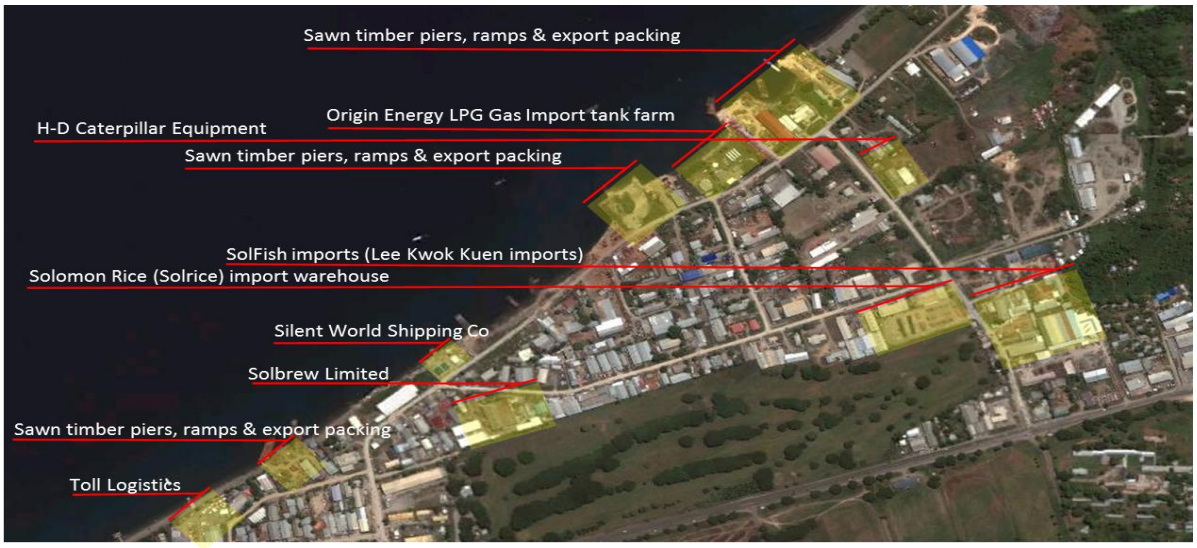
All port traffic arrives at and departs from the port via Mendana Avenue, resulting in significant road traffic congestion in Honiara CBD during periods of port activity. Mendana Avenue comprises a four-lane divided road with a number of roundabouts located at major intersections. This street is the only main road passing through the Honiara CBD, and becomes heavily congested at varying times of the day (Figure 21).

Figure 21 - Mendana Ave traffic weekday 2:30pm - looking west towards Honiara port

4.3.2 Industrial areas

Ranadi is 8 km to the east of Point Cruz port and is the main industrial location serving Honiara. Access to Ranadi from Point Cruz is via Commonwealth Street, Mendana Avenue and the Kukum Highway having two main access streets to the north of the highway at both the western and eastern extremes of the golf club. Ranadi consists of approximately 50 hectares of industrial land occupied by approximately 90 operational business enterprises including exporters of sawn timber and some of the largest volume importers of containerized products into the Solomon Islands (Figure 22).

Figure 22 - Ranadi Industrial area showing major industries

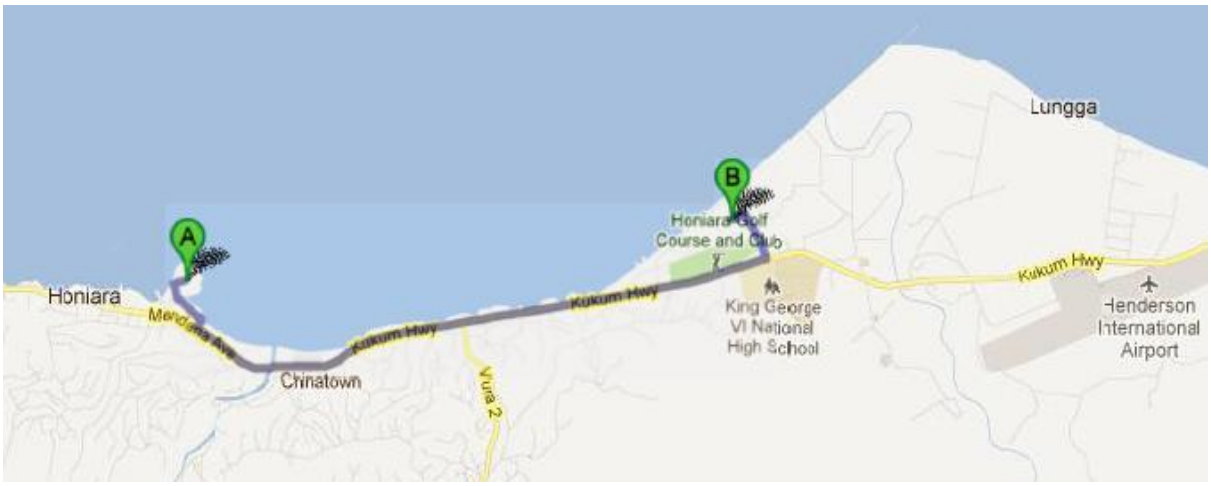


It is estimated that the journey between Ranadi industrial area and Honiara port gates takes up to two hours round trip (including waiting time at port) for empty truck front haul and laden truck backhaul during business hours compared to a similar journey after midnight of approximately 90 minutes. Figure 23 shows the driving route between Honiara Port and Ranadi industrial area.

An option to stage block truck runs from Honiara port at Point Cruz port to Ranadi during night time hours would also serve to alleviate congestion within the Honiara CBD and main arterial roads during business hours and improve road safety for passenger vehicles and pedestrians.

In addition to the Ranadi Industrial area being located to the east of Honiara port, other major industrials such as GPPOL, SIEA, Gold Ridge Mine and the international airport are also located east of Point Cruz. This condition underpins the importance of the eastern sector of Honiara as the focus for continued industrial developments and supports the proposal made to SIPA to investigate opportunities to develop an inland container terminal within the eastern district 6 to 10km from Honiara to be included into a Master Plan.

Figure 23 - Route from Point Cruz port to Ranadi industrial area



4.3.3 Beach landing area

Under the Community Service Obligation (CSO) requirements stipulated under the State Owned Enterprise Act, SIPA supplies and maintain an area of gentle sloping beach to the west of Point Cruz. This beach landing consists of approximately 120m of water frontage as access for small outboard motor driven craft that serve outlying island communities with transport for agricultural exports, inbound stores and passenger services (Figure 24). There is an evident need to better define the CSO obligation with minimum levels of service and this would be best served by SIPA developing a CSO working group and inviting feedback from users and other stakeholders.

Figure 24 - Beach landing area provided by SIPA under CSO statute

4.4 Assessment and Efficiency

4.4.1 Main wharf

The older (western) section of the main wharf structure is nearly 30 years old and is likely to be deteriorating to the extent of possibly approaching the end of its useful life. To assess this in more detail, a thorough and systematic inspection and condition assessment of the structure needs to be undertaken by an experienced maritime structural engineer. This assessment will need to investigate the condition of concrete and steel making up the structure. This should provide information for determining the remaining life of this section of the main wharf, thereby assisting in making a decision on when this part of the structure should be replaced.

All the bollards mounted along the quay are in poor to unserviceable condition due to heavy corrosion, and need to be replaced as soon as possible (Figure 25).

Figure 25 - Bollards at main wharf requiring replacement

All rubber fenders which were originally mounted on the front face of the wharf (both the western and eastern sections) have now disappeared and must be reinstated with new fenders. The large truck and tractor tyres currently being used as fenders are entirely unsatisfactory since they provide virtually no capacity to absorb the energy of berthing vessels. Installing new fenders is a difficult task since the original embedded fasteners are damaged and corroded. New fasteners will need to be fixed into the front face of the wharf structure in order to mount the new fenders. Other wharf hardware (e.g., access ladders), should be replaced at the same time as the new fenders are fitted.

4.4.2 Coastal and passenger wharves

Based on a general observation, all the coastal wharves except for the newly constructed Kwalemanu Wharf (in 2010) and the adjacent Vaukei Wharf, are in poor to very poor condition, and a rolling program should be implemented to replace them as funds become available. The design of replacement finger wharves should take into account any opportunity to extend the staging area behind the present wharves further seaward to make additional space available for vehicles servicing these wharves.

Safety, particularly for passengers travelling on inter-island passenger vessels, would be significantly improved if passenger embarkation and disembarkation were separated from domestic cargo loading operations. In addition, passengers should not be permitted to travel on cargo vessels. SIPA and SIMSA should work jointly to seek remedies to these issues.

4.4.3 Container yard

Fire services

A major omission from previous developments of the main wharf and container yard is the provision of fire mains and hydrants. A high priority addition to the port should be a fire ring main together with an adequate number of fire hydrants. This is particularly important at this port because copra, which is stored in three different sheds located across the port, is a Class 4.2 classified cargo (International Maritime Dangerous Goods Code) with very high fire risk status due to its tendency to spontaneously combust.

Terminal lighting

A number of light towers are located across the container terminal area, but random testing showed that none of these lights were operational. This creates a hazardous situation for night operation of the terminal, since the only lighting available comes from ship's lights and lights on mobile container-handling equipment. There are a few portable lights available but as these are mounted on low poles (approximately 1.5m high) they are not particularly useful and tend to create considerable glare, which increases rather than reduces the hazard.

4.4.4 Other in-port facilities

Non-productive areas of Port land

A number of areas across the port are presently not used productively for cargo handling or other core port activities. Some areas, at the northern end of the port, used for storing obsolete and non-operating plant and equipment occupy valuable land (Figure 26), which could be opened up for additional container stacking areas. A number of sheds are not being used and also occupy valuable land which if demolished, could be useful areas for container storage and commercial cargo operations.

Figure 26 - Obsolete and non-operating equipment at north end of Honiara port

4.4.5 Access to the Port

The public roads which provide primary access to the port – Mendana Avenue leading into Commonwealth Avenue – are at times heavily congested with domestic and commercial traffic. Vehicles delivering containers and other cargoes to and from the port contribute to this congestion by the very nature and size of the trucks, particularly those carrying containers and bulk fuels. A large volume of smaller trucks is engaged in collecting and delivering cargoes to the domestic wharves also adds to the congestion.

Since Mendana Avenue provides the only road into and out of Honiara CBD, to both the east and west along the coast, there are no simple solutions to relieving this traffic congestion. From discussions with MID, it is understood that there are concept plans to construct a bypass road around Honiara CBD. This will relieve some of the traffic congestion within proximity to the port. MID also has a concept plan to construct a port access road along the foreshore of Honiara from the end of the domestic wharves area to the main roundabout 600m to the east. This new concept road would redirect port-generated traffic away from Mendana Avenue within Honiara's busiest precinct.

All roads outside the Port secure area are the responsibility of MID and any improvements needed to relieve the existing and likely future congestion on these roads will need to be coordinated with MID planners and engineers.

The Port at Point Cruz is endowed with a wide range of port infrastructure to facilitate operation of the port. This includes:

- A 120m long main wharf with a declared depth of 9.0m below MSL. Severely damaged fenders and bollards compromise vessels berthing at the main wharf. The structural condition of the main wharf is unknown and a detailed survey of the structure is recommended;
- Ten domestic wharves and loading ramps, some of which are in very poor condition and require replacing, following detailed structural survey to set replacement priority;
- Passenger vessels mix with domestic cargo vessels, endangering passengers and pedestrians – a separate passenger terminal is planned;
- A "Mediterranean mooring" arrangement for unloading bulk fuels to two tank farms located within the port;

- Port land totalling 7 ha, of which 3 ha is used for a container yard. At least 3 ha is occupied by non-productive activities/storage which could be better utilised for port operations. Fire services and terminal lighting need immediate upgrading;
- SIPA's stevedoring operation includes a plant workshop and a large fleet of container-handling and earth-moving plant;
- SIPA presently does not have an adequate port work boat or pilot boat. A new pilot boat has been ordered and will be delivered early in 2012; and
- Local roads providing access to the port are congested and in poor condition. In addition, the roadway adjacent to the domestic wharves is unsealed and in very poor condition. SIPA needs to work with the relevant Government Department to have these roads adequately upgraded and maintained.

5 Institutional and Organizational Assessment

5.1 Institutional Framework

SIPA was established in 1956 as a statutory corporation of the Solomon Islands Government reporting to the Minister of Commerce. The Ports Authority Act was the original legislative instrument empowering SIPA to acquire, construct, manufacture, maintain or repair anything required for the purposes of SIPA:

- To provide services such as stevedoring and wharfage;
- To load and unload ships;
- To regulate the use of Solomon Islands ports activities;
- To maintain, clean, deepen, improve or alter any port; and
- To deliver the usual range of port services.

The Ports Act states that SIPA may "carry on the business of carrier by land or sea, stevedore, wharfinger, warehouseman or lighterman" but may also "determine and impose charges for any services performed by the Authority and for the grant to any person of any license, permit or certificate for the undertaking for the loading and unloading or warehousing of goods in any port". This establishes the understanding that SIPA may contract or concession the activity of stevedoring and warehousing at the ports they control.

The Act establishing SIPA was last updated in 1996. SIPA is now a wholly owned Solomon Islands Government authority subject to the SOE Act of 2007 reporting to the Minister of Infrastructure Development. It is responsible currently for the operation of the ports of Honiara and Noro. It has a board comprising of nine directors. The current board is in transition after completing its two year term, with newly elected directors expected to be announced by the end of 2011.

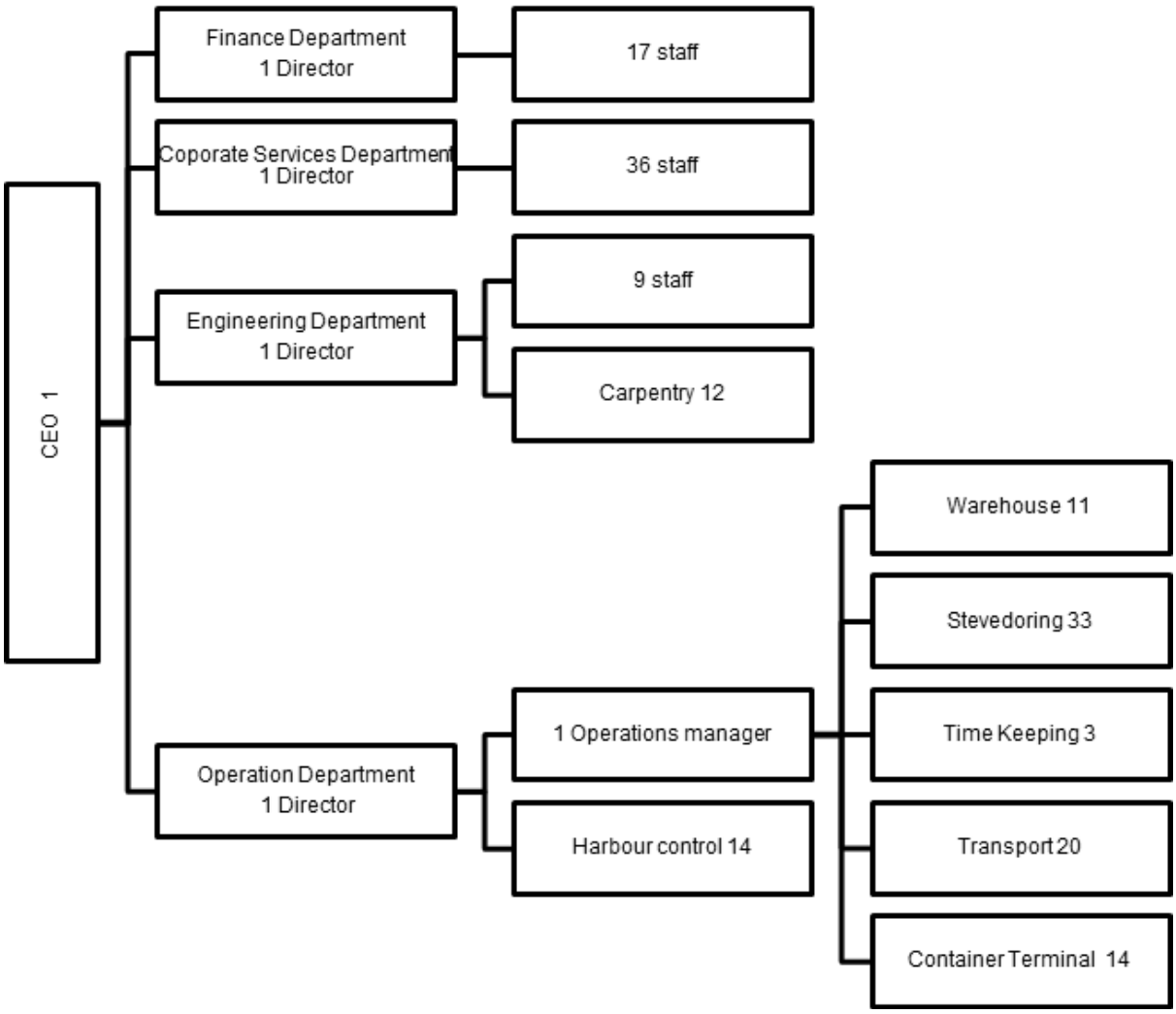
The Board is required to meet at a minimum of four times per annum or as per special requirement. The SOE Regulations state that the term of appointment for directors is three years or less and individuals must not serve more than six continuous years as a board member. From discussions with board members, in the past 12 months, the current SIPA Board has officially met twice.

The SOE Act and Regulations define a specific regime for the Board for accountability and timing for reporting of financial statements, corporate objectives, performance targets and policies controlling such activities. The Act also states that the Minister may modify such corporate objectives by providing adequate notice to the Board. Therefore the SIPA Board is provided a prescriptive regime of governance and management policy to follow as described clearly in the SOE Act, SOE Regulations and by following the responsible activities declared in the Ports Act. The SIPA Board limiting meetings to twice in a year is non-compliant of the SOE Act and Regulation reporting requirements.

5.2 Organizational Framework

SIPA has a hierarchical structure of management consisting of four operating departments, each headed by a director. Each departmental director is responsible to the Chief Executive Officer of SIPA. The CEO reports to the SIPA board of directors that is designated to meet quarterly, whom in turn report directly to the Minister of Infrastructure Development. The four SIPA departments (often referred to as Divisions) are determined based on operating activity. Figure 27 details the existing organizational structure of SIPA.

Figure 27 - Organizational Chart SIPA 2011



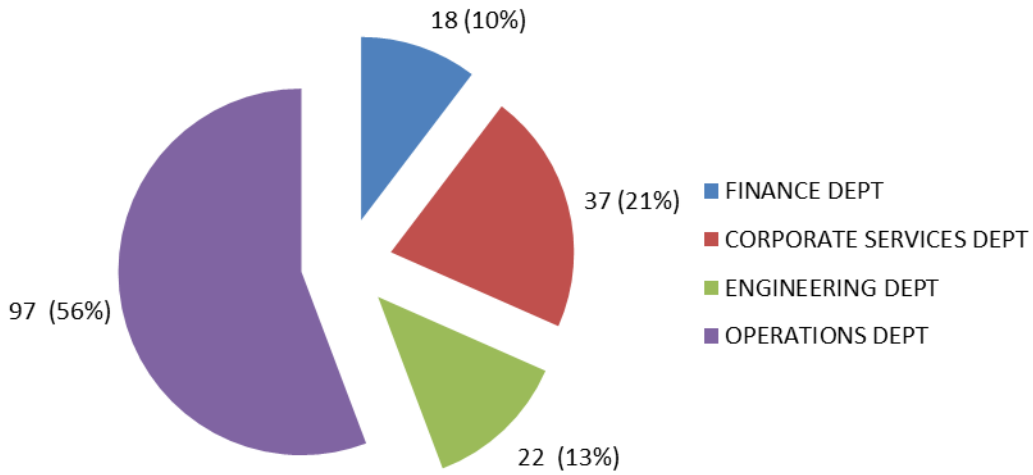
There are currently 175 direct employees at SIPA with an unknown number of casual labour staff employed during peak periods of stevedoring activity. This current staffing number is a reduction of 80 compared to staffing numbers of 255 in 1996. The current weighting of staff numbers in SIPA shows that 56% of staff (Figure 28) is employed under the operations department which consists of one manager and one director who is also the harbour master. The four functional departments of SIPA are responsible for the following activities:

- Operations department: stevedoring, harbour control, navigation services and pilotage, warehousing, transport and general cargo services.
- Engineering department: design and development, management and maintenance of wharves, jetties, plant equipment and vehicles, port buildings, staff housing and roads.
- Finance department: financial management & planning, purchasing and stores, fixed assets control, general cash flow and accounting control, cashier services, statistics and payroll.
- Corporate Services: Administrative services, staff training and development, Industrial relations and occupational health and workplace safety, salary administration and information services.

The Operations Department responsible for a wide range of operations and activities is headed by a single line manager (Operations Director) who is also the Harbour Master. This is assessed as being outside the capability for one person to effectively manage and contain such a wide range of business activities. In addition, the Harbour Master/Operations Director is housed in a separate complex from the main SIPA administrative building which was purpose built as a harbour control tower. Given that the Operations Department is responsible for operating revenues amounting to 88% of total SIPA income, realignment of management responsibility is seen as a priority.

The assessment of the organizational structure and key responsibilities of each department demonstrates a concentration of engineering and operational tasks and functions and an absence of commercial and marketing management at SIPA. The lack of customer interaction and commercial relationships with the market was further expressed by several major customers of SIPA when conducting interviews with importers and exporters, shipping lines and agents as regular users of SIPA facilities at Honiara.

Figure 28 - SIPA departmental staff allocation



5.3 Current Policies and Strategies

SIPA currently operates predominantly with a public character as a full Service Port or Tool Port by providing a full range of services required for the functioning of the seaport system. SIPA owns, maintains and operates every available asset (fixed and mobile) and cargo-handling activities are executed by labour employed directly by the Port Authority. In a classic tool port model, SIPA owns, develops and maintains the port infrastructure as well as the superstructure, including cargo-handling equipment such as mobile quay cranes and heavy forklift trucks, etc. SIPA employs staff to operate and maintain all Port Authority owned equipment. Apart from the existing lease arrangement for a crude palm oil tank farm on port land which is operated by GPPOL and several copra exporters who rent warehouse space for receival and storage of copra, there is no other cargo-handling or port service activity in Honiara either on board vessels or on the quay which is carried out by private cargo-handling firms contracted by the shipping agents or other principals licensed by the Port Authority.

As a primary policy and process tool, SIPA has an established Company Handbook which is in line with policy directives established from the SOE Regulations. The Company Handbook is updated as required from time to time (often referred to as "The Manual") and contains approved policies and practices endorsed by the SIPA Board.

In the capacity of strategic planning, there exists a draft Statement of Corporate Objectives prepared in 2007 and a draft Corporate Plan prepared in 2005.

There is no Master Plan, Strategic Plan or Business Plan prepared or operational at present and no apparent planning by SIPA to implement such documents. There are no forecasts prepared as part of the annual budget planning process and limited interaction with port customers mainly due to the absence of a marketing and commercial department.

The Mission statement for SIPA as declared on its website[5] and draft Corporate Objectives states:

"To ensure facilities and services are provided at the declared ports for the least most effective cost so that trade through these ports is promoted and efficiently facilitated."

The current SIPA Mission Statement is confused with the directive of cost effectiveness and minimal cost activity. The mission statement should define why SIPA exists, its reason for being. Then at a minimum, should define SIPA's primary customers, identify the services and describe the geographical location in which it operates.

Concurrently the declared objectives of SIPA are listed as:

- *to be financially self-sufficient*
- *to provide efficient services for the benefit of port users to efficiently utilize all port facilities*
- *to provide the infrastructure needed to facilitate the trade through the ports*
- *to develop and maintain an efficient, motivated workforce committed to the objectives of the Authority*
- *to respond to the expectations of port users and the community and to ensure no particular person is given any undue preferences or subjected to any undue disadvantages*
- *to promote the services and facilities of the ports and maximize trade through these ports*

Similar to the SIPA mission statement there is confusing use of the adjective 'efficient' in SIPA's objectives and the intent to declare an objective to deliver efficient services is contravened by the confusing statement that efficient utilization of port facilities may be the responsibility of the users. There is scope to review and address each of the existing SIPA business objectives to better position its intended purpose and ambitions.

5.4 Current Planning Frameworks

The Point Cruz location as the concentration of SIPA's international and coastal vessel facility and freight services is experiencing urban encroachment as the city of Honiara expands. This urban encroachment is causing congestion on the roads that egress the port facility and the demand for land in the city is resulting in non-port related business users moving alongside and within the port precinct. There appears to be no planning process by SIPA that is addressing the urban encroachment or the resulting congestion that is evidently

[5] http://www.sipa.com.sb/sipa.html.

hampering port operations and creating delays to port customers delivering and receiving freight.

The urban drift of the Solomon Islands population from outlying rural areas and Islands to Honiara City is clearly recognised through the census comparisons between 1999 and 2009. In 1999, Honiara City, with a designated area of 22 km^2, had a population of 49,107 providing a density of 2,232/km^2; in 2009, the population had risen to 78,190 resulting in a density of 3,554/km^2.

The aspirational future capital works plans discussed by SIPA include, in no order of priority, the following projects:

- Fishing wharf, 42m in length for landing of tuna catch – (western sea front of Point Cruz);
- Copra wharf, 85m in length for transfer of coastal copra to international vessels – (north-western seafront of Point Cruz);
- Public coastal passenger terminal wharf, 160m (eastern area of seafront);
- Customs inspection shed, 30m x 30m (within controlled area of port Point Cruz);
- Reclamation works, approximately 2 ha (Point Cruz);
- Second Main wharf, 200m (north-eastern area of seafront Point Cruz – JICA proposal);
- Off-dock container terminal, approximately 4 ha (Mamara area);
- Fuel oil pipework relocation and fitting of fuel oil manifold at main wharf (Point Cruz); and
- SIPA Haus Port Tower Office complex, approx. 8,600m^2 (central Honiara).

The total cost estimate for these capital works excluding the JICA funded international wharf is SBD242 million ($30 million) over the period 2011 to 2015. There is a need for capital works of such magnitude to be subjected to a proper cost benefit analysis and to assess them within the framework of a comprehensive port master plan.

The planned construction of a 12-storey port office complex (SIPA Haus in Appendix P) for an estimated value of SDB170 million ($22 million) would be better placed under the development control of another government agency. A PPP / BOT may be the vehicle to advance such a large scale commercial building project. SIPA administration would then become tenants of the completed office complex and SIPA would benefit from ongoing income from developments on SIPA land.

5.5 Management Capacity

5.5.1 General

The management direction for SIPA has emphasis on civil works and capital equipment purchase. The emphasis on civil works contributes to a lessening of the management teams' involvement in day-to-day and strategic commercial and financial management of the port authority. There is a need to place greater emphasis on control over commercial and financial matters which will assist conformity with reporting, budget controls and help to enhance customer relations and general cohesion of the SIPA management team in their awareness of priorities and business direction. The financial reporting at SIPA is sound and production of reports and financial and operating ratios are maintained and distributed. There is, however, an absence of senior management or Board involvement to make assessment and deliberation of corrective measures required to strategically move SIPA towards improved trading results and operating ratios.

5.5.2 Departmental responsibilities

The capacity of SIPA management appears well founded at individual Departmental Director level with placement of managers with appropriate backgrounds, experience and qualification. The main concern rests on the large number of direct reports that each departmental manager maintains under the declared organization structure. The true nature of efficiency and reporting lines need to be fully analyzed through a more rigorous examination of the structure and position responsibilities to gain a better understanding of the proportion of time each departmental manager spends on staff matters and decision-making matters within their portfolio of responsibilities.

The Operations Director, who also holds the role of Harbour Master has over 96 staff directly reporting and is responsible for six revenue centers including port and cargo operations and harbour control. The limited number of middle management resources at SIPA reduces the capacity to effectively manage all duties and responsibilities held by the Operations Director. This is further complicated by the fact that the Operations Director is separated from the main SIPA administration building being located in the port control tower where the day to day focus is on matters of harbour control.

An assessment of the SIPA managerial unit provides for concern towards the lack of inclusive input from departmental managers in decisions of capital works and capital expenditure. The observations made demonstrate a lack of systematic planning and cost benefit analysis as part of the decision process employed by the organisation towards declared aspirational capital works and capital expenditure that is currently underway or planned. This fact was highlighted at interview with departmental directors and conclusively observed at interview with the management team at which time it was made clear that an estimate of capital works and capital purchases is created and maintained separately from the SIPA annual budget.

By proceeding with relatively large capital works and capital purchases without the business discipline of cost benefit testing and a Board-endorsed Port Master Plan, SIPA is potentially removing cash flow reserves which could be more wisely spent once the future location and timing of Point Cruz end of life as a port facility is properly defined. Such issues support the immediate need to commence preparation of a Port Master Plan for Honiara followed closely by a Business Plan.

The exclusion of SIPA departmental management in policy direction and lack of apparent transparency in such key policy and business direction could lead to erosion of managerial cohesion and possible disenfranchising in day-to-day work activities at SIPA. There is a need to establish formal reporting guidelines on policy matters that can be included into the SIPA policy handbook and endorsed and monitored by the SIPA Board.

5.5.3 Commercial relationships

A number of port users made comment towards the lack of customer and market interaction from SIPA. This was evident when the recently announced SIPA tariff increase was made public without a notice period. After subsequent complaints from port users as to the sudden implementation in June 2011 and quantum of increases an invitation was extended to SIPA to attend a meeting of the Solomon Islands Chamber of Commerce, but for reasons unknown, representatives from SIPA did not attend the meeting. It is understood that various challenges towards the SIPA tariff increase were being progressed by several port users. The issue of cost increases affecting port users was exacerbated by the announcement

eight months earlier from SIMSA of a range of costs associated with navigation, marine regulatory and protection levies imposed upon domestic and overseas vessel arrivals.

The absence of a commercial or marketing department at SIPA further indicates the lack of focus on relationships with port users and SIPA avoiding being a customer-focused business. The lack of market commercial activity at SIPA is a contributing factor typical of the period where no tariff increase applications were made to the reporting Ministry. It is understood that the recent tariff increase gazetted in 2011 was preceded by the last one in 2007. It is understood that no SIPA tariff increase was formally requested in the ensuing four year period. Given that SIPA has operating costs associated with both port and navigation services and stevedoring and cargo services, the failure to maintain a discipline of regular tariff adjustments to keep pace with operating costs is seen as a major flaw in commercial procedures.

There are several legal proceedings pending being initiated by SIPA on major industrials and local business operating in and around the Honiara port area. Legal action has also been initiated on a number of occasions where recoverable amounts would be less than the legal expenses incurred by SIPA. In the environment where local business is emerging from recent years of trading difficulties associated with civil unrest SIPA should seek mediated solutions as a priority outcome. Legal proceedings as a last resort are considered a correct course of action where substantial monies are owned but caution should be exercised by SIPA where action would generate marketplace and commercial ill will towards SIPA and also exhaust substantial management resources. Two key examples are as follows:

- Legal action has been initiated by SIPA against South Pacific Oil Limited (SPOL) over an issue of the eastern entrance/exit to the port, which connects directly to one of the coastal jetties owned by SIPA (Island Jetty) and acts as the sole bunkering jetty serving both SPOL and Markwarth Oil for refueling of coastal vessels. In addition, SPOL have constructed a petrol service station potentially worsening traffic congestion already experienced at the port. SIPA feel that SPOL should not be entering into retail fuel operations and have concerns about safety and security in and around the port zone.
- In 1988, the Point Cruz Yacht Club (PCYC) failed to hand back 15m of foreshore land that SIPA lent out to them for the staging of a canoe regatta during the 10th anniversary of the Solomon Islands Independence celebrations. SIPA claim they are still hanging to it and have erected a fence around it. At some stage there was a SIPA Board resolution to hand them the land but such resolution was considered a conflict of interest and records at the Department of Lands reveal no transfer has been completed. SIPA intends to recover the land for use as an expanded Community Service Obligation (CSO).

5.5.4 Organizational direction

Although SIPA is owned by Government, the Authority is still expected to employ commercial processes and procedures as would private sector operations. In this regard, it is essential that the principal objectives of the SIG SOE Act are complied with. To allow the organization to operate to the fullest of its commercial potential, SIPA requires a broad business-based commercial leadership.

The performance of the CEO of SIPA and their commitment to the commercialization and modernization of the Port Authority will therefore greatly influence their management team and the shape and pace of its commercial operating performance.

In other words, managers accustomed to civil service procedures and practices that emphasize single disciplines need to drastically change their management styles and extend their management skill base beyond their single discipline. At SIPA, this transition has not been realised and is the reason why, in many such processes, managers with private sector experience soon replace the former civil service senior management. A well thought-out training program may be an effective tool to change attitudes and prepare SIPA management and staff to the different style and culture commercialization brings. It is also vital to recognize the responsibility placed on the SIPA Board to both appoint senior management personnel to suit each particular role, and to undertake regular overview of the Authority's activities commensurate with the Board's role defined in the SOE and Ports Acts.

The SIPA Board, currently in transition, as required by the SOE Act is to be comprised of persons who, in the opinion of those appointing them, will assist the SOE to achieve its principal objective. It is uncertain as to the full composition of the current SIPA board as most members were unavailable for interview.

The composition of the SIPA Board, defined in the SOE Act as persons who will assist the SOE to achieve its principal objectives, is considered to be too broad for the selection of a Board for a port authority that has requirements for highly specialised inputs and management controls.

The Board should be comprised of individuals with specific skills and experience to usefully contribute to providing direction to a Port Authority including:

- A person experienced and qualified in maritime commerce;
- A person experienced in freight transportation;
- A person experienced and qualified in finance;
- A person experienced and qualified in sales and marketing;
- An engineer or person with significant and relevant engineering experience;
- A person otherwise deemed qualified to serve as a member of the local city council; and
- A person(s) who are major commercial users of the port who shall be nonvoting members.

There should be non-voting limitations on Board members who are representatives of port users, who will by nature, be reluctant to support tariff increases sufficient to generate the revenues needed to allow for depreciation and subsequent reinvestment in port facilities.

5.6 Financial Management

SIPA reports its financial year concluding 30 September. Financial statements are submitted for auditing to the Office of the Auditor General through the Ministry of Infrastructure Development. SIPA has not published an annual report since 2002.

However, SIPA accounts and notes have been maintained up to date and the reports exist in soft form held by the SIPA Financial Controller. The CEO of SIPA has assigned a two-person team to ensure annual reports for 2003 to 2009 are published by year's end 2011.

SIPA has a broad range of responsibilities that have altered little over the past 25 years. As well as being responsible for the provision of basic port infrastructure and the regulation of port activity, SIPA is the sole stevedore at both Noro and Honiara, and the sole provider of pilotage services. It is the sole provider of under-bond storage for import cargoes and provides other storage and warehousing facilities. It also provides housing and other social amenities for staff.

5.6.1 Financial/accounting procedures

The financial accounts of SIPA are drawn up in accordance with international accounting standards and the requirements of the laws of the Solomon Islands, particularly with reference to the Ports Act (Chapter 161) and the SOE Act Part IV section 14 - Annual Reports, Accounts and Dividends. The applicable conditions state that SIPA should:

> *within 3 months after the end of each financial year of a State Owned Enterprise, the board of a State Owned Enterprise shall deliver to the Accountable Ministers: -*
> *a. A report of the operations of the State Owned Enterprise and a separate report of each of its subsidiaries during that financial year: and*
> *b. Audited consolidated financial statements for that financial year consisting of statements of financial position, profit and loss, changes in financial position, and such other statements as may be necessary. Note: SIPA has unaudited accounts for 2010 and is working to deliver financial statements for 2011.*

SIPA accounting procedures show fixed assets at a lower-than-historical-cost or valuation and recoverable amounts. Depreciation is provided on all fixed assets on a straight line basis over the estimated useful life of each item of property, plant and equipment. In the case of construction activity depreciation is in the year of substantial completion of the asset. Land is not depreciated. The estimated useful lives in the current and comparative periods are as follows:

- Land and improvements: 25 to 50 years
- Buildings: 20 years
- Wharves and jetties: 30 to 35 years
- Vehicles: 7 to 10 years
- Plant and equipment: 5 to 15 years

SIPA land, staff residences and commercial buildings in Noro and Honiara were revalued in July 2011. There has been no re-valuation recorded for wharves, jetties, roads, capital equipment, any leased land or leased buildings with agreements extending beyond two years. In addition, a rental review on leases expiring within two years was carried out in Noro and Honiara in August 2011; however most of the recommended rental adjustments have not been acted upon.

5.6.2 Currency Adjustment Factor

The functional currency adopted in the preparation of SIPA financial statements is the Solomon Islands Dollar (SBD). Transactions in foreign currency are recorded at the exchange rate of the date of activity and foreign exchange differences arising from such are recognised in the profit and loss statements.

As declared in the Solomon Islands Gazette – the Currency Adjustment Factor (CAF) linked to a basket of currencies is applied to all charges levied on overseas vessels under parts I and II of the Levy of Ports Rates Dues as publicly gazetted. The CAF is advised by public notice as SIPA receives notification of changes from the Central bank of the Solomon Islands (CBSI) (Appendix G on CBSI CAF Adjustment Notice). The CAF, which is gazetted as an official charge by SIG, currently stands at +80% on top of all other tariff charges and was introduced in 1991 as a reaction to the transfer of the ADB loan from the SIG to SIPA.

SIPA adds the CAF when levying charges for port services including pilotage, port dues, mooring fees, wharfage and handling, stevedoring and storage, on all international vessel

and cargo activities. The consideration of imposing a CAF from a port user's perspective for international cargo and vessel activity is difficult to reconcile on the basis that no formal calculation can be provided by SIPA or SIG to substantiate the calculation or the quantum imposed on port users. Also by having a CAF charge, it should be subject to movement of the basket of currencies being considered both on a positive and negative scale. Therefore any appreciation of the SBD against the USD or other currencies could substantiate a challenge by foreign vessel owners using SIPA ports for an adjustment in the CAF in their favour.

5.6.3 Taxation

Tax paid by SIPA consists of current tax and a change in deferred tax on the profit for the financial year concluding. Goods and Services Tax (GST) is paid on procurement and are recognised in financial statements as net of the amount of GST except where the amount of GST is recoverable from the taxation authority. SIPA pays company tax at 35% which is on assessment of the total income (excluding exempt income) derived by the authority.

5.6.4 Budget management

SIPA declared that its operating budget (Revenue and Expenditures) is determined from a process by which each department head provides a mini-budget reflecting their respective work plan for the coming year aimed at achieving SIPA's core objectives. The 'mini-budgets' are then consolidated by the Finance Department.

It was further explained that Departmental Management then meet to scrutinise the spending before it is approved and consultations are also sought with various stakeholders' especially major exporters and importers[6] on their current and future plans and production levels for the coming year. Data on current state of the economy is sought from CBSI and current inflation rate is taken into consideration. Once the operating budget is consolidated by the Finance Department, the SIPA management then meets and deliberates on it to conclude final changes after which it is then tabled at the next Board meeting by the Finance Head for the final approval and sign off.

The SIPA Capital Works and Capital Expenditure (CAPEX) are prepared as an estimate by the Engineering Department, currently being completed by the Supervising Engineer, who is also the CEO. The budget and capital works estimates for 2011/2012 are being prepared for the November 2011 meeting of the Board. As such, two separate submissions will be made as in previous years.

SIPA does not maintain monthly budget variance statements and does not monitor or report the budget against actual performance of costs or revenue.

5.6.5 Debtor management

It was reported that SIPA offers 30 days' credit to recognised trading businesses registered in the Solomon Islands. There are no credit checks or bank/company guarantees required prior to credit being granted.

It was declared by the CEO of SIPA that resources at the port are systematically going through the aging list of debtors and arranging for recovery actions. The current aging debtor

[6]Budget discussions could not be substantiated with importers/exporters minutes of meeting.

list is constructed in accordance with standard accounting practices but is not supported with a commentary of actions pending recovery.

The latest aging debtor report for July 2011 shows SBD9.2 million ($1.2 million) outstanding over 90 days being 55% of the total monies owed to SIPA in that period. It is understood that no recovery action or appointment of external recovery agents are employed by SIPA and no actions are underway by senior management to withdraw services from those recurrent delinquent debtors.

There is a year-on-year provision of SBD3.4 million ($440,000) for doubtful unrecovered debts and this amount may be insufficient considering the compounding level of debtor activity that is currently evident.

It is further understood that in August 2009, SIPA instructed the local firm, 'Global Lawyers' to commence legal action against 25 firms that had long-standing debts for port services. On examination of the list submitted to Global Lawyers, there are 10 firms with less than $1,000 owing and all others with the exception of one firm owing less than $5,200. Included on the list is one of the previous owners of Gold Ridge Mining who has left the country and the SOE, Solomon Islands Water Authority (SIWA).

SIPA-initiated legal action involves a lot of management energy into chasing mostly smaller debtors whereas large invoices remain uncollected. Taking action against other SOEs and small privately owned port customers may damage commercial relationships and reputation as a customer-focused government owned enterprise.

6 Financial Assessment

6.1 Current Financial Position

According to the unaudited accounts for year ended 30 September 2010 SIPA has total assets of SBD76,018,593 (2009: SBD 72,113,934) and total liabilities of SBD24,993,052 (2009: SBD25,718,251).

SIPA's unaudited financial statements for 2010 show it earned a net operating profit of SBD2.96 million from a turnover of SBD42.4 million. This enabled SIPA to deliver an annual rate of return of 5.68% in line with the ADB loan condition (provide an annual rate of return of no less than 5%). The annual rate of return for 2009 was 5.27%, but the average annual rate of return for SIPA[7] from years 2002 to 2008 was -0.19%.

SIPA had a Current Ratio[8] of 2.4 at the end of 2010, demonstrating a reasonably sound working capital position. Cash at bank was low at only SBD2.9 million insufficient to pay its creditors amounting to SBD4.7 million. This problem is due to the high level of accounts receivable. A review of the latest aging debtor report (July 2011) covering 227 customers shows SIPA is owed SBD16.9 million, with SBD 9.2 million over 90 days, representing 55% of total monies owed to SIPA. SIPA has made an ongoing provision of SBD3.4 million for bad debts each year for the last five years.

SIPA reported a consolidated (Honiara and Noro ports) profit of SBD2.96 million ($367,000) in 2010. The profit contribution was 76% from Noro port and 24% from Honiara port operations. The consolidated operating result shows that the majority of costs were borne by Honiara port at 88% of the combined total and Honiara also contributed 84% of total revenue earned.

The latest aging debtor report (July 2011) shows SBD9.2 million ($1.2 million) outstanding over 90 days, being 55% of the total monies owed to SIPA in that period. The condition whereby SIPA pays creditors on average within 15 days demonstrates the immediate need to recover recurrent delinquent debtors and cease the requirement for maintaining annual write off of bad debts.

There has been a year-on-year provision (last five years) of SBD3.4 million ($440,000) for doubtful debts and this amount may be insufficient considering the compounding level of debtor activity that is currently evident.

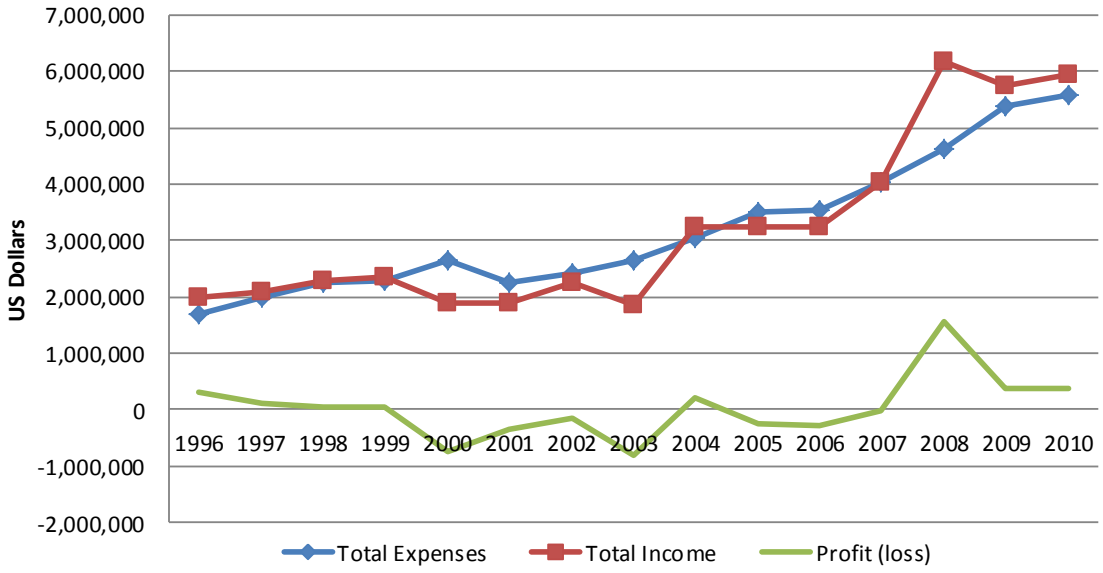
Under the SOE Act, SIPA is required to operate as a successful business and be profitable and efficient as comparable businesses that are not owned by the crown or established as statutory bodies by an Act of Parliament. In addition, under the Ports Act, SIPA is required to operate commercially and to be financially self-sufficient: that is, to meet all commercial operating costs and generate a net operating surplus, plus achieve an annual rate of return on fixed assets.

However, as demonstrated in Figure 29 - SIPA Profit & Loss 1996 – 2010, SIPA has been marginally profitable for seven years, had one year of solid profit and incurred actual losses in seven years. It is considered that margins in the profitable years have not been sufficient to cover the true cost of capital, and accumulated losses over the preceding years amounting in excess of SBD18.59 million ($2.4 million).

[7] ADB Finding Balance 2011 Report – Benchmarking performance of SOEs.
[8] Current Ratio compares a firm's current assets to its current liabilities.

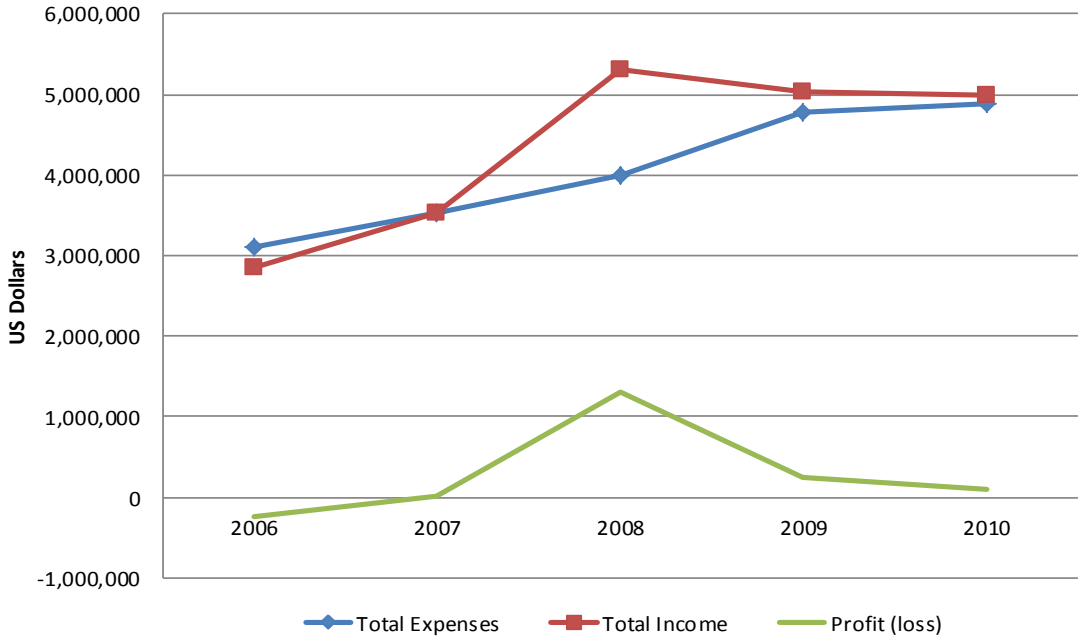
Note: SIPA revenue and costs accounted for in SBD and shown in US dollars for ease of reference against port development plans which are declared in US dollars.

Figure 29 - SIPA Profit & Loss 1996 – 2010 (in US Dollars)



The Honiara portion of the 2010 financial year (Figure 30) shows a total profit by comparison of only SBD722,000 ($93,000). The balance of the profit was designated against Noro port which is misleading as described above.

Figure 30 - SIPA Honiara Port - Profit & Loss 2006 – 2010 (in US Dollars)



6.2 Commitment for Loans and Capital

Long-term debt is currently SBD16.8 million ($2.13 million). This represents loan instruments provided by the Solomon Island Government through on-lending ADB loans to SIPA at beneficial interest rates. SIPA has not always been able to meet the debt service payments on these loans due to the difficult financial situation caused by ethnic conflict affecting the country. In 2010, its debt service payments amounted to SBD3.4 million ($440,000) adversely affecting SIPA's current cash flow position. The consolidated loan debt is now shown as SBD16.8 million ($2.2 million) in SIPA's 2010 financial statements. In the years 1999 to 2004, SIPA ceased payments due to the poor state of its finances. It now expects to fully repay the loan by 2019.

The history of ADB loans and Solomon Island Government on-lending is as follows:

6.2.1 SIPA loan 1

The first SIPA port development project was financed largely by ADB together with small contributions from the Solomon Islands Government (SIG) and SIPA. The loan agreement between the SIG and ADB provided funds equivalent to $2.03 million with a service charge of 1% per annum on the balance of the funds drawn down.

A special financing arrangement was fixed in June 1978 between SIG and SIPA for relending of the ADB loan at an interest rate of 8.3% per annum on funds already drawn down with a repayment period of 25 years with principal and interest to be repaid in 42 equal semi-annual installments commencing April 1983. A total amount under this current agreement of $2.026 million was drawn down against the loan.

6.2.2 SIPA Loan 2

A further loan agreement in September 1987 between Solomon Islands Government and ADB resulted in a Special Drawing Rights (SDR) loan equivalent of SDR 3,087, 000 with a service charge of 1% per annum. A subsidiary loan agreement between the Solomon Islands Government and SIPA in the same year provides for relending of these principal funds from ADB to SIPA at 7.36% per annum with repayment by 40 equal semi-annual installments commencing November 1990. A total amount of SDR 3,032,253 was drawn down when the loan was concluded in Sept 1991. This subsidiary loan also provides that SIPA shall bear the foreign exchange risk under the agreement.

Covenants relating to the second Honiara Port loan are contained in the Project Agreement dated September 1987 and of particular note is the requirement for SIPA to achieve an annual rate of return of not less than 5%. The average annual rate of return for SIPA[9] from years 2002 to 2008 was -0.19%. The annual rate of return on fixed assets calculated for 2010 was 5.68% as reported by the SIPA Finance manager.

6.3 Financial Assessment of Honiara Port Operations

6.3.1 Revenue

Honiara operating revenue is derived from port operations including pilotage, berthage and port dues, wharfage and handling, stevedoring and cargo services and warehousing for

[9] ADB Finding Balance 2011 Report – Benchmarking performance of SOE.

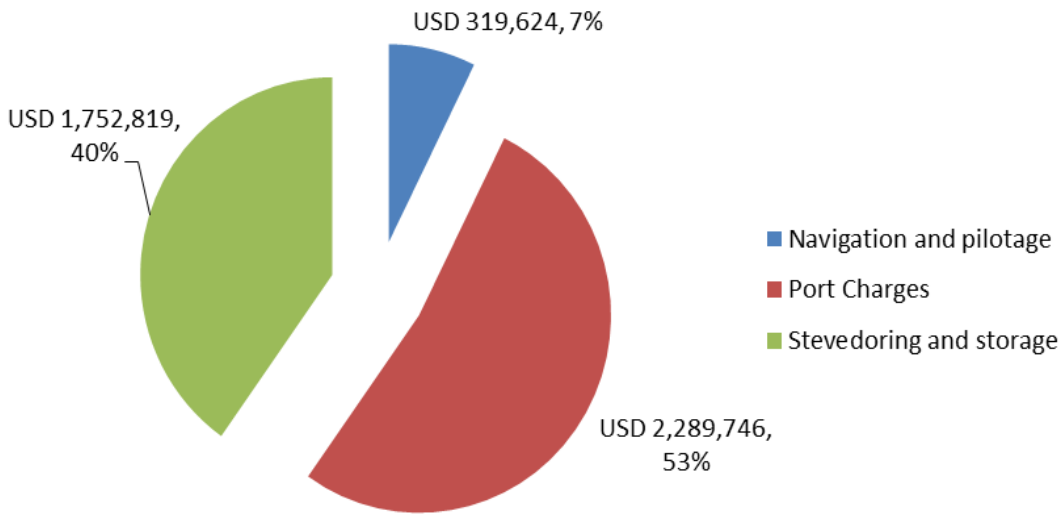
unaudited financial statements 2010 totaled SBD35.2 million ($4.36 million). Non-operating revenues derived from plant hire, rental of sheds and office space and other miscellaneous sources totaled SBD4.67 million ($579,000).

The Honiara port operating revenues can be apportioned into three distinct centers (Figure 311):

- Navigation and pilotage, 7%;
- Port Charges, 53%; and
- Stevedoring and storage, 40%.

Each of these operations are specialised and employ specialist management and operating staff to carry out such activities and there is no cross training of shared resources between the three. The financial results are consolidated in total but revenues are shown separate as derived from each of these operations.

Figure 31 - SIPA Honiara Port operating revenues 2010 by activity



6.3.2 Tariff

The existing SIPA tariff covers charges associated with vessel movements, cargo movements across the facility, and stevedoring for loading and discharging cargo.

In the past six years the SIPA tariff has been increased twice, once in July 2007 and again in June 2011. The most recent tariff increase was made without any notice period to port users. Main shipping lines interviewed commented that the first occasion they became aware of the SIPA tariff increases was in the government notice published in local newspapers. Shipping lines serving Honiara have reacted by imposing a new Terminal Handling Charge for all freight shipped to or from the Solomon Islands (Appendix M - Swire Shipping THC announcement).

Requests for adjustments to the SIPA tariff need to be applied to the reporting Ministry, reviewed, and if agreed, gazetted. The latest increases that were authorized tended to be offset by increasing labour costs, which have increased steadily as a result of pressure from organized labor, supported by the Solomon Islands National Union of Workers. SIPA had to

operate with inadequate surpluses and with depreciation allowances based on historical costs. Without substantial surpluses, the ports had to raise the money needed for wharf extensions from fixed interest loans and on-lending agreements. The current SIPA tariff review resulted in an escalation of port and navigation charges at an average of 60% of previous rates (Appendix H - SIPA Tariff comparison of charges 2011 / 2007-2010).

The existing SIPA tariff includes charges associated with vessels, cargo movements across the facility, and stevedoring for loading and discharging vessel activity. The assessment of these charges raises the question over the validity of the charge items for 'Handling' and 'Wharfage' levied on importers and exporters. As shown in Table 10, the accepted practice for port charges is for single items covering port authority supplied services for the provision of infrastructure or activities carried out. The item for cargo wharfage for provision of wharf hardstand appears to be double charged by SIPA.

Table 10 - Port Tariff charge items

	Standard port model		SIPA
Item	**Activity**	**Paying Party**	**Paying party**
Pilotage	Pilot services ship	Shipping Line	Shipping Line
Port Dues	Channel service	Shipping Line	Shipping Line
Berth Occupancy	Quay line service	Shipping Line	Shipping Line
Anchorage Occupancy	Anchorage ground	Shipping Line	Shipping Line
Cargo Wharfage (SIPA = Tonnage dues)	Hardstand service	Shipping Line	Shipping Line
Stevedoring*	Load/discharge	Shipping Line	Shipping Line
Handling Fee / PSC	Lift stack to truck	Importer/Exporter	Importer/Exporter
Wharfage#	Unclear	N/A	Importer/Exporter

Notes: *Stevedoring is usually supplied by a private licensed operator but in the case of Honiara is provided by the Port Authority.
#it is unclear why this charge item is levied by SIPA on importers and exporters as wharfage has been paid already by the shipping lines. It may be better for SIPA to rename this charge item as cargo marshaling.

The SIPA Honiara port hours of operation are 07:30 – 11:30 am/ 13:00 – 16:00 pm. Anything outside these times are classified as overtime where importers and exporters pay penalty rates including extra staff attendance fees when receiving or delivering their export / import freight at the SIPA terminal at Point Cruz.

6.3.3 Tariff Comparison

Comparison of the SIPA tariff with other Pacific ports highlights the fact the SIPA has maintained a calculation method using length overall (LOA) for vessel port charges whereas most ports in the region use a per Gross Revenue Tonnage (GRT) scale for calculating the same items. The items in SIPA tariff that use the LOA method for calculating charges includes: pilotage, port dues, berth occupancy and anchorage occupancy fees.

The LOA method is disadvantaging SIPA in maximizing its revenues for vessel activity at Honiara. The option to change to GRT methodology for calculating vessel port charges would improve revenue for port services and increase cashflow.

The assessment of other port charges at Honiara reveals that cargo wharfage paid by the shipping lines is classified by SIPA as 'Tonnage Dues' which can be confused with the

description used by many other ports for stating vessel tonnage fees. It may be more appropriate to rename 'Tonnage Dues' to 'Cargo Wharfage'. The scale used by SIPA for calculating cargo wharfage (Tonnage Dues) is revenue tonne (per 1000kg or 1 cubic meter whichever is greater). This method of calculation has been replaced by many modern container ports with the per TEU method which has a better ability to place costs against activity where container movements are dominant by volume of throughput.

The option available to SIPA is to alter the charge method for calculating cargo wharfage (Tonnage Dues) from revenue tonnes to TEU for containers whilst retaining the revenue tonnage calculation method for break-bulk and bulk commodities.

When comparing SIPA port charges for Honiara against those from other Pacific countries using a standard international vessel size[10], it is evident that SIPA is the lowest in the region (Table 11). The contributing factors to this are that SIPA maintains an LOA calculation method for vessel charges and there has been a gap of five years between tariff review periods.

Table 11 - Pacific port charges comparison

ITEM (US Dollars)	MAJURO	APIA	SUVA	PORT VILA	HONIARA
PORT ENTRY FEE / HARBOUR DUES	$477.00	$173.00	$1,426.00	$1,543.00	$73.68
LIGHT DUES NAV AIDS *	$30.00	$22.50	$0.00	$385.00	$2,106.00
SECURITY SURCHARGE	$180.00	$452.00	Incl dues	$0.00	$0.00
PILOTAGE	$820.00	$452.00	$750.00	$466.00	$414.46
TUG LINE FEE	$0.00	$0.00	Incl dues	$22.00	$0.00
PILOT LAUNCH FEE / MAJURO per move	$200.00	$0.00	$0.00	$68.00	$0.00
BERTHAGE	$477.00	$243.00	$858.00	$334.00	$138.15
LINE HANDLING FEE	$160.00	$0.00	$0.00	$98.00	$105.00
LINE BOAT FEE per usage	$150.00	$0.00	$0.00	$150.00	$0.00
Total per vessel / voyage	**$2,464.00**	**$1,320.00**	**$3,034.00**	**$2,681.00**	**$731.30**
ANCHORAGE FEE	$160.00	$0.00	$0.00	$0.00	$179.60
WHARFAGE IMPORT / rev ton	$3.00	$6.55	$2.00	$3.85	$1.49
WHARFAGE EXPORT / rev ton	$3.00	$6.55	$2.00	$1.90	$0.87

*Light dues/navigation aids is excluded from the total vessel voyage cost given that Marine Safety Authorities and Administrations are increasingly responsible for the levy of these charges instead of the port authority.
Honiara includes CAF adjustment.

There is ample scope for SIPA to proceed with a tariff improvement program including increasing the quantum of charge of main items and reclassifying tariff items to conform to international accepted practices. This could be achieved without loss of competitiveness and would provide considerable improvement to its revenues.

[10] MV. Kyowa Hibiscus type – LOA 117m, GRT 7945, IMO 9110248.

6.3.4 Expenses and costs

Honiara port total expenses for the unaudited financial statements 2010 totaled SBD 39.5 million ($4.9 million). Assessment shows that operating expenses make up 74% of the total with the balance attributed to administrative and financial expenses. Operating expenses include direct wages, overtime wages and allowances, depreciation, fuel and consumable items and 12 sub items associated with ongoing repair and maintenance activities of equipment and infrastructure. Honiara operating costs by activity are shown in Table 12.

Table 12 - SIPA Honiara port - operating expenses 2010 by activity

Operating activity	USD
Depreciation	$538,872
Consumerable items	$470,968
R&M Infrastructure	$71,203
R&M Equipment	$506,935
Wages Direct	$869,472
Wages Overtime	$701,174
Others	$475,701
Total	$3,634,324

As shown in Section 5.2, the Operations Department accounts for 97 persons or 56% of the total SIPA permanent staff at Honiara; of this, 62 persons or 64% of permanent operations staff are engaged in stevedoring operations. In addition, SIPA management declared that almost 100% of overtime wages are attributed to stevedoring activities where casual staff is engaged, being approximately 55 casual stevedoring staff per month over the last twelve months. Some of the reasons declared for the high number of overtime staff was supervisors and line managers had failed to monitor overtime activity in some instances, weekend work had attracted above award overtime rates (week days - time and a half, Saturday – double time and Sundays triple rates and public holidays four times normal rate) and ISPS security operations.

Stevedoring as a cost activity at Honiara port accounts for approximately SBD18.36 million ($2.37 million) or 65.5% of total operating costs but only contributes approximately SBD13.56 million ($1.75 million) in operating revenue.

6.3.5 Reporting

SIPA does not have a standard financial operating procedures handbook but does comply with international accounting standards as declared and demonstrated by the senior financial manager.

Debts can only be written off by an approval from the Board of Directors and are reported through preparation of an aging debtors listing every month.

Civil works are contracted to the private sector by way of public offer and each applicant is assessed by the chief engineer. There is no referral to the Board for appointment and no limit of jurisdiction is set.

SIPA maintains two internal auditors who coordinate the internal audit procedures. Each accounting staff member of each sub-ledger i.e. accounts payable, accounts receivable, general ledger, etc. complete their year-end adjustments and reconciliations by the end of the first month after the financial year ends. This should provide ample time for the internal audit section to comply with the timeline for external auditors and the Auditor General's Office.

The Auditor General's Office is to complete the external audit of SIPA within three months after the end of the financial year.

SIPA is using the Sage - ACCPAC accounting software package and receives contract support from a Queensland based consultant. Sage - ACCPAC Enterprise Resource Planning (ERP) software is a Windows based range of software, available with a variety of database back-ends designed for small and medium sized businesses. Sage – ACCPAC was originally developed in the early 1990's and undergone several major updates. SIPA is investigating costs associated with the purchase of a new centralised system to cover financial and budgets, invoicing, debtors control, statistics, terminal and yard management.

SIPA maintains a statistics reporting standard which provides basic data on historic tonnes of cargo handled, vessel types and arrivals and commodity type throughput at both Noro and Honiara and basic vessel working productivity rates. The statistics maintained and reports delivered have not altered since 1994 (Appendix E - SIPA standard statistical reporting).

There are no benchmarks or targets or forecasting procedures and SIPA does not maintain monthly budget variance statements and does not monitor the budget against actual performance of costs or revenue.

6.4 Financial Performance of SIPA – Key Ratios

The financial performance of SIPA as an entity is dependent on reviewing it as a combined operation of both Noro and Honiara ports. The key ratios to consider are the operating and liquidity ratios detailed in Tables 13 and 14. In addition, Appendix I - SIPA Balance Sheet 2006 - 2010 and specific for Honiara Port, Appendix J - SIPA Honiara Consolidated Profit & Loss 2006 - 2010, details the current financial statements and recent trading results.

Table 13 - SIPA operating indicators for 2010 results

Ratios or Other Measures		Computation Method	Significance and Notes
Rate of Return on Net Fixed Assets in Service (%)	41,978,953 56,436,443 74%	Net Operating Income (a) x 100 Average of Net Fixed Assets in Service (b)	This measure is misleading due to operating assets valuation taken from latest being 1995
Self-Financing Ratio (%)	47,823,755 4,766,025 100%	Cash from Internal Sources Average Annual Capital Expenditures*	Also called Cash Generation Capability and Contribution to Expansion. Measures the percentage of annual capital investments financed from available cash resources. This indicates that all SIPA Capital investments were financed from internal sources
Operating Ratio (%)	34,109,716 41,978,953 82%	Total Operating Expenses (including Depreciation and Taxes x 100) Total Operating Revenues	Measures the coverage of operating expenses by operating revenues. This level is high compared to OR of developed ports below 50%. The smaller the ratio, the greater the organization's ability to generate profit if revenues decrease. This ratio doesn't take debt repayment or expansion into account.
Return on Total Assets	4,381,530 76,018,593 5.76%	Net Income + Interest Expense Average Investment in Assets	Measures the productivity of assets. This indicates that SIPA's total assets only generates about 6% return to SIPA. A more ideal ROA would be between 10 - 20% which would demonstrate an acceptable level of converting its investment into profit.
Percentage Growth in Revenues	1,430,635 46,393,120 3%	Current Period Revenues - Previous Period Revenues x 100 Previous Period Revenues	Measures the increase in revenues between two periods. There was a 3% growth in revenue for 2010 from that of 2009.
Profit element of Revenues	2,960,485 47,823,755 7%	Net Profit Total Revenues	Measures the profit element of sales. In 2010 SIPA's net profit represents 7% of total sales.
Revenues to Total Assets	47,823,755 76,018,593 63%	Revenues Total Assets	Measures efficiency of use of assets in generating sales. This indicates that $ 1.58 in assets is needed to generate $1 in sales.
Return on Equity	2,960,483 51,025,541 6%	Net Profit Equity	Measures the rate of return on the investment in the business. This is a 6% return on investment for SIPA in 2010.

Table 14 - SIPA liquidity indicators for 2010 results

Ratios or Other Measures		Computation Method	Significance and Notes
Current Ratio	18,109,832	Current Assets	This ratio measures SIPA's ability to meet its short term obligations. The ratio indicates SIPA may not have problems in meeting its short term obligations. However, the higher ratio is not necessarily good as it is due to excess investments in unprofitable current assets like SIPA's higher accounts receivables.
	7,426,942	Current Liabilities	
	2.44x		
Days in Receivables	14,318,485	Average Accounts Receivable x 365 days	It takes SIPA an average of 109 days to collect its debts starting from the issuing of invoices until payment becomes useable funds. More than half of SIPA's debts is over 90 days. Intervention is urgently required to arrest this scale of aging debtors.
	131,024	Revenues	
	109 days		
Accounts Receivable Turnover	47,823,755	Net Revenues	Measures the number of times that receivables turn over in a year.
	14,318,485	Average Accounts Receivable	The higher the turnover, the shorter the time between sales and collecting cash. It would be desirable for SIPA to have a ratio for this at 6x or above.
	3x		
Days in Accounts Payable	540,333	Average Accounts Payable	Measures the average time span of unpaid payables. It takes on average 15 days for SIPA to pay its credit customers. It also should be noted that SIPA only have credit facility(30days) with abouth 10% of its total customers. This does not reflect well on cashflow policy when compared against days in receivable of 109 days.
	36,603	Cost of Goods Sold / 360 days	
	15 days		

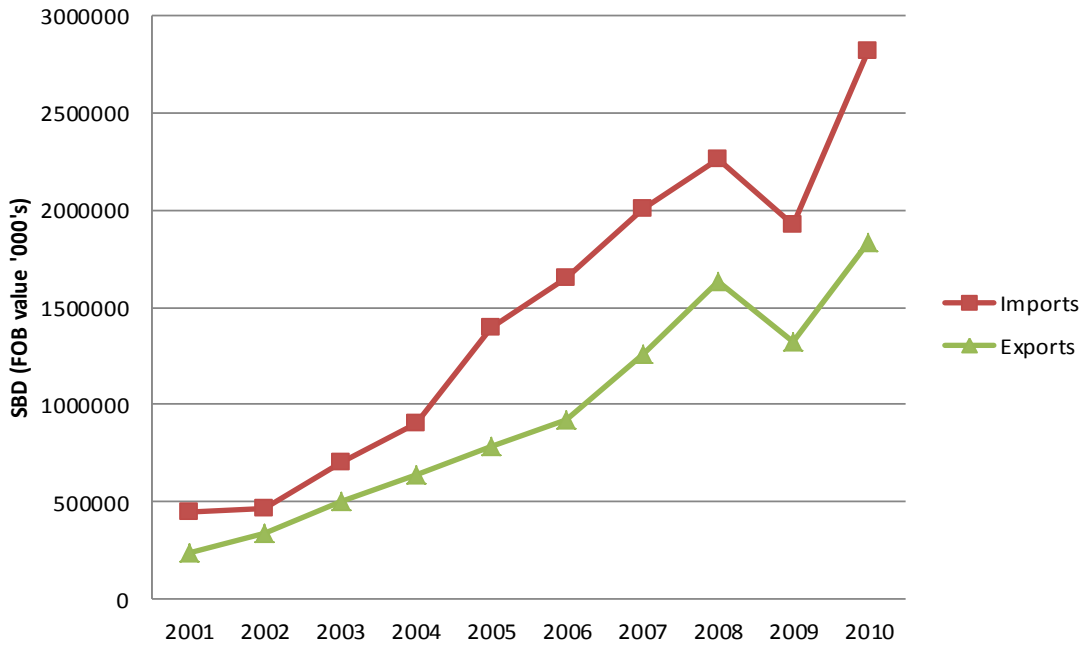
7 Trade Activity

7.1 Current Trading Conditions

The latest merchandise trade statistics[11] (FY 2010) produced for the Solomon Islands show a trade deficit of SBD99 million and an export ratio of 65% of imports. Figure 32 tracks prior years with the trend showing year on year positive gains in export activity apart from 2009 where a reduction was experienced due to GFC conditions directly affecting investment activity in industrial ventures in the Solomon Islands.

- Imports: SBD282 million (2010);
- Imports - commodities: food, plant and equipment, manufactured goods, fuels, chemicals;
- Imports - partners: Singapore 24.69%, Australia 23.06%, NZ 5.2%, Fiji 4.47%, Papua New Guinea 4.34%, Malaysia 3.98%;
- Exports: SBD183 million (2010);
- Exports - commodities: timber, fish, copra, palm oil, cocoa; and
- Exports - partners: China, 54.07%; South Korea, 6.19%; Philippines, 6.04%; and Spain, 4.87%.

Figure 32 - Merchandise Trade by Imports & Exports (SBD 000)



7.2 Rebuilding trade policy and investment

The Solomon Islands economy contracted by 24 percent during the ethnic conflict period 1998 to 2002. Business closures including Solomon Islands Palm Plantation (SIPL) the largest palm oil plantation in Solomon Islands, traditionally the third highest export-earner; Maruha Corporation of Japan withdrew their Solomon Taiyo fisheries fleet and closed their cannery operation and Gold Ridge Mining ceased exploration and extraction operations. In addition, the thin supply chain networks allowing agricultural small holder harvest of cocoa

[11]Solomon Islands National Statistics Office, 2011. Consolidated key trade statistics.

and copra to reach export traders were substantially reduced and international shipping services withdrew direct calls at Honiara in favour of transshipments via PNG. No trade statistics were produced for the years 1999 and 2000 and when resumed in 2001 the balance of payments had dropped from 84 percent in 1996 to 53 percent in 2002 as a measure of exports over import percentage by revenue totals[12].

Following the rebuilding years and assistance through interventions from donor nations the Solomon Islands economy has regained sufficient stability allowing for investment activity to recover. The logging industry has surged ahead in felling and export volumes, positive investor sentiment towards the fisheries sector, mining and palm oil plantation saw new operators enter into the rehabilitation of these generational industries.

The Solomon Island Government with assistance from donor countries and organisations has undertaken a program of rebuilding the economy from its fragile state towards having a competent future focused trade policy. A blueprint[13] describing a sectoral approach to strengthening and directing trade policy has been undertaken by the Solomon Islands Government which includes:

- Conducting inclusive, strategic and timely review of the country's tariff structure
- Revise the duty exemption procedure and amend the current exemption schedule
- Relevant agencies taking responsibility in implementing trade agreements
- Strengthen the SIG Department of External Trade
- Develop inclusive and nationally owned framework to coordinate trade negotiations.

The Central Bank of Solomon Islands (CBSI) concluded in their June 2011 quarter report that:

> *"The balance on trade in goods recorded for the first time in many years, a surplus of $77.3 million during the quarter as exports buoyantly increased by 49.0% to $817.3 million exceeding the 7.4% increase in imports to $740.0 million[14]"*

The CBSI went to add, the overarching reasons behind the return to positive period of surplus in trade was due to a combination of solid export results from the primary industries active in the Solomon Islands.

This condition should be considered both a comfort that the nation has recovered the ability to host a positive balance of trade but also a warning that a large weighting is placed upon agricultural exports, particularly logging, that have finite resources and are subject to global price fluctuations and lastly that all these industries are directly involved with offshore investors who are sensitive to issues of global competitiveness, cost effective logistics and supply chains (including efficiency at ports), civil unrest and disruptions in labour cost and supply.

[12] Solomon Islands National Statistics Office, 2008. Consolidated Trade Statistics.
[13] Solomon Islands Ministry of Foreign Affairs and External Trade, 2009. Diagnostic Trade Integration Study.
[14] Central Bank of Solomon Islands (CBSI) June 2011 Quarter Report.

"The remarkable increase in exports driven by the robust performance of the country's major export commodities including the sudden jump in mineral exports from $5.2 million in the first quarter to $82.5 million as the first shipments of gold exports occurred during the quarter. The value of round log exports continued to perform strongly with a 23.4% increase to $386.7 million recorded during the quarter as a result of increasing export volume. Fish export receipts went up by 78.2% to $74.4 million due to the increasing shipments of loin products to Europe as well as sustained high international prices; palm product export receipts increased by 43.8% to $108.3 million; copra exports increased by 43.0% to $85.9 million; and cocoa exports increased by 5.3% to $43.7 million on the back of strong production during the quarter despite slight declines in international prices. Meanwhile, the value of sawn timber exports fell from $18.7 million to $16.1 million and the value of other exports fell from $11.0 million to $6.5 million.[14]"

The return to trade deficit was reported by CBSI in July 2011 as follows:

"Trade balance in July registered a preliminary deficit of $32.7 million from a surplus of $75.2 million (revised) in the previous months due to the decline in exports and increase in imports. Export receipts fell by 16.6% to $258.2 million from the previous month, owing to declines in exports from the agriculture, fisheries and mining sectors which more than offset an increase in exports from the forestry sector.[15]"

Solomon Island GDP growth has been widely recorded as expanding at an annual average of 7.18% between year of 2003–2007, which in some reports goes onto say "the highest among Pacific Island Countries and the fastest rate for over a decade"[16]. These statements are misleading as this should be seen as being set against the rehabilitation phase of the country after coming from a low base from ethnic conflict years and the closure and degradation of the industrial and agricultural outputs.

There are no published GDP growth rates for years beyond 2012. The assessment of the Solomon Island recovery phase and GDP growth patterns should create an environment where GDP growth would be no less 5% per annum and perhaps higher into the range of 6-9% should commercial palm plantations be expanded and production of crude palm oil substantially increase, on-shore fisheries investment proceed at levels proposed, new mining concessions commence, development of tourism industries prove successful, and forestry operations are extended and managed to prolong the life of commercial yield.

Macroeconomic performance targets[17] for the Solomon Islands are as follows:

- GDP growth rates of 6% or more annually;
- Non-logging sectors to contribute at least 5% (up from 3.5%) to overall GDP growth;
- Foreign reserve levels to exceed three months of import cover annually;
- Inflation not to exceed 10% for more than three consecutive months;
- Government debt to be reduced to less than 30% of GDP in 2011; and
- No new borrowing or guarantees issued in the MTDS period.

[15] Central Bank of Solomon Islands (CBSI), July 2011. Economic Monitor.
[16] Solomon Islands Ministry of Foreign Affairs and External Trade, 2009. Diagnostic Trade Integration Study.
[17] SIG, 2008. Medium-Term Development Strategy (MTDS) 2008–2010.

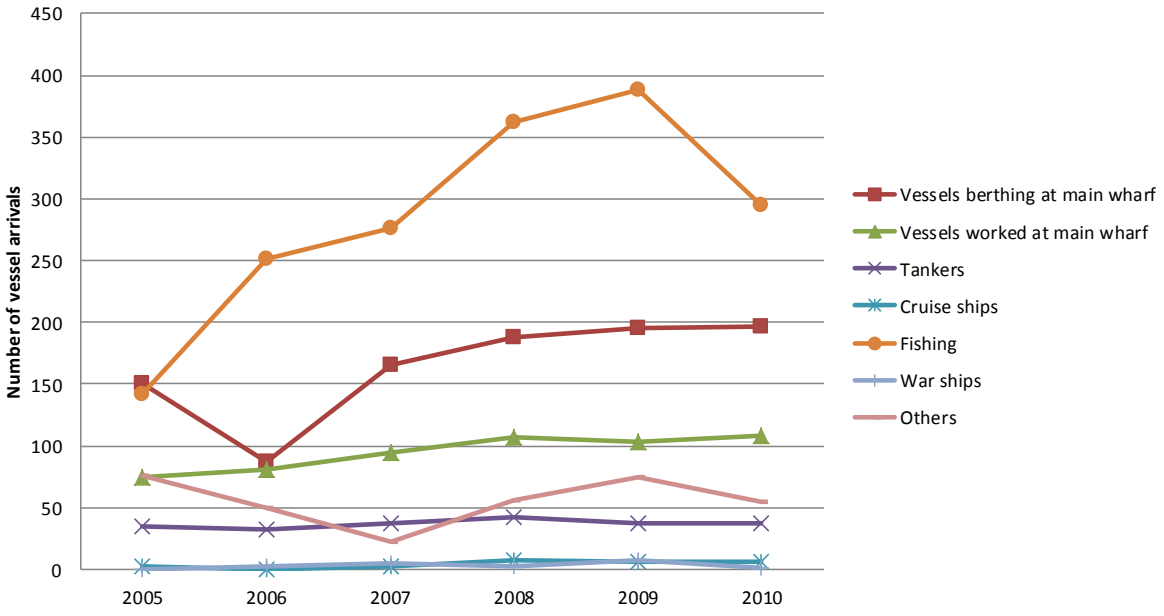
7.3 Honiara Port Current Activity and Forecasts

7.3.1 Ship arrivals

Vessel arrivals at Honiara can be segmented into two categories; international arrivals and coastal vessel arrivals. The two activities both have distinct sub sectors but can be separated on the grounds of facility location and type of trade.

Figure 33 shows international vessel arrivals by activity type. The majority of activity is designated as fishing vessels which consist of purse seine, long line and reefer fish carrier vessel arrivals (at anchorage and alongside main wharf). The purse seine catch is particularly subject to the seasonality of tuna activity which in Solomon Island waters is October to March. Vessels working at the main wharf are container, break bulk and bulk copra carriers; tankers including crude palm oil tankers. Diesel and fuel tankers, and LPG gas tankers (gas tankers berth at mooring buoys at Ranadi); cruise vessels on international voyages (excludes domestic tourism boats); visiting warships on international visits (excludes local patrol boats); and other vessels including international flag logging vessels at anchorage while being cleared by customs, immigration and quarantine.

Figure 33 - Number of direct calls at Honiara port by vessel type



Coastal vessel arrivals using jetties and ramps under SIPA authority and control located to the east of Point Cruz are dedicated to coastal operations of passenger and freight distribution from Honiara to outer islands and the delivery of cash crops from outer islands to Honiara. The recorded numbers available from SIPA show that in calendar year 2010 there were 3,433 coastal vessel arrivals at Honiara and annualised for 2011 the figure is anticipated to be 3,622. Discussions with coastal fleet operators have provided additional consideration that the total coastal arrivals may be somewhat larger than declared by SIPA and maybe as high as 5,000 arrivals per annum.

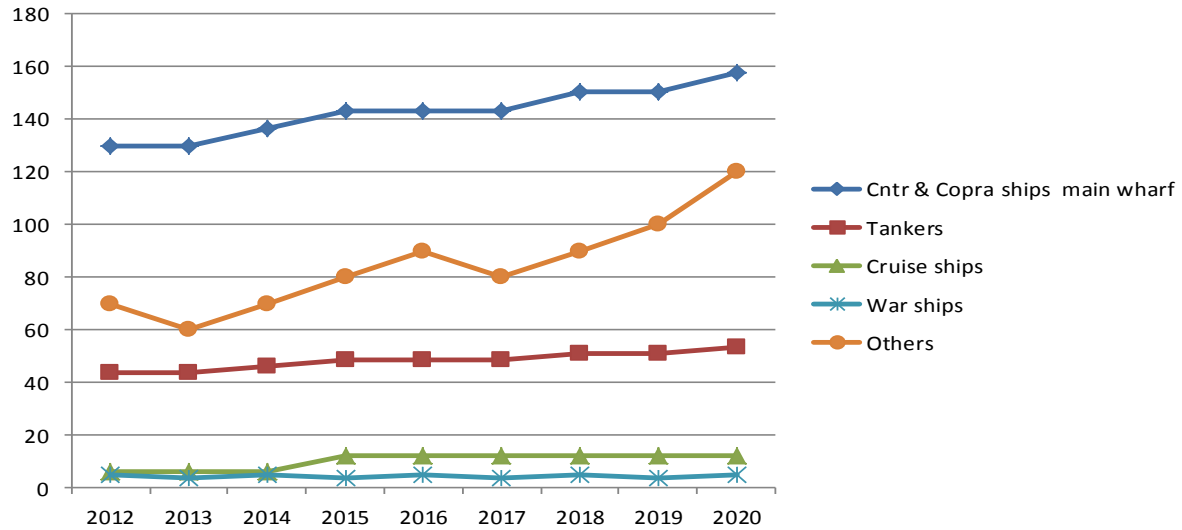
Appendix C - Honiara coastal vessel arrivals, shows details of domestic vessel arrivals by jetty and ramp at Honiara. The forecasting of vessel arrivals at Honiara is based upon segment analysis by commodity and vessel type and capacity. The forecast international vessel arrivals at Honiara are shown in Figure 33 which excludes fishing fleet arrivals, which is dealt with under Section 7.3.5. The variable nature of forecasting vessel arrivals takes into consideration container vessel sizes currently connecting main trade partners with main Pacific ports and their anticipated replacement by larger vessels, which are more economical to operate. Other vessel forecast conditions are associated with growth in export and import commodities, population numbers and the changes in industrial activity which are detailed in Section 7.3.2. It is considered that general freight movements in/out of Honiara do not warrant the level of service provided by the eight dedicated direct container services currently calling. Utilization levels vary significantly from carrier to carrier and without disclosing commercial in-confidence specifics, one main carrier may be considering withdrawing from direct services at Honiara due to lower than anticipated loadings and poor revenue yields.

The forecasted growth of vessel arrivals summarized in Figure 34, is set to rise by 20% between 2011 and 2020 at 138 container vessel arrivals per annum. The condition on this rise is that length overall and Deadweight Tonnage (DWT) per vessel will rise, thereby offsetting any loss in revenue due to some carriers dropping as a result of market competition.

Copra bulk charter vessel arrivals are expected to rise by 60% between 2011 and 2020 coming from a low base due to the rehabilitation of the industry supply chain. The potential for copra production is discussed under Section 7.3.9.

Tanker vessel arrivals are forecasted to increase by 33% over the period 2011 to 2020 to provide a total of 53 vessel arrivals per annum for the supply of LPG and diesel, aviation fuel and petroleum. This forecast is linked directly to population growth and expansion in demand from the industrial, agricultural, and mining sectors.

Figure 34 - Forecast of International vessel arrivals by activity 2012 - 2020



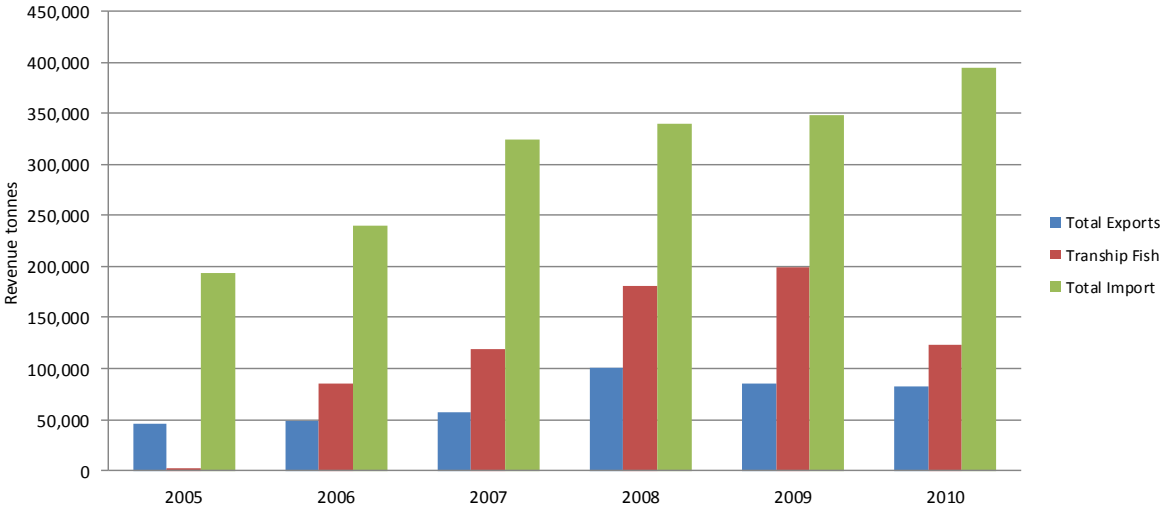
7.3.2 Total freight throughput

Growth in export freight throughput is directly associated with industrial activity as investment continues in the core activities of agriculture production and processing and

mining. Import freight volumes are similarly dictated by investment in industrial activity that requires re-supply of consumable materials but the main consideration is associated with population growth in the Solomon Islands. Figure 35 - Honiara port total import / export and transship fish comparison for years 2005-2010, demonstrates the imbalance of imports against exports and fluctuations in fish transshipments at Honiara.

The ratio between imports and export containers currently stands at 6:1 and this is factored to increase to 7.5:1 by the Year 2020. The main reason for this is the population growth in the Solomon Islands currently at 2.3% overall and 4.7% in urban areas including Honiara. The Solomon Islands is predicted to remain reliant upon imported food sources, including rice and wheat, and the demand for consumer goods and building materials will steadily increase in line with population growth and urbanization.

Figure 35 - Honiara port total import / export and transship fish comparison



7.3.3 Bulk liquid fuels

The Solomon Islands hosts two fuel oil importers and one LPG gas importer. In excess of 70,000 tonnes per annum of fuel oils are imported into the Solomon Islands. Tankers pump fuel via submarine pipe from permanent moorings located to the east of Point Cruz to dedicated storage tanks located within Honiara City limits.

The supply of petroleum based fuels originates from Singapore and LPG is supplied from Brisbane, Australia. South Pacific Oil (SPO), 70% owned by the National Provident Fund (NPF), owns and operates a fuel terminal storage and distribution facility with a capacity of 12 million litres in Honiara and aviation facilities at Henderson International Airport. SPO also provides bunkering services at Honiara Port from Island Jetty to coastal vessels with a draft of less than 2.5m.

Markwarth Oil Company is privately owned and operated and shares the import facility with SPO for pumping to its own tank farm adjacent to Point Cruz which has a capacity of 4.4 million litres. Markwarth also owns a tank farm with a capacity of 3.1 million litres at Lungga approximately 10km to the east of Point Cruz. Markwarth is constructing preliminary piling for an offshore wharf to connect their Lungga facility but indicated that work has been delayed due to requirement for extra hydrographic studies to be completed.

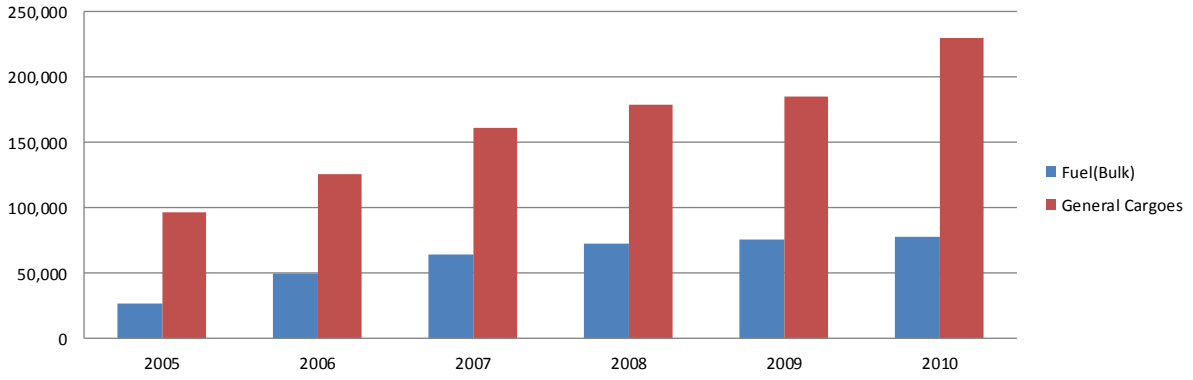
There is an ongoing dispute involving SIPA, SPO, Markwarth and the Korean owners of 'K-Mall' a retail and commercial complex, on the ownership of the foreshore where the fuel pipe

corridors are located. It is understood that a pipe easement fee is being charged by the K-Mall owner on the quantity of imported fuels pumped ashore. This easement penalty is greater than SBD2.5 million per annum which is creating the search for alternatives including placement of a pumping facility at the main wharf at Point Cruz and relocation of pipe works away from the K-Mall area or relocating SPO and Markwarth tank farm facilities to Lungga and investing in an offshore berth arrangement for oil tankers. GPPOL is also interested in partnering with the oil companies to relocate its crude palm oil tank facility away from Point Cruz to Lungga.

Origin Energy is the main importer of LPG gas into the Solomon Islands and have a tank farm capacity of 2000 tonnes located at Ranadi adjacent to their permanent mooring facility. Imports of LPG into Honiara (Ranadi) have increased over the past 12 months with the main demand coming from Gold Ridge Mining and the industrial bakery that doubled its capacity output in early 2011.

The comparison of fuel oil imports against general cargoes is shown in Figure 366 and demonstrates that fuels have been directly proportional with changes in general dry imports. Set against this background fuel imports into Honiara are forecast to increase at a marginally greater ratio to that of general imports. Fuel imports are forecasts to increase by 70% between 2011 and 2020 due to increasing demand from industrial users.

Figure 36 - Honiara bulk fuel imports by tonnes



7.3.4 Containers and break bulk

The latest Solomon Island GDP forecast for 2011/12 has been revised to around 10% (this is 4.5 points up from initial estimate of around 5.5%)[18].

Population growth in the Solomon Islands is anticipated not to fall below current levels of 2.3% overall and 4.7% in the urban areas including Honiara. The Solomon Islands is predicted to remain reliant on imported food sources, including rice and wheat, and the demand for consumer goods and building materials will steadily increase in line with population growth and urbanization.

Industrial re-supply demand is anticipated to grow strongly driven by Gold Ridge Mining Limited's (GML) demand for diesel and LPG fuels, mining machinery, and consumable processing materials including grinding media, chemicals, lubricants and steel support structures. Similarly, GPPOL will increase demand for fuel, fertilizers and plant equipment

[18] Solomon Island Ministry of Finance & Treasury.

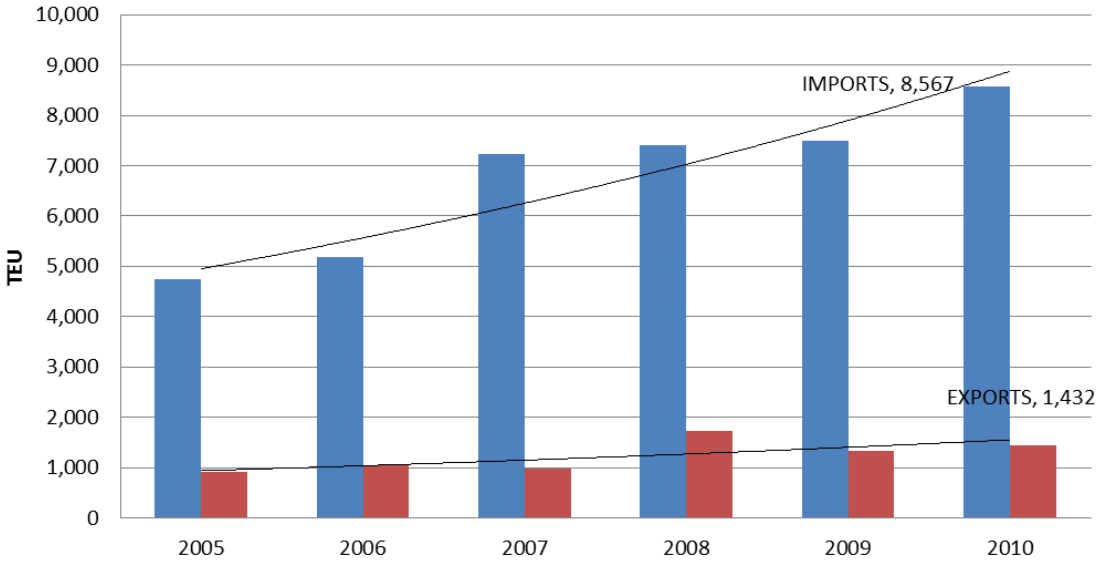
and parts. Logging camps will continue to demand plant machinery, fuels and lubricants until such time as the resource diminishes to a level that creates unsustainability for large scale logging. It is understood that a proportion of logging camp materials are landed by logging vessels and other support craft outside Honiara. Consideration towards existing and expanded on-shore fisheries processing would demand ongoing imports of fuels, lubricants, salt, plant machinery and spare parts.

Construction materials would also spike during installation phases but are considered negligible in the ongoing supply patterns for shipping service supply decision criteria and demand forecasting.

Other industries that will contribute to the demand for imported materials are tourism, road and bridge construction and maintenance, inshore coastal craft, aviation, and passenger vehicle supply and servicing.

As shown in Figure 377, set against coming from a low base after the rebuilding phase of the economy, there has been a recovery from 2005 to 2010 in export container volumes by 55% through Honiara (compound total). This has been driven mainly by volume increases in sawn timber (175%) and cocoa (40%).

Figure 37 - Honiara export / import container volumes in revenue tonnes



Similarly, import container volumes for the same period rose by 80% with major increases recorded in cement (70%), grain (60%), and general containerized cargo (140%). In the same period, imported motor vehicles carried break-bulk increased by 72%.

Forecasts set against the stabilization of the economy, stable population and GDP growth; Government controls resuming over governance of public utilities and authorities; and improved investment sentiment from industries create a sound base for compound total growth estimated at 64% for imports in containers and 32% for exports in containers between years 2010 and 2020 as shown in **Error! Reference source not found.**.

Table 15 - Honiara forecast transshipment, tonnages at anchorage

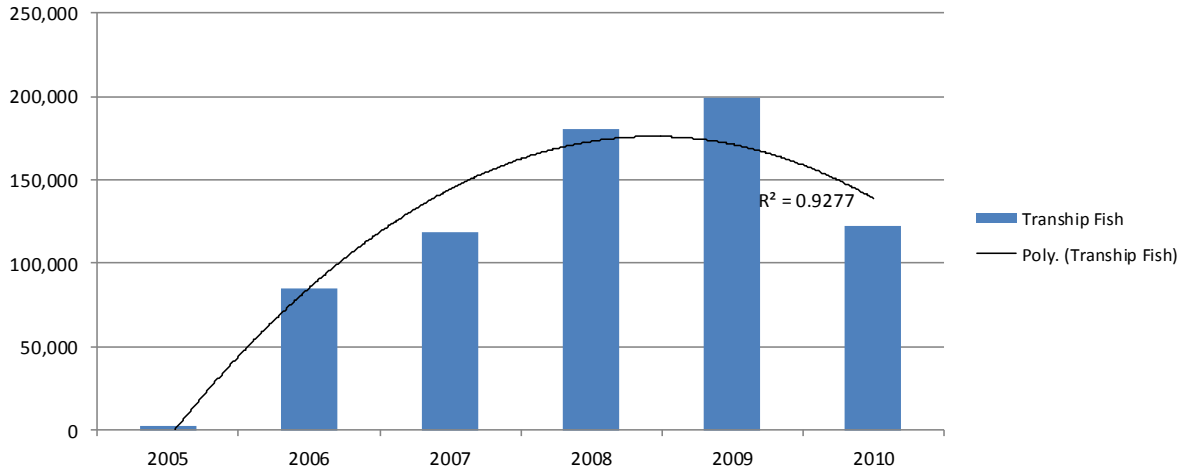
Year	2005	2006	2007	2008	2009	2010	2011	2012
	actual	actual	actual	actual	actual	actual	annualised	forecast
Revenue tonne	2,680	85,030	118,695	180,457	199,009	122,741	140,000	140,000

Year	2013	2014	2015	2016	2017	2018	2019	2020
	forecast	forecast	forecast	forecast	forecast	forecast	forecast	forecast
Revenue tonne	140,000	140,000	110,000	100,000	80,000	80,000	80,000	80,000

7.3.5 Fish transshipment at anchorage

The volume of transshipment of fish at anchorage in Honiara (Figure 38) is characterised by seasonal peak activity between October to March and the limitation of fishing days in EEZ waters under the Nauru Agreement. In addition, there are competing ports anchorages where fish catch can be transshipped both in Solomon Islands and in neighboring countries such as PNG.

Figure 38 - Honiara purse seine annual fish transshipment – revenue tonnes



The forecasting of transshipment fish catch at anchorage includes consideration that the Solomon Islands Government has an intention towards creating an environment where fishing licenses are linked to investment in fisheries industries including onshore processing. There are several onshore processing proposals under consideration including the 'Wontok' project with principal private sector investor Dong Won Fisheries Co. Limited of Korea initiating the concept of building a greenfield fisheries port and processing facility 24 km west of Honiara at Doma.

In anticipation that such processing onshore will commence during 2014/15 at a yet to be commissioned facility and with consideration of declining activity at anchorage due to competitive pressures from other states, the overall drop in transshipment tonnage is considered conservative from 140,000 tonnes in 2011 to 80,000 tonnes in 2017 to 2020 as described in Table 15.

7.3.6 Fisheries on-shore processing

Soltai, owned by US based Tri-marine, is the Solomon Islands' main on-shore fisheries processor based in Noro. This operation receives re-supply and operational materials for its factory and fleet through both direct calling vessels at Honiara and Noro. Exports of canned products are loaded both at Noro and Honiara. Soltai explained at interview that their supply chain planning is disrupted by ever changing schedules of international carriers that cancel calls at Noro in favour of Honiara due to uneconomic volumes of freight to be exchanged. Soltai now have a packing station leased from SIPA at Honiara for loading canned products into containers for export to PNG, Vanuatu and Australia. Soltai explained their intention is to increase production of canned products but presently are limited by capital for investment in new plant equipment for their factory and require a few more positive years before investment in expansions could be sufficiently assured to the parent company.

Southern Seas Investments, a Taiwanese company, is currently undertaking construction of their 42m tuna receiving wharf, grading and refrigerated storage facility at Point Cruz. They expect to be operational by January 2012 at which time they will commence exporting from Honiara airport sashimi grade tuna for markets in Australia and North Asia. The output volume from such operation is expected to reach 50 tonne per month in the first two years of operation.

Solfish owned by Solomon Island Antonio Lee, has desire to enter the fish processing market and has development plans for a processing plant at Ranadi and a warehouse and seawall under construction at Burns Creek, approximately 10km east of Honiara CBD. The scale and operational output of this proposed activity is unknown.

The 'Wontok project' has been widely reported as the primary focus of the Solomon Islands Government campaign to attract onshore investment in fish processing. In May 2011, the Ministry of Fisheries and Marine Resources held a joint meeting with representatives of the Republic of Korea Government and a group of Korean investors to provide information on the project at which total investment value is approximately $120 million. The proposal is expected to generate approximately 3,000 to 5,000 local jobs.

The site chosen by the Korean investor consortium is Doma, approximately 24 km west of Honiara CBD. The 10-15 hectare Doma proposal is for a vertical integrated facility hosting landing wharves capable of berthing purse seine vessels and refrigerated fish carriers. The operations would include a primary fisheries loining and canning plant supported by net making and mending facilities, ship repairs, cold storage, fuel depot, fish meal plant, accommodation, ship supplies and other related services. It is understood that to facilitate a whole of government approach, an Inter-Agency Working Group (consisting of representatives from 9 Ministries and the Guadalcanal Provincial Government) has been established to coordinate the Wontok Project.

It is understood there are other investor proposals for onshore fish processing including provision of a spate site at Doma for Frabelle Fisheries of the Philippines and another for Suava Bay in Malaita province. The details and output volumes of these are unknown.

The combined effect of the new onshore fisheries investments would provide increased demands on Honiara port for the delivery of factory consumable items including tinplate, salt, fuels, lubricants, spare parts and materials to support fishing fleets based at Doma, estimated at 100 TEU per annum and between 10,000 to 12,000 tonnes of diesel per annum. A similar sized cannery capable of processing 50-100 tonnes per day in Thailand

would normally carry a permanent workforce of 1,500 persons and deliver an export volume of between 800-1,200 TEU per annum.

Based on observations, the Doma proposal, if advanced, could be easily catered for by the existing Point Cruz port facility in terms of container import and export volumes and be well within the existing shipping services capacities to supply container volumes demanded. Increased export volumes from Honiara would allow an improved ration of full imports to exports and considering in 2010 more than 7,000 were back loaded empty from Honiara, there would be scope for the new fisheries venture to negotiate favourable container export freight rates.

7.3.7 Crude palm oil

The crude palm oil industry in Solomon Islands was devastated during the ethnic conflict era with the then owners, Commonwealth Development Corporation (CDC) pulling out and abandoning their plantation and processing facilities at Solomon Islands Plantation Limited (SIPL). The plantation reopened in January 2005.

The future of palm oil production in Guadalcanal is promising with 2009/10 export volume exceeded 25,000 tonnes.

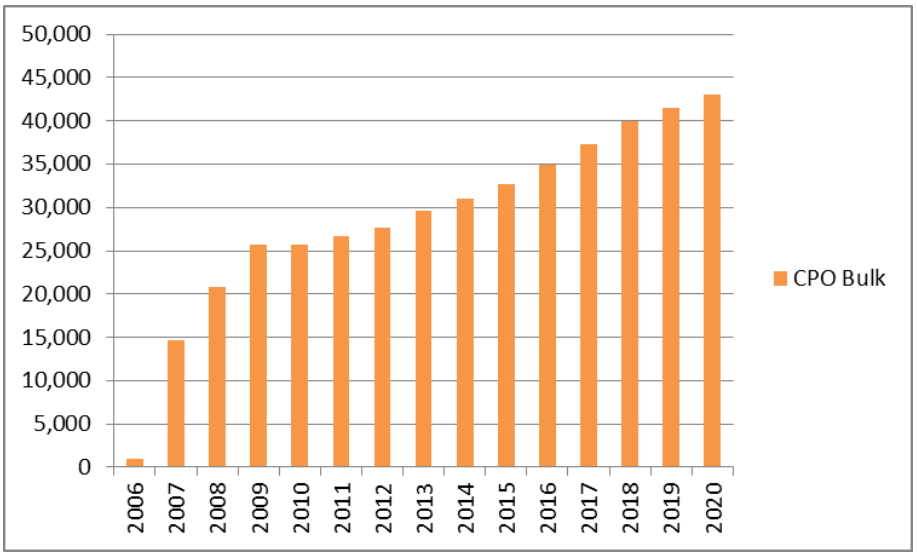
At interview the management of GPPOL advised they were investigating the potential for establishing a tank farm for CPO and kernel oil in association with existing oil companies in the Solomon Islands. The proposals are centered on expanding Markwarth Oils private land holding at Lungga and investing in an oil pier offshore from the same facility (Figure 39) which would halve the trucking distance from GPPOL. This potential development would create a competing facility and subsequent loss of berthage and wharfage income through CPO tankers ceasing to berth at SIPA's international wharf and the existing CPO tank farm at Point Cruz becoming redundant resulting in the loss of land rental income currently paid to SIPA. The issues forcing GPPOL to investigate such options is the legacy conditions of hosting an aging and small capacity tank farm at Point Cruz on SIPA land which creates a need to truck all CPO production in tanker trucks from their facility at Mbinu to Point Cruz, approximately 33km and empty back haul the same distance. The size of the Point Cruz facility limits the volume of CPO export loading and thus adds to the frequency of charter costs of parcel tankers calling at Honiara for small volumes. In addition, the Point Cruz international berth is based on first come first served causing GPPOL significant vessel demurrage costs resulting from congestion at the Honiara berth.

Figure 39 - Markwarth Oil's private pier pilings at Lungga

The Solomon Islands Government has aspirational targets for GPPOL to double the plantation area under oil palm to around 15,000 hectares by 2015, which could see CPO production exceed 70,000 tonnes per annum. Additional storage capacity would need to be an integral part of this plan and the Ranadi site may be such opportunity.

Current production with growth at 5% year-on-year and taking into account comments from GPPOL management about new plantations and outputs provide for a forecast of 43,000 tonnes by 2020 as shown in Figure 4040. In addition, crushed palm kernel, as a byproduct, is exported in containers for stock feed and is anticipated to grow at the same rate, with a forecast total of 5,000 tonnes per annum by 2020, up from 3,000 as at 2011.

Figure 40 - Honiara Crude Palm Oil export forecast– revenue tonnes



7.3.8 Timber and Forestry

Over the past decade, Solomon Islands exports have been increasingly dominated by logs, mostly unprocessed. In 2007, logs accounted for 65 percent of exports, 17 percent of GDP and more than a fifth of government tax revenue. Logging involves ground harvesting (fell and skid) methods in remote locations where logging camps are established and rivers and estuaries are used to transport logs via barge to waiting mother ships for loading at anchorage. Logging is conducted by the logging industry, including companies that harvest trees and are involved in the various aspects of operations including milling, sales from timber yards and log exports. Most logs are exported while timber is both exported and sold locally. Large scale logging operations are dominated by foreign owned companies which vertically integrate logging camps, labour supply, equipment provision and maintenance transport and shipping under the same business organisation.

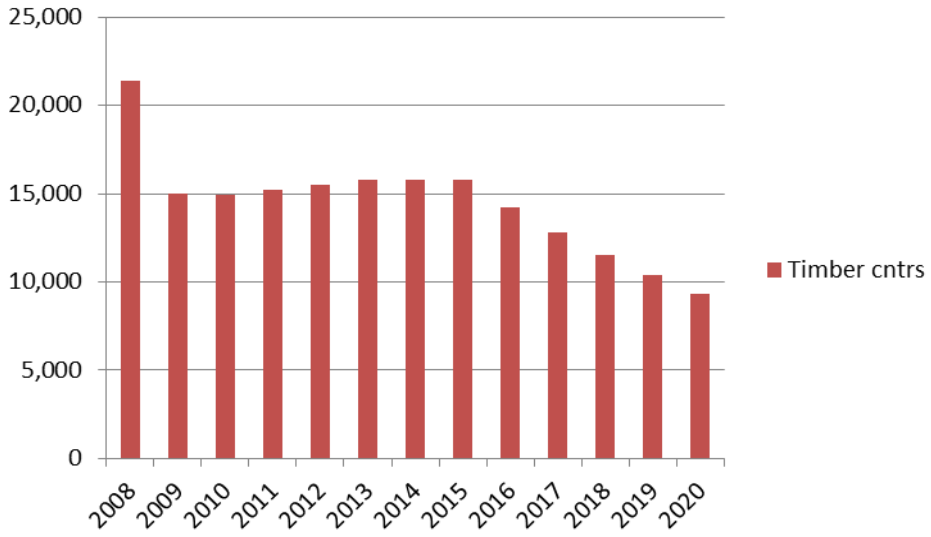
The contribution of logging to the economy is predicted to begin eroding by 2012, so that by 2013 the industry's contribution to the economy is likely to be negligible[19]. There are other industry observers that conclude replanting and natural reforestation will enable the industry to continue at peak conditions to 2015.

[19] CBSI, 2007:8, Ministry of Development Planning and Aid Coordination MDPAC, 2008.

For Honiara port, the main trade resulting from the forestry industry is processed sawn timber in containers delivered for export by various saw mills based on Guadalcanal. The revision of the Solomon Island Forestry Bill 2004 included a provision for the processing of timber harvested under commercial licenses. This licensing condition requires at least 20% of the volume of logs exported per year by a licensee to be processed either by the licensee, or another person or company that buys the logs from the licensee.

The forecasts for sawn timber in containers exported through Honiara is considered on a conservative basis against the issue of resource management and sustainability with a growth of 2% per annum for the next 4 years after which a stabilization and decline is forecast in consecutive years to 2020, as shown below in Figure 411.

Figure 41 - Honiara timber export forecast in containers - revenue tonne



7.3.9 Copra

Copra is exported in bulk form loaded direct into the holds of bulk vessels for shipment using grabs or skips. At Honiara copra is stored in warehouses either on Point Cruz within SIPA controlled port zones or outside the wharf area in private facilities awaiting sufficient volume for export. Due to its high oil content, copra is highly flammable and has a tendency to self-heat/spontaneously combust and is thus assigned to class 4.2 of the International Maritime Dangerous Goods (IMDG) Code. Copra and cocoa exporters require a license issued by the Commodities Export Marketing Board (CEMA) as governed under the CEMA Act. The license requires the exporter to own a proper storage facility that includes permanent building, proper ventilation and a good floor. An annual fee is charged for the license. In addition, CEMA charges a levy for export quality inspection, currently SBD30 per tonne of copra and SBD40 for cocoa.

There remains concern over recurrent poor yields resulting from the age profiles of coconut stands throughout the country. There has been no systematic replanting undertaken in recent years, with many trees being 80 years old or more.

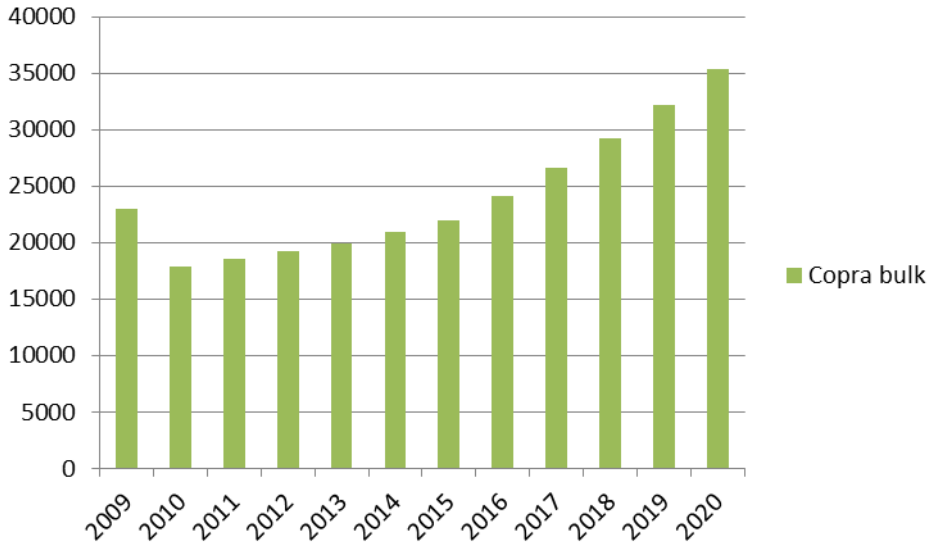
The Copra export industry is typified by a fractured and inefficient supply chain where initial cost burdens are placed at the farmers end. There are three major copra traders in the Solomon Islands and they have significant influence over the wholesale price, control most of the storage facilities and exert market control through fixtures of charters. The industry is

also subject to a limited number of regional buyers with the majority of exports shipped to Cebu in the Philippines for processing.

The Solomon Islands Government have been working towards increasing export volume with various schemes including grants through the Ministry of Agriculture and Livestock (MAL) under a cocoa and copra rehabilitation project that funds traders to buy products from farmers, and then sell these to exporters. The lack of availability of credit for working capital is a major constraint for those trading cocoa, copra, fresh food, livestock and other agricultural produce.

The copra export industry has recovered well from the ethnic conflict era and in 2009 reached 23,000 tonnes from Honiara. Volume has slipped back to 18,000 tonnes in 2010 but is forecast to increase by an average of 6% year-on-year to be about 35,000 tonnes by 2020, as shown in Figure 422.

Figure 42 - Honiara copra export forecast - revenue tonne

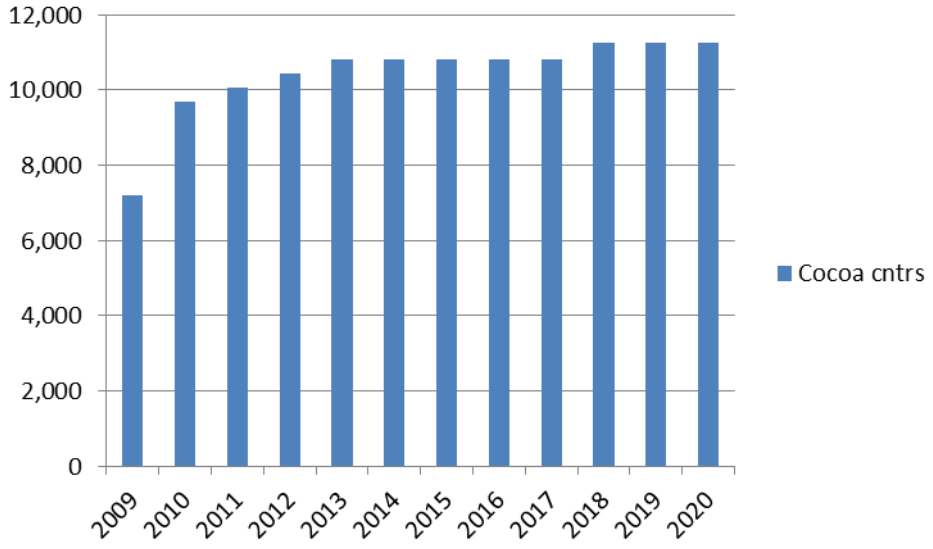


7.3.10 Cocoa

Cocoa is an important cash crop for the Solomon Islands having a good rate of return with production concentrated in Guadalcanal and Malaita, which together delivered 82% of total production in 2007.

Cocoa is exported in containers from Honiara port and the forecast shown in Figure 43 is for a conservative growth of 2% per annum to arrive at 11,200 tonnes by 2020. There is some concern regarding the future of global prices and oversupply from larger scale supply locations and yields from newly developed producing countries.

Figure 43 - Honiara cocoa exports - revenue tonne



7.3.11 Tourism – cruise vessels

There is limited data available on the historic number of cruise ship arrivals at Honiara pre-conflict era, but in recent years, arrivals have been steady at six vessels per annum. The typical vessel type is that of the very small 'Oceanic Discoverer class' of between 60-100m LOA carrying 70 to 150 passengers. It is understood that larger class cruise liners also call direct to Honiara on an ad-hoc basis and others have investigated the potential to call at Honiara but have ruled it out due to the size of the main wharf and limitations on passenger facilities for ships with more than 3,000 passengers. Given the limitations in Honiara, the forecasts for cruise vessel arrivals is limited to 10-12 per year until 2020 (Table 16).

Table 16 - Potential Trade Growth and Future Trading Patterns

HONIARA	year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
EXPORTS																	
EXPORT CONTAINERS TEU		921	1,034	976	1,733	1,329	1,432	1,480	1,531	1,591	1,639	1,693	1,706	1,719	1,767	1,817	1,897
EXPORT BULK COPRA RT		20,923	19,812	16,401	31,925	22,971	17,820	18,497	19,200	19,930	20,926	21,972	24,170	26,587	29,245	32,170	35,387
EXPORT BULK CPO RT		0	1,000	14,695	20,846	25,730	25,675	26,651	27,663	29,600	31,080	32,634	34,918	37,362	39,978	41,497	43,074
IMPORTS																	
IMPORT CONTAINERS TEU		4,743	5,189	7,234	7,412	7,504	8,567	9,100	9,559	10,041	10,554	11,090	11,538	12,130	12,755	13,413	14,097
IMPORT VEHICLES UNITS		671	921	1,090	1,038	920	1,150	1,272	1,409	1,559	1,637	1,719	1,805	1,841	1,933	2,030	2,132
IMPORT BULK FUEL RT		26,284	49,152	64,519	72,800	75,704	78,216	78,000	81,900	85,995	94,595	104,054	109,257	114,719	120,455	126,478	132,802
IMPORT BULK GAS RT		955	1,076	789	2,220	6,198	6,490	6,500	6,825	7,166	7,883	8,671	9,105	9,560	10,038	10,540	11,067
IMPORT BREAK-BULK RT		17,854	23,271	29,872	33,089	34,236	42,558	44,400	46,620	48,951	51,399	53,968	56,667	59,500	62,475	65,599	68,879
SHIP ARRIVALS	*notes*																
Cntr & Copra ships main wharf	*3*	75	81	95	107	103	108	130	130	130	137	143	143	143	150	150	158
Tankers	*4*	35	33	37	43	37	38	40	44	44	46	49	49	49	51	51	53
Cruise ships	*5*	2	0	2	7	6	6	6	6	6	6	12	12	12	12	12	12
Fishing	*6*	142	251	276	362	388	295	300	300	300	300	300	300	300	300	300	300
War ships	*7*	0	2	5	2	7	1	4	5	4	5	4	5	4	5	4	5
Others	*8*	76	50	22	56	75	55	60	70	60	70	80	90	80	90	100	120

Note 3: Includes all vessels worked by SIPA Stevedores (Containers, break-bulk and Copra)

Note 4: Includes all Crude Palm Oil tankers. Diesel and fuel tankers and LPG Gas Tankers (Gas tankers berth at SPM at Ranadi)

Note 5: Includes Cruise vessels on international voyages (excludes domestic tourism boats)

Note 6: Includes all purse seine, long line and reefer fish carrier vessel arrivals (at anchorage and alongside main wharf)

Note 7: Includes visiting warships on international visits (excludes local partrol boats)

Note 8: Includes other vessels such as international flag logging vessels at anchorage whilst being cleared by customs, immigration and quarantine

8 Options to Meet Future Demand

8.1 General

As a consequence of the predicted growth in trade, the current port facilities are expected to reach capacity within the next 5 to 10 years. The time when capacity is reached will depend on short-term measures SIPA takes to improve the productivity of the existing port facility and infrastructure at Point Cruz. Development options for meeting the future demand with the current facilities primarily focus on a short-term improvement program for improving the existing facilities to operate more efficiently. In the longer term, two further stages for development of the Port will provide a five-year plan for some additional infrastructure investment, while a long-term plan will aim to provide a new port facility in a timely manner when the current site at Point Cruz can no longer provide the necessary operating capacity. Improving the operational efficiency of the Port depends on implementing both improvements in the infrastructure and physical facilities of the Port, and on improving the management of the Port, as discussed in Section 5.

8.2 Honiara's Existing and Future Port Capacity

8.2.1 Cargo volumes

Past (2005-2010) volumes of container cargo handled through Honiara Port are shown in Table 17.

Table 17 - Honiara container throughput 2005 - 2010

Description	2005	2006	2007	2008	2009	2010
Imported TEUs/year	4,743	5,189	7,234	7,412	7,504	8,567
Imported empties/year (TEUs)	n/a	n/a	n/a	n/a	n/a	51
Exported TEUs/year	921	1,034	976	1,733	1,506	1,472
Exported empties/year (TEUs)	n/a	n/a	n/a	n/a	n/a	4,807
Total TEUs/year	**5,664**	**6,224**	**8,211**	**9,146**	**9,010**	**14,897**
No. of container ships	63	69	83	95	89	93
No. TEUs/ship	90	90	99	96	101	160
No. of copra and CPO tanker ships	22	20	23	29	25	25

The container yard size required to operate efficiently is dictated by the volume of containers handled and the time needed to handle these containers. Other cargo volumes, such as copra, break-bulk and miscellaneous cargoes, while important to Honiara Port, have not been assessed for determining the size of the container yard. From 2011-2020, the forecast container volumes are shown in Table 18.

Table 18 - Honiara container forecast 2011 - 2020

Description	2011	2012	2014	2016	2018	2020
Imported TEUs/year	9,100	9,559	10,041	10,554	11,090	11,538
Imported empties/year (TEUs)	53	55	57	60	62	65
Exported TEUs/year	1,480	1,531	1,591	1,639	1,693	1,706
Exported empties/year (TEUs)	4,872	4,940	5,010	5,083	5,158	5,233
Total TEUs/year	**15,505**	**16,085**	**16,700**	**17,335**	**18,003**	**18,541**
No. of container ships	115	120	120	128	128	138
No. TEUs/ship	135	134	139	135	141	134
No. of copra and CPO tanker ships	29	35	38	41	47	51

The average time to unload and load a ship is based on a sample of recorded times for vessels taken in 2011, which shows that it takes on average 20 hours of active stevedoring operating time to unload and load a container ship.

8.2.2 Container yard capacity

In assessing the capacity of the existing container yard to handle the existing and forecast container volumes, a number of operating assumptions need to be made. These include:

- Full containers (mostly imports) are stacked 2-high, to facilitate ready access from the stacks to deliver to customers. While stacking higher than two-high increases the capacity of the container yard, accessibility to individual containers is significantly reduced;
- Empty containers (mostly for export) are stacked 3-high;
- Up to two forklift trucks with capacity to lift full containers are available at all times to operate in the container yard;
- Up to two smaller forklifts are available at all times to move empty containers;
- The average cycle time for loading and unloading a container vessel is 6.5 TEUs per hour; and
- Containers are held in the yard for an average time of 10 days.

Using UNCTAD guidelines[20], it is estimated that the sizes of container yard needed for current and future forecast container throughput are shown in Table 19.

Table 19 - Honiara container yard area forecast

Year	Container Throughput, TEUs /year	Container Yard Size, ha
2011	15,505	3.0
2016	17,335	4.0
2020	18,541	5.0

[20] UNCTAD, Port Development, A handbook for planners in developing countries, 1985.

This estimate of container yard size is further supported by the fact that the existing container yard is 3.0 ha in area, and appears to be adequately sized despite some opinions to the contrary.

8.2.3 Container-handling equipment

The Port currently provides stevedoring services in the container yard with three large fork lift trucks (FLTs) and three smaller FLTs, along with other support equipment such as tractors and skeletal trailers. This combined fleet has the capacity to handle up to 48 TEUs per hour in the yard at its present size of three hectares. Each FLT should be able to deliver up to 8 TEUs per hour when unloading and loading a container ship. This productivity rate is rarely achieved because:

- Not all six FLTs are always dedicated to ship unloading/loading – some can be diverted to loading customer's trucks;
- Some break-downs reduce the availability of FLTs in the yard;
- Occasionally, tractor/trailer combinations are used to move containers to and from vessels. This operation tends to be slower than operation by FLT alone; and
- Productivity can be dictated by the capacity of ship's gear to load and unload the ship.

8.2.4 Number of berths

The present and forecast future container volumes and ship numbers also provides the necessary data to estimate the number of berths required to support the ship arrivals without constant queuing of vessels. Again using the UNCTAD Guidelines, the estimated number of berth days needed to accommodate 115 container ships per year plus a further 30 copra bulk vessels and oil palm bulk tankers – the ship numbers in 2011 - is 260 berth days. This analysis is validated by providing the estimated ship stay per voyage of 29 hours (the actual average in 2010 was 26 hours).

Hence, one berth should be adequate for the number of vessels presently using the overseas berth. As container volumes and the number of ship arrivals grow, the berth days demand increases.

Table 20 - Honiara berth days per annum forecast

Year	No. of ships per year	No. of Berth Days per year
2011	144	260
2014	169	315
2020	189	400

By 2014, the waiting time for ships due to excessive queuing for the one berth will result in vessel demurrage costs which are excessive. This shows that a second berth will be needed by 2014, to either accommodate waiting container ships or alternatively to remove copra ships (18 ships per year) from the main wharf.

8.2.5 Fish processing facility

The proposal to develop a new fish processing facility at Doma by Dong Won includes a processing plant for loining and canning, as well as support infrastructure for power generation, water supply, waste management and processing and a wharf for the berthing of

fishing vessels to unload catch. The development will include an area of 2.3 ha of reclaimed land, a 245m long wharf and a total site area of approximately 10 hectares.

According to the Draft Master Plan prepared by Dong Won, about half of the site will be set aside for a tuna factory, a residential area (for factory personnel) and fuel tanks and power generation plant. Hence, an area of 5 ha is needed for the tuna manufacturing plant and other facilities needed for pre-processing of fish.

It is not viable to relocate part(s) of Honiara port operations to the proposed Doma Township west of Honiara. Any attempt to do this would create increased traffic flow through Honiara heading to and from the industrial areas and airport to the east. In addition the extra distance to Doma would add to fuel and trucking costs translating in extra freight charges for materials.

8.3 Improving Current Port Infrastructure and Operations

8.3.1 General

The current port operations suffer from a lack of organisation cohesion, control and performance monitoring, resulting in a poor understanding of performance and hence lost potential opportunities for improving the operational performance of core business activities. This applies both to the efficient utilisation of Port land and the provision of stevedoring services. The options for improving performance of the Port need to focus on assessing the current performance and setting realistic benchmarks against which performance improvements can be measured. This will identify areas where improvements can be made for relatively little cost, using the existing financial and infrastructure resources of the Port. As has already been demonstrated, the container yard has adequate capacity to operate within the forecast container volumes until 2016.

A number of initiatives for increasing the available space for container yard operation and measures needed to improve the overall safety and efficiency of port operations focusing on core business activities are suggested in the following discussion.

8.3.2 Port infrastructure

Demolish any non-productive and derelict buildings: Inspection of buildings and facilities within the Port has identified a number of buildings which are either not being used for the purpose for which they were intended, or are in poor condition and can no longer be put to any useful purpose. These buildings include:

- Small sheds at the western end of the Foxwood copra shed;
- Transit shed #1; and
- Transit shed #2.

These sheds should be demolished and, where practical, sold as shed components for erection elsewhere by a purchaser, or sold as scrap. Alternatively, one or both of the transit sheds could be relocated to the northern end of the port, for future use as copra sheds as part of the development of a separate copra berth and copra-handling operation away from the main wharf (further discussion in Section 8.4.3).

There may be a case for retaining some transit shed space within the Port, and this could be achieved by demolishing only part of transit shed #2 and reconstructing the end wall so that a part of the shed is retained for short-term storage of loose cargo.

The estimated cost for this demolition works is SBD 500,000 ($ 65,000). The area of land which will be made available by the removal of these three buildings amounts to approximately 4,000m^2 (0.4 ha).

The primary purpose for demolishing these sheds is to make additional land available for container yard operations.

Remove all obsolete and non-productive plant and equipment: obsolete and non-functional items of plant and equipment are being retained and stored at various locations around the Port. Keeping these items is not useful to the operation of the Port. These plant and equipment will have been fully depreciated so retain no value to the Port. All surplus and non-productive items of plant and other scrap materials should be removed from the Port and sold to a scrap merchant in Honiara. By doing this, it is estimated that at least 5,500 m^2 (0.5 ha) of occupied land will be freed up for use as productive areas for container storage or other vital Port operations. This clean-up is likely to be cost-neutral, taking into account the likely sale of scrap metals to pay for the labour and plant costs incurred.

The primary purpose for removing these pieces of plant and equipment is to make additional land available for container yard operations.

Fire ring mains and hydrants: The safety of the port and vessels berthed at the wharf is primarily determined by the facilities available for preventing or combating hazardous situations. Honiara will continue to be an important port for the export of copra, with the growth of export volume forecast to be just fewer than 4 % per year through to 2020. As previously noted, copra is a hazardous commodity when it is stored in jute bags or in bulk, due to its tendency for spontaneous combustion. In this Port, three sheds scattered across the port are used for copra storage, which poses a significant fire risk for the entire port footprint. This fire risk is significantly magnified by the fact that no fire mains or hydrants exist within the port limits.

It is essential that design of a suitable fire main and hydrants system within the Port be undertaken as soon as practical, so that an appropriate firefighting capability can be implemented, before a serious fire occurs. This fire main and hydrants should be designed to take into account any proposals and plans to relocate the copra handling to new storage facilities and a new berth in the future. A general cargo port is normally provided with a fire ring main which is located underground around the perimeter of the port. By adopting a ring main approach, redundancy is automatically available in the event that the main is damaged in any way, e.g. accidental breach by excavation. Fire hydrants are provided at designated spacing along the fire main to ensure that full coverage of all port facilities is achieved.

The estimated cost of a complete fire main and hydrant system is SBD2.3 million ($300,000).

Perimeter fence: the Port secure area is securely fenced along the entire length of the western side, between the Royal Solomon Islands Police base and the copra shed located at the northern end of the Port. In line with ISPS requirements, is essential that the north-eastern and eastern boundaries of the Port be fenced to at least the same standard as the existing fence. Completing this fence will greatly assist in preventing access from the sea by unauthorised persons. The extent of new fence amounts to about 400m which is estimated to cost approximately SBD770,000 ($100,000) to construct.

Yard lighting: The operation of a general cargo terminal with most cargo handled as containers is commonly operated 24 hours per day, with three shifts covering the 24 hour

operation. The entire terminal area needs to have sufficient lighting for safe operation at night. Although a number of light poles and fittings are installed around the port operating area, none of them function, indicating the need to replace the light globes. The cost to replace and/or repair yard lighting is estimated to be SBD40,000 ($5,000).

8.3.3 Overseas Berth Improvements

The main wharf was constructed in two separate reconstruction stages, in 1984 and 1990/91. The structure appears to be in reasonable condition, although no detailed inspection of the structure has been made. However, observation of the wharf from the deck has identified a number of short-comings which need to be addressed as soon as possible.

New fenders and bollards: It is essential that new fenders are designed and installed, to accommodate the existing and predicted larger ships likely to visit Honiara in the next decade. Fenders need to be provided to a new design to accommodate the largest forecast vessel within the next 10 to 15 years. New fenders for the main wharf are estimated to cost SBD2.4 million ($300,000).

The existing bollards along the berth edge are heavily corroded and have become virtually unusable. Measures are needed to replace all the bollards with new bollards of adequate capacity. This will require the replacement of the holding-down bolts embedded in the front wharf beam, since the existing holding-down bolts are severely corroded and unserviceable.

The new bollards should be provided with adequate capacity to accommodate the expected line pull of larger cargo vessels expected to visit Honiara in the future. Bollards of at least 50 tonne capacity will be adequate for ships up to 50,000 DWT, although some bollards of 80 tonne capacity would be prudent for ships larger than 50,000 DWT. New bollards for the main wharf are estimated to cost SBD1.6 million ($200,000).

Structure condition survey: No detailed condition survey of the wharf structure has been made since the two wharf sections were constructed 26 years ago. A thorough structural condition survey should be made of the entire wharf, including the underside where this is accessible. This survey should be aimed at determining the current condition of the structure, identifying any remediation works needed, and making an assessment of the remaining life of the structure. This survey should be conducted by a skilled and experienced maritime structural engineer. A comprehensive condition survey of the main wharf is estimated to cost SBD1.2 million ($150,000).

8.3.4 Domestic wharves

The domestic wharves within Honiara Port serve the vital function of supporting the busy and crowded domestic shipping industry. Domestic shipping provides capacity for transporting agricultural and associated products from out-lying islands to Honiara for transshipment to export markets, as well as the transport of consumer goods and passengers back from Honiara to the island domestic ports around the Solomon Islands.

At present a set of ten coastal wharves and barge landings provide all the available berthing facilities for these domestic vessels. Activity around these wharves is typically very crowded, with passengers and vehicles delivering or receiving cargo mixing along the waterfront. Cargo can include fuels and building materials, as well as bags of copra and packaged foodstuffs. Small forklifts operate here to assist with handling of these cargoes, and there is a significant safety issue with passengers and taxis mingling with commercial traffic.

General trafficked area: the entire backup area adjacent to the domestic wharves is an unsealed roadway, which is dangerous and difficult to negotiate. Significant improvements in safety and access would be achieved if this entire area was graded and sealed. This would allow the area to drain after rain and would eliminate the continuous dust problem. Grading and sealing this area is estimated to cost SBD3 million ($ 400,000).

Detailed condition survey of wharves: Most of the existing domestic wharves are in poor structural condition, although no detailed survey of these structures was undertaken during the Scoping Study. One very new structure is in excellent condition. A comprehensive condition survey of all the domestic wharf and ramp structures should be undertaken to identify those structures which should be replaced. Such a survey will identify any structures which are urgently in need of replacement, and would provide prioritisation for remedial and replacement works for these structures, before they become entirely unserviceable. A detailed condition survey of these structures is estimated to cost SBD1.2 million ($150,000).

Staged wharf replacement: Once the existing wharves have been surveyed, a staged program of replacement, based on priority setting for this reconstruction, should be implemented, in line with available capital works funding. This also provides an opportunity to construct wharves longer than the present 30 to 35m, so that up to four domestic ships can be accommodated at each wharf instead of the present two ships. Each wharf is estimated to cost SBD3 million ($400,000) to replace.

8.3.5 Allocating domestic berth space

The Harbourmaster is responsible for allocating berths and/or anchorage space to all vessels arriving at the Port of Honiara, and this task is particularly problematic at the domestic berths. Domestic berth allocation needs to take into consideration a range of factors which ensure the safe movement of vessels within port limits as well as ensuring adequate berth space and unhindered operation for each vessel, once berthed. Some prioritization of berth space allocation is needed to ensure that higher-priority vessels are not queuing and waiting for a berth longer than necessary.

At present, berth allocation appears to operate on an *ad hoc* basis, with no forward planning for vessel arrivals. This is exacerbated by the failure of SIPA to adequately recover all berth fees owing, particularly from long-stay vessels whose operators remain at a domestic berth to wait for the next voyage, without proper charging for this berth time.

The Harbourmaster should provide clear instructions to all domestic vessel operators in allocating berth space at the domestic wharves, consistent with demand and cost recovery. A more efficient method of recording vessel occupancy time spent alongside a berth so that accurate and equitable charges can be invoiced and recovered. For operators who fail to pay berth dues a strict policy of lock-out with support from security staff is needed. By implementing a more effective method for charging berth occupancy, a sustainable source of funds for upgrading and replacing these domestic wharf structures can be established.

8.4 Improving Current Cargo Operations

8.4.1 Berth occupancy

SIPA makes available their main wharf to international vessels on a common user scheme of first–come, first-served basis (FCFS). In 2010 SIPA suspended the berth reservation scheme which had enabled vessel agents to pre book, for a fee of SBD2,000, the

international wharf with seven days clear notice of arrival. The Harbourmaster operates on the basis of common user berth arrival to control all vessel movements within the port limits.

The study team observed bunching of international vessel arrivals during the month of September 2011 which created a line-up of three container vessels at anchor awaiting the berth to become available as shown in Appendix F - Vessel arrivals Honiara main wharf Sept 2011. On another such occasion, a two day delay to a bulk tanker berthing was observed due to congestion and occupancy of the main wharf by other vessels. This delay caused the requirement by the vessels charterers (GPPOL) to pay approximately $20,000 in demurrage charges. In other instances, the main wharf was clear of any international vessel for up to periods of three days.

8.4.2 Cargo handling operation

The present stevedoring operation is run entirely by SIPA, who operate various items of cargo-handling plant and equipment to attend to the landside part of the unloading/loading of each container or general cargo vessel while in port. The statistics used by SIPA to measure performance are inadequate and outdated.

Plant and equipment owned by SIPA and used by the stevedoring department includes all those items listed in Section 4.2.2, and include forklift trucks, tractor-trailer combinations and a mobile crane. SIPA also maintains all these equipment in an extensive plant maintenance workshop.

Container and general cargo vessels always load and unload using ship's gear. SIPA does not have the crane capacity to unload or load container ships. Once cargo is dropped onto the wharf deck, the stevedore collects and removes the cargo to either the container stacks in the container yard or to a specific location for general cargoes. The reverse occurs for delivering cargo to the ship.

There does not appear to be any forward planning or preparation for a ship arrival. There is no ship berth booking scheme operating at Honiara, but within a couple of days SIPA is notified of a ship's imminent arrival.

By forward planning and advising the stevedore of a ship's arrival, the stevedore would be able to prepare export containers in advance of the ship's arrival, ready for their loading, as well as preparing yard space for receiving import containers and break-bulk cargoes. This forewarning and planning would also assist the local shipping agent in their advice to customers in advance of an impending vessel visit at Honiara. This assists the customer to prepare for prompt pick-up of import cargoes when they arrive and have been cleared.

Statistics for cargo importing and exporting have been provided to the Study Team for 2005 to 2010, which show that the stevedoring operation is reasonably efficient. This is expected, since general cargo and container vessels visit Honiara on regular weekly schedules. In 2005, there were 85 general cargo vessel voyages while in 2010 there were 118 voyages. This means that the stevedoring operation is carried out at an effective, if not, expedient pace. The processes used by SIPA to measure productivity are considered to be inadequate and using methodology not suited to Honiara port.

The statistics show that, on average in 2010, a total of 14,897 TEUs were loaded and unloaded from 93 vessels; on average, 160 TEUs were loaded and unloaded per voyage. Since the average total time in port for these voyages was 26 hours, this equates to an average of 6 containers moved per hour. Even using ship's gear to load and unload the ship,

this is a slow rate of handling. Typical container-handling rates for small ports using ship's gear is at least 10 TEUs per hour.

However, there is no incentive to improve the rate of cargo transfer to/from a vessel, since there is no pressure to reduce the time in port for a vessel. Commonly, the primary reason for seeking to shorten the berthing time is to avoid vessel queue. However, the one or two-shift operation for stevedoring activities is a disincentive for improving ship loading productivity.

SIPA should be collating the stevedore department's statistics and analysing the information for each voyage. This analysis can then be translated into more informed forward planning of cargo preparation within the container yard and shift planning with the objective of improving productivity and reducing the time ships are in port. SIPA can also make use of this information to improve the port's productivity and operational efficiency. This provides sound justification for increasing tariffs to better reflect market demand. It may also be possible to reduce the time a vessel is in port, thereby reducing the shipping line's costs.

8.4.3 Improvements to container yard operation

Container handling within the container yard utilises three large and three small forklift trucks, with one operating with a top-lift frame for handling 40-ft containers. Containers are generally stacked three-high, which limits the availability of any particular container for collection by a customer or delivery to the ship for loading. While the available container yard area of three hectares have been demonstrated to be adequate for the current container throughput, future throughput growth will need to be accommodated by enlarging the area of the paved container yard, commencing in about 2016.

Increasing the container capacity of the yard provides improved capability to pre-plan container stacking for vessel arrivals, where export containers can be set aside in a designated area and stacked in a way which facilitates efficient transfer to the vessel in the correct order of loading. This reduces the number of container movements needed while the vessel is in port and will therefore lead to reducing the time in port for a vessel. This should lead to reduced costs per container. Pre-planning of imported containers will also facilitate efficient collection and delivery of containers to customers.

8.4.4 Copra operation

The Study Team observed a small bulk copra vessel being loaded at the main wharf during the study visit, and noted the slow operation which utilized open bins for loading the copra into the ship's hold. A quantity of about 2,000 tonnes of bulk copra took three days to load, which caused a queue of larger general cargo and container vessels to develop.

It is clear that the copra-loading operation is slow and consequently a copra ship occupies the main wharf for extended periods of time while being loaded, thereby creating delays to other ships. This slow loading rate for copra is further exacerbated by the three copra bulk storage sheds being located at different locations around the port, so that transfer of copra by open bin from each shed to the ship tends to disrupt the normal flow of cargo operations around the port while copra loading proceeds. Compounding this is the need to weigh each bin at the port's weighbridge before delivering the loaded bin to the ship's side.

There is no simple remedy to this situation. However, it is apparent that copra ships are typically smaller than other international cargo vessels, and these smaller ships should not be berthed at the main wharf. A medium-term solution would be to relocate the entire copra-

handling operation away from the main wharf, to free up that berth for waiting container vessels.

This could be achieved by constructing a dedicated copra berth at a location away from the main wharf, and establishing centralized copra shed storage capacity adjacent to the new berth. This would create a separate and dedicated Copra Export Terminal. All bagged copra could then be brought to one central shed for unpacking and storage, from where the bulk copra would be loaded directly to the ship. This will require the construction of a new (or relocation of an existing) copra shed, relocation of the weighbridge and construction of a new copra berth. The preferred location for this Copra Terminal would be along the northern perimeter of the port area at Point Cruz.

It is understood that SIPA is already considering the development of such a facility dedicated to the copra trade. A budget of SBD46 million ($6 million) has been identified for these capital works. The SIPA plans are not measured against cost benefit and have no planning for adjacent warehouse space to transfer copra to / from vessels side.

8.4.5 Coastal cargo handling and passenger services

The large number of domestic wharves and barge ramps support a substantial domestic trade operation, where consumer goods are transshipped to the outer islands and agricultural products are delivered to Honiara from the outer islands for export or processing in Honiara. In addition, passenger-carrying vessels provide transit to and from outer island destinations for large numbers of people.

Considerable congestion occurs along the domestic wharves area, particularly when passenger vessels arrive and depart. A mix of trucks delivering or receiving cargoes and private vehicles, buses and taxis creates an unsafe situation which needs to be rectified. Two measures which would improve this situation are relocation of the copra-unloading operation away from the domestic wharves and removal of passenger operations away from the domestic cargo zone.

It is understood that SIPA has commenced work to provide a new passenger terminal to the east of the port, with a budget allocation of SBD2.6 million ($340,000) over the next three years for the reclamation component of this work.

8.5 SIPAs Capital Works Program

8.5.1 Program for next five years

SIPA advised the Study Team that a five-year capital works program is in place, to define a number of infrastructure and port improvement projects and the proposed expenditure for each of the next five years up to 2015. Table 211 is a reproduction of information provided to the Study Team, detailing the main components of this Capital Works Program. A number of items have been omitted from the information provided by SIPA, including works associated with off-port residential properties (Items H6 to H9 and H11). In addition, items relating to the Port of Noro have been omitted.

Table 21 - Capital Works Program, 2010 – 2015 (SBD)

Item	Description	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	Total
H1	Container terminal extension (hardstand)	400,000	1,000,000	2,000,000	1,000,000	500,000	**4,900,000**
H2	Point Cruz reclamation	500,000	500,000	2,000,000	2,500,000	2,000,000	**7,500,000**
H3	Customs shed (second hand)	-	1,000,000	-	-	-	**1,000,000**
H4	Kwalemanu jetty (domestic jetty)	2,500,000	2,000,000	500,000	1,500,000	100,000	**6,600,000**
H5	Passenger terminal (reclamation)	100,000	1,800,000	600,000	100,000		**2,600,000**
H10	Equipment replacement[2]	4,100,000	9,550,000	800,000	900,000	200,000	**15,550,000**
H12	Tug boat[3]	-	5,000,000	200,000	-	-	**5,200,000**
H13	75 m deep-water berth (copra berth)	1,000,000	20,000,000	20,000,000	5,000,000		**46,000,000**
H14	200 m deep-water berth (overseas berth, JICA-sponsored)[3]	500,000	2,000,000	20,000,000	40,000,000	20,000,000	**82,500,000**
H15	Southern Seas Investment Limited jetty[3]	-	2,600,000	-	-	-	**2,600,000**
	Oil pipeline re-route to mooring buoys[3]	-	1,000,000	1,000,000	-	-	**2,000,000**
	Point Cruz building development[3]	5,000,000	20,000,000	20,000,000	16,000,000	16,000,000	**77,000,000**
Total		**14,100,000**	**66,450,000**	**67,100,000**	**67,000,000**	**38,800,000**	**253,450,000**

Notes:
1. non-port items have been omitted.
2. The Equipment Replacement item H10 is further detailed in Table 21.
3. SIPA contribution only.

Table 22 - H10 - Equipment Replacement (SBD)

Item	Description	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	Total
	Empty handler fork truck	2,000,000					2,000,000
	Reachstacker		5,000,000				5,000,000
	FCL carrier (second hand0		2,000,000				2,000,000
	8 T FLT		1,200,000				1,200,000
	2.5 T/4 T FLT		250,000		300,000		550,000
	Cargo handling gear	400,000					400,000
	Security/office bus	500,000	400,000				900,000
	Replace works vehicle	500,000	400,000				900,000

	PA14						
	Replace vehicle for GM				400,000		400,000
	Vehicle subsidy for mgt staff	500,000	100,000	100,000	100,000	100,000	900,000
	Computer replacement	200,000	200,000	300,000	100,000	100,000	900,000
	Weigh bridge, vibro hammer, sand blaster			400,000			400,000
	Totals	**4,100,000**	**9,550,000**	**800,000**	**900,000**	**200,000**	**15,550,000**

8.5.2 Program components

H1 – Container terminal extension (hardstand)

SIPA proposes to continue to extend the existing heavy-duty concrete pavement further north and west to gradually enlarge the container storage area. No details are available of how much additional pavement will be provided. It is estimated that the five-year allocation of SBD4.9 million ($630,000) will provide about 2,000m^2 of additional hardstand.

H2 – Point Cruz reclamation

SIPA proposes to use their internal plant and labour resources to gradually extend the western side of the port by placing further reclamation fill to the edge of the natural reef. This reclamation will provide additional land for further development of wharves (e.g. item H1 container storage area and H13, copra berth).

The five-year allocation of SBD7.5 million ($970,000) is estimated to provide an additional 4,000m^2 of reclaimed land along the northern and western edges of the current Port area.

H3 – Customs shed (second hand)

SIPA and Customs have both advised that Customs have requested a shed which can be utilised exclusively for opening and inspecting containers under cover. This task is currently conducted in the open in a less-than-secure manner, and is an unsatisfactory environment for Customs officers to carry out this activity.

It is understood that SIPA intend to procure a second-hand shed of adequate size (it needs to have a high roof line to fit the large forklift truck inside) and reconstruct it inside the entry gate inside the secure port area.

It is not clear whether the cost of this shed is to be shared between Customs and SIPA or whether SIPA will carry the full cost. An allocation of SBD1 million ($130,000) has been made for this item.

H4 – Kwalemanu jetty

SIPA has recently (late 2010) completed the construction of a new domestic wharf at the eastern end of the domestic wharf area, for additional berth space, primarily for passenger vessels. The total cost of this jetty is understood to be SBD3.5 million ($450,000), although an allocation of SBD6.6 million ($850,000) has been made in the Capital Works Program.

It is understood this jetty was constructed using a mix of SIPA labour and external contractor resources. SIPA has not been able to provide details.

This wharf has been provided to reduce congestion along the domestic wharves.

H5 – Passenger terminal reclamation

SIPA has recognised that domestic passenger vessels need to be separated from domestic cargo vessels to reduce congestion on the domestic wharf area and improve the safety for passengers and the general public. Accordingly, SIPA is proposing to construct a reclaimed area at the very eastern end of the Port limits, between the Island (refueling) Jetty and the Market Jetty, in preparation for developing a new domestic passenger terminal.

The allocation for this passenger terminal is SBD2.6 million ($335,000) over three years. While drawings for the proposed reclamation have been prepared, and a hydrographic survey of the area to be reclaimed has been completed, there are currently no concept drawings to show the arrangement or concept for the passenger terminal. Nor is there a clear plan for providing access by road to this new terminal.

The proposed reclamation also provides new Port land upon which the existing fuel discharge pipeline can be re-routed, thereby eliminating the charge currently imposed by the owners of the K Plaza development for this pipeline running across their land.

H10 – Equipment replacement

SIPA propose to upgrade their plant and equipment fleet to augment the present plant used for various Port operations and associated activities. The list of plant and equipment ranges from container-handling FLTs to vehicles for management and staff use and miscellaneous construction equipment.

It is noted that some current new vehicles are proposed to be replaced in 2013. It is not clear why this is necessary as such vehicles are not very old and still in good condition.

This is considered to be unnecessary and could be delayed until at least 2016.

The procurement of major container-handling plant does not appear to be based on any clear strategy for maintenance and replacement of plant for stevedoring activities, although it is recognised that one of the three large FLTs is over 20 years old and is probably approaching the end of its useful life.

An allocation of SBD15,550,000 ($2 million) has been made over a five year period for these equipment replacements.

H12 – Tug boat

SIPA has identified the need to procure a tug boat and the proposal is to obtain a tug with a bollard pull of 60 tonnes. The capital cost of such a large tug is likely to exceed $4 million. Further operation and maintenance costs will be high, considering the permanent crew needed to operate a specialised vessel of this nature. The need for a tug of this size needs to be critically assessed. A small multi-purpose line boat having capacity as a push-vessel would appear to be more appropriate for this Port (Figure 44).

Figure 44 - Typical multi-purpose work boat used at smaller ports

H13 – 75 m deep-water copra berth:

SIPA has a proposal in the Capital Works Program to construct a new copra berth on the western side of the Port, together with a further extension of the existing progressive reclamation (refer H2 above). Documentation supporting and showing the scope of this proposal is limited to a single drawing showing the plan footprint for the reclamation and berth structure. Further development of this concept is needed, to show both the engineering concept (form of wharf structure, back-up area needed, sheds needed to store copra, etc.) and the economic and operational justification for the proposal. For example, since bulk vessels exporting copra rarely exceed 70 m in length, a berth of about 40 to 50 m length is likely to be adequate for this dedicated trade.

Intuitively, this proposal appears to be well-conceived, for a range of reasons:

Firstly, the existing copra berth located at the inner (western) end of the main berth is congested and difficult to access, especially when a large container ship is berthed at the main wharf. The adjacent copra shed is one of three copra sheds scattered across the port, so unloading and bulk storage of copra prior to its export is a piecemeal operation needing consolidation.

Secondly, when a copra bulk vessel is in port being loaded with bulk copra, a typical vessel, although relatively small, can take two to three days to load. The loading process is cumbersome and the loading rate is in the order of 800 tonnes per shift. The time taken to load these vessels creates significant delays for general cargo and container vessels waiting to berth.

These two issues can be readily resolved with a separate copra berth and associated back-up facilities located away from the main wharf. A comprehensive feasibility study of this proposal should be undertaken to demonstrate its feasibility and benefits to the port and its customers.

It may also be appropriate to utilise one or both of the existing under-utilised transit sheds, demolished and re-erected in a new location, for storing bulk copra as part of the new facility.

H14 – 200 m deep-water (JICA) berth

It is understood that SIPA has been negotiating with JICA for a number of years for the construction of an additional overseas berth within the port. It is understood that the wharf structure will be located along the eastern edge of Point Cruz, to the north of the eastern end of the main wharf. The berth will be aligned approximately north/south and will include new

reclamation behind the wharf for additional operating area. Advice from SIPA is that negotiations have stalled and no further progress is likely.

The benefits of a second overseas berth revolve primarily around relieving queuing of vessels at times when vessels are unable to gain immediate access to the one existing main berth. On the basis that an average of 115 container vessels per year visit Honiara with an average berth time of 26 hours, it has been estimated (refer Section 8.2.4) that queuing for the main berth will not become a major issue (i.e. impose excessive demurrage charges to waiting vessels) until 2014, when the number of berth days will exceed the availability of the main berth, based on the predicted growth in ship arrivals to Honiara.

However, if a separate copra facility is provided, as proposed, this will reduce the demand for the main wharf to the extent that a second overseas berth will not be needed until at least 2020.

H15 – Southern Seas Investment Limited jetty

Southern Seas Investment Limited (SSIL) has established a tuna processing plant within the port, to prepare whole fish for premium export by air to north Asia. They require a dedicated jetty to receive fish from small fishing vessels so that catch can be unloaded directly to their process facility. To facilitate the prompt implementation of this industry, and to provide the basic infrastructure to support new industry (for which a berth occupancy fee will be charged), SIPA has undertaken to share the cost of constructing this jetty with SSIL.

SIPA and SSIL have jointly prepared a proposal to construct a jetty 45m in length adjacent to and north of the Royal SI Police Base jetty on the western side of Point Cruz. The design of the jetty has been completed, and some materials have been procured, including steel pile material. Construction of this jetty is expected to commence in October 2011 and be completed early in 2012.

The estimated cost of this jetty has been estimated by SIPA to be SBD6.0 million ($775,000). A cost-sharing arrangement has been negotiated between SIPA and SSIL, where SSIL will carry the costs of all materials procurement and SIPA will provide construction plant and labour. SIPA has estimated the plant and labour costs to be SBD3,440,500 ($444,000), which is about SBD840,500 ($110,000) above the allocation in the Capital Works Program.

Pipeline re-route from mooring buoys

The main fuel pipeline which runs from a point adjacent to the three mooring buoys to the shore, then to the South Pacific Oil and Markwarth tank farms is partially located within the property boundary of the K Plaza building. It has been advised that this attracts a rental cost of SBD2 million ($258,000) per year. This proposal in the Capital Works Program will relocate that length of pipeline to a location fully within SIPA's port limits. This cannot be completed, however, until the passenger terminal reclamation (item H5) has been completed. The allocation for this proposal is SBD2 million ($258,000).

Point Cruz building development

Appendix P – SIPA HAUS Office Tower shows a 12-storey building which SIPA proposes to construct on port land on the corner of Mendana Avenue and Commonwealth Avenue. Preliminary design for this building has been completed by a Brisbane-based engineering consultant. SIPA has also advised that an economic assessment of this SBD172 million ($22 million) development has been completed.

A total of SBD77 million ($10 million) has been allocated over the next five years for SIPA's contribution to designing and constructing this building. It is not known who will contribute the remaining cost of this building, and it is not clear who will manage the building once it has been completed.

8.6 Upgrading Existing Infrastructure within Five Years

8.6.1 General

While the Capital Works Program provides a large number of development and investment items, some of which may bring benefits to the operation of the Port, there are other items which need to be attended to within the next five years which are considered to bring value to the Port and its customers, and to accommodate the predicted future growth of trade and operations at the Port of Honiara.

8.6.2 Port Master Plan and Business Plan

No Master Plan or Business Plan for the Port currently exists, which means that any development implemented or proposed is proceeding without any long-term view of the present and future needs and operation of the Port. The consequence of this is a high risk that capital works funds are wasted on unnecessary infrastructure, and investment will not contribute efficiently to improvement of the Port and improvement of services to the Port's customers.

It is essential that an in-depth master planning exercise be implemented which will produce a comprehensive and robust Master Plan and Business Plan for the Port, for at least the next 25 years. This Master Plan must be fully endorsed and supported by Government and the Port's Board and management.

The Master Plan should present the port's broad strategic intentions over the medium to long term. It should discuss the port's main markets and principal trades; its expectations for future traffic growth; and any predicted expansion of the port or changes in the way it operates. The Plan will also consider in some detail the impact of port activities, and especially of any future growth, on the local environment, community, economy and transport infrastructure, and how these impacts might be managed. Most fundamentally, the master planning process will help to clarify the port's strategic thinking, and provide a framework within which the future direction of the port can be considered. Also and in the longer term, the position and function of the port in relation to the further development of the town of Honiara will need to be part of the analysis.

This master planning task should be given the highest priority possible, so that a clear direction for planned development of the port can be established. The estimated cost to prepare a Master Plan using consultants is $300,000.

8.6.3 Demolition of existing redundant sheds

A number of existing sheds located within the port secure area are no longer being used for their original intended purpose, and remain empty. These should be demolished and sold, or alternatively retained for re-erection at a new location within the Port for copra storage as part of a new copra export facility. The area of land available from the removal of these sheds will be about 0.4 ha and the cost is estimated to be $65,000.

8.6.4 Remove obsolete and non-productive plant and equipment

An area of about 0.8 ha can be made available by removing a large quantity of obsolete plant, equipment and scrap. It is likely that this initiative will be cost-neutral considering the proceeds of the sale of scrap.

8.6.5 Extend cargo handling operations

Where land can be vacated of non-port activities, this should be implemented. The areas vacated should then be redeveloped by grading and paving the areas with heavy duty concrete pavement, so that container storage areas can be expanded. By doing this, the estimated area of land which could be turned over to container storage is estimated to be about 22,600m^2. Trimming and paving this area is estimated to cost in the order of SBD20 million ($2.6 million). This pavement extension works should be spread over at least ten years to reduce the annual cost. As noted in Section 8.2.2, this will provide an additional two hectares of container yard needed for 2020.

8.6.6 Port support vessels

The Port is involved in a number of activities requiring the services of a sound work vessel or special-purpose vessel. These activities include:

- Pilot transfer to and from arriving/departing ships;
- Line handling; and
- Security surveillance of the anchorage and general port waters.

The present operations involving work boats are being conducted with small fibreglass outboard-powered coastal boats, which are not suitable for open water operation or for heavy work activities. They are only adequate for line handling.

The Harbourmaster has reported that patrolling the anchorage area to ensure that security and compliance with immigration and port regulations is maintained is virtually impossible. The security surveillance task will be facilitated if regular security patrols can be implemented with the aid of adequate boat support. A surveillance boat does not need to be large or sophisticated. A small reliable launch equipped with mandatory safety equipment, security equipment and communications will be adequate for patrolling the anchorage both day and night. The presence of regular boat patrols will act as a deterrent for illegal activity and incidents of non-compliance with environmental regulations. The pilot launch could be utilized for such surveillance activity when not required by the pilot.

The SIPA marine pilots need a replacement pilot boat to avoid using an open coastal boat for transit to/from the pilot station located in Iron Bottom Sound. Standard safety equipment and other equipment such as navigation lights, life preservers, fire extinguisher, boat fenders, flares, back-up fuel tank, back-up outboard motor and communications will need to be included with the pilot boat package.

Improved efficiency within the port will be achieved if a suitable vessel together with coxswain and boat crew was available for the various boat-dependent operations. Operating rules and procedures will need to be prepared and disseminated to all port personnel to define operating procedures, including banning unauthorised use of port vessels (e.g. for personal use), the provision of comprehensive and properly maintained safety equipment for each boat, routine maintenance, and safe operation. In addition, a set of charges for the services provided by these boats will be needed.

As a first step, the existing pilot boat should be repaired by the replacement of its missing motor (either with a new motor or reinstatement of its original motor from the Hyster FLT) and returned to service as the primary pilot boat. While out of the water, SIPA should refurbish the vessel's hull and provide a new set of safety and operating equipment so that the vessel is ready when the motor is re-installed.

Consideration should be given to procuring a small second-hand tug with a 10 TBP capacity. Such a vessel is estimated to cost $250,000 to purchase and deliver to Honiara. SIPA will need to provide support for a vessel of this nature, by way of engine and winch servicing, holding of spare parts, regular general preventative maintenance, and coxswain and maintenance personnel.

A suitable vessel can be obtained by:

- Inspecting similar workboats and pilot cutters deployed in Fiji, FSM and Guam and engaging a marine broker to locate a suitable pilot/work boat(s) for operation in Honiara.
- Reviewing the deployment of security and safety staff and harbor control staff and plan to allocate a number of trained personnel for both pilot boat and work boat patrol duties.

8.6.7 Main wharf fenders and bollards

The primary purpose of the main wharf is to provide a safe and secure berth for all visiting international vessels. This includes suitable fendering for all expected vessel sizes to guard against damage to the vessel and the wharf structure. In addition, adequate capacity for securing mooring lines to the wharf is essential to safely moor and secure the vessel while berthed.

Observation shows that nearly all of the rubber fenders initially installed along the main wharf concrete face beam are missing and inadequate fendering using old truck and tractor tyres is being adopted instead along the wharf face. This significantly increases the risk of damage during berthing to both the vessel and the wharf structure. To reduce the risk to vessels and the wharf structure, the missing and damaged fenders should be replaced with new fenders of an appropriate size. It may be necessary to increase the size of these fenders to improve their energy-absorbing capacity for the larger vessels expected to visit Honiara in the future. The design of fendering for large vessels is complex and should be undertaken in strict accordance with both the PIANC guidelines and the Australian Standard AS 4997, *Guidelines for the design of maritime structures.*

Observation also shows that the mooring bollards mounted along the quay face are in very poor condition due to excessive corrosion. Replacing these bollards with new bollards will ensure that vessels are safely and securely moored while in port. For the general cargo vessels presently visiting Honiara Port, the bollards should have a capacity of at least 30 tons, although 50 ton bollards would be preferable for accommodating larger vessels which may visit Honiara in the future.

8.7 Long Term Improvements

While short-term improvements to the port have been outlined above, the longer term development of the Port to maintain pace with cargo volume and shipping growth will need to be planned and implemented using a structured approach to setting development priorities and capital works expenditure.

The Master Plan/Business Plan, proposed in Section 8.6.2 above, will provide the direction for implementing detailed improvements in the future.

It is expected that, over time, the available space at the Point Cruz site of the present port will become fully developed, and no further expansion of the Port can be achieved. Based on present forecasts and assessment of available and potential land (from further reclamation), this situation is unlikely to arise before 2037. After this time, it may be necessary to seek new possible locations for a second port site where some port activities can be transferred as appropriate. It is unlikely that all port activities would need to be removed to another site, since the Point Cruz site comprises important infrastructure which will be costly to replace at a new site. On the other hand the port currently occupies a prime piece of land right in the center of Honiara and has a major impact on the flow of traffic through the city, and this is an issue that may need to be reviewed in connection with the next major expansion of the port.

8.8 Off-Port Improvements

8.8.1 Roads

Accessibility by road to the Port is often heavily congested because of the volume of Port traffic and the proximity of the Port to the CBD of Honiara. The main focus of this congestion is the intersection of Mendana Avenue and Commonwealth Avenue, where container trucks and other trucks carrying other cargoes and goods unpacked from containers at or near the port turn onto Honiara's main road en route to the eventual destination. The major route taken is to the east from the port, since this is where the majority of businesses receiving cargo are located.

This congestion is compounded by additional traffic generated by activity at the domestic wharves. This traffic comprises small commercial vehicles delivering or accepting cargo from domestic vessels, as well as passengers arriving and departing on passenger vessels operating to/from the outer islands.

Some improvements to the road network can be made within close proximity to the port. Already, SIPA has managed to open the new road at the far eastern end of the port, which has provided a second entry/egress between the domestic wharves area and Mendana Avenue. Traffic movements around the domestic wharves area would be made significantly more efficient if the entire roadway area was graded and paved with a bitumen seal. This would increase vehicle speeds and substantially reduce dust which is a significant nuisance across this area. The cost of sealing this area (approximately 8,000m^2) is estimated to be $200,000.

In the longer term, it may be possible to modify the area adjacent to the domestic wharves, so that a major road route could be established along the SPO fence line, at least for a single lane of one-way truck traffic which might serve as the exit lane for large trucks leaving the port. This would reduce the volume of traffic on Commonwealth Avenue by 50%.

It is desirable for port traffic to be diverted away from Commonwealth Avenue, and this could be done by improving Savo Street and encouraging more port traffic to use that street. It would also be beneficial for this street to be paved with a bitumen seal. The cost of this is estimated to be $70,000.

Where the port exit gate is located on Dowling Drive, the road pavement has been badly damaged by trucks constantly turning as they enter Dowling Drive. This small area of roadway would benefit from a complete rebuild, using a short section of concrete pavement instead of the bitumen pavement used along the rest of Dowling Drive. The area needing

this treatment is only about 240m^2. To place a concrete pavement here is estimated to cost about $30,000. As Dowling Drive is a public road, SIPA will need to consult with MID to determine how best to undertake this upgrade.

8.9 Cost Estimates (Capital and Recurrent)

A range of improvements and capital development items have been recommended for implementation at the Port of Honiara. Table 23 summarises the estimated capital and recurring costs for implementing and operating these developments.

Table 23 - Capital costs of port improvements

Short Term Improvement	Capital cost, $'000	Annual recurrent cost, $'000
Demolish non-productive buildings	65	0
Remove obsolete plant and equipment	0	0
Fire ring main and hydrants	300	0
Perimeter security fence	100	0
Terminal lighting	5	1
Main berth fender and bollard replacement	500	0
Berth structure condition survey	150	0
TOTAL Short Term Improvement Costs	**1,120**	**1**
Medium Term Improvement (Five Year Program)		
Master Plan and Business Plan	200	0
Domestic berths back-up area sealing	400	5
Domestic berths condition survey	150	0
Domestic wharf replacement (staged, $400,000 per wharf)	2,000	10
Construct new concrete heavy duty pavement to unpaved terminal area	200	0
Procure port support vessels (pilot launch/workboat)	250	20
New Honiara Copra Export Terminal	6,000	10
New passenger terminal	340	
Southern Seas Investments jetty	340	
TOTAL Medium Term Improvement Costs	**9,880**	**45**

9 Preliminary Cost Benefit Analysis

9.1 General

Honiara port long-term strategy planning is an absolute priority for successfully confronting the emerging conditions at Point Cruz, Honiara that will evolve over the next 10-30 years and most certainly require decisive action within the next 10 years.

The strategic objectives and, through that, the business policy and its implementation can be set up only after a clear definition of the port vision and mission framework through a business plan and infrastructure master plan based upon the freight demand and land occupancy conditions.

The proposed future expansion of the capacity of the Honiara port will require major investment. The proposed infrastructure developments will extend the life of Honiara's Point Cruz location, delaying the need for relocation by up to 30 years. Construction of the proposed copra wharf and terminal will alleviate congestion at the main wharf by redirecting copra carriers to use this new facility. These waterfront developments increase the capacity of existing facilities and further defer the time at which a new international wharf will be needed, estimated to be not until 2020.

It is understood that SIPA has been negotiating with JICA for a number of years for the construction of an additional overseas berth within the port. It is understood that the wharf structure is planned to be located along the eastern edge of Point Cruz, to the north of the eastern end of the main wharf.

The benefits of a second overseas berth revolve primarily around relieving queuing of vessels at times when vessels are unable to gain immediate access to the one existing main berth. On the basis that an average of 115 container vessels per year visit Honiara with an average berth time of 26 hours, it has been estimated (refer Section 8.2.4) that queuing for the main berth will not become a major issue (i.e. impose excessive demurrage charges to waiting vessels) until 2014, when the number of berth days will exceed the availability of the main berth, based on the predicted growth in ship arrivals to Honiara.

However, if a separate copra facility is provided, as proposed, this will reduce the demand for the main wharf to the extent that a second overseas berth will not be needed until at least 2020.

Therefore, the cost benefit considerations are set against the proposed infrastructure plans set out in Section 8 of this document and exclude that of the JICA wharf.

Additional planning is required for removal of obsolete sheds and warehouses after the construction of the new Copra Terminal. This will allow the container terminal to expand yard space and provide sufficient area to handle the forecast container and break-bulk movements through the facility for at least the next 20 years.

Construction and upgrading of terminal lighting, fire mains and hydrants are associated with safety and mitigation of economic and social costs associated with accidents and fires which could reduce capability of the port or close it in the event of a major incident where reliance is placed upon external firefighting.

The coastal facilities development proposals center upon the construction of a new passenger terminal designed to benefit both commercial freight movements and passenger safety and comfort. The existing multi user jetties and ramps compromise occupational health and safety issues where both passengers and freight use the facilities at the same

waterfront and marshaling locations at the same time. The benefits of this proposal are both economic, safety and social.

The incremental revenue to be generated as a direct result of improvement plans for Honiara port are related to capacity at the berth allowing opportunity to provide space for additional vessel calls representing incremental turnover. The benefits of the investment are also derived from occupational health and safety, economic benefits derived from relieving congestion, and institutional reforms associated with direct action to manage and contain costs. The investment cost cannot be judged on traditional application of investment return and payback periods or discount rates.

9.2 Preliminary Financial Cost Benefit Analysis

The financial cost benefits are judged against the assumed condition that a failure to act on port infrastructure and management improvements will inhibit growth due to ongoing congestion affecting vessel arrivals and limiting yard space available for imports and exports.

The financial and economic benefits are based on the net impact of the port improvement plans, i.e., the revenue generated from the constrained case, without the improvements, compared to revenue in an unconstrained situation where improvements have been carried out and capacity is not constrained. Net cash effects are based on revenue less direct operating costs in calculating the indicative financial internal rate of return (FIRR).

The financial model has been constructed using assumptions of capital cost and incremental revenue adjustments from seaport tariff increases.

The preliminary financial model covers a 26 year period with the initial first 5 years focusing on surveys, removal of obsolete sheds and wharf constructions along with master planning. The major assumptions used to develop the model are:

- A total capital expenditure of $11 million consisting of civil works and infrastructure; and
- Other items listed in Table 23 under Section 8.

Appendix N - FIRR analysis of port improvement plan (indicative), contains the preliminary assessment of the financial condition on the proposed capital investments. A more detailed assessment would be required in association with the recommended master planning process.

9.3 Major Volume and Operating Assumptions

The plan described in the Port Improvement Plan is designed to maintain and extend the life of Point Cruz as the main commercial gateway for the Solomon Islands until 2037. The institutional improvements are an integral part of the infrastructure developments and one cannot deliver full benefits with the other.

The Solomon Islands rapid economic recovery from the ethnic conflict era with investment and rehabilitation in core industries provides a solid base for which to forecast international and associated coastal freight movements. A cautionary note repeated by several commercial parties interviewed was the ongoing availability of capital for major industrial projects due to concerns over the Government policy, rising labour costs, global commodity prices and competition from other pacific states offering more favorable terms for investment. In addition, the study team heard on several occasions of the fear of a resumption of ethnic conflict in the coming years.

The growth outlook supplied by the Solomon Islands Ministry of Finance & Treasury (Economic Reform Unit) predicts 2011 to pick up strongly with GDP forecast to around 10% (this is 4.5 points up from initial estimate of around 5.5%). The main reasons for this upward revision include:

- Strong logging output during the first half of 2011;
- The expansion in the mining sector as Gold Ridge Mine has restarted production;
- All agricultural commodities (i.e. palm oil, cocoa, and fish) except for copra recorded an increase in the first half of the year (based on the y-o-y comparison) resulting from strong demand and high commodity prices; and
- General improvements in business activities as the economy rebounds.

It has been difficult to place a high degree of accuracy when forecasting migratory tuna catch volumes given the uncertainty over sustainability of fish stocks and competition from other pacific ports for anchorage (port) transfer and competition to attract onshore processing. In a similar context, the forestry and sawn timber industry has doubts over maintaining sustainable resources past 2015.

The population growth and rational economic behavior demonstrated by the Government through assistance afforded by donor states and organisations does, however, combine to create the scene for a conservative but stable estimation of growth for this model at an average of 6% between the years 2012 and 2037.

9.4 Economic Analysis

Preliminary economic impacts are calculated by taking account of the direct benefits from the proposed infrastructure improvements, namely a reduction in congestion and delay costs that are currently driving shipping lines to apply a SBD 275.00 per container and SBD 10.00 per revenue tonne Terminal Handling Charge (THC) on freight rates in reaction to port operations and tariff increases (see Appendix L - New Pacific Line THC announcement and Appendix M - Swire Shipping THC announcement). Additionally, the easing of dwell times for import containers and break-bulk inside the terminal due to increased efficiency resulting from yard improvements will decrease the cost to port users from delays accessing freight, such on costs discussed with importers in Honiara, are considered to be SBD250 per container and SBD12.50 per revenue tonne. Improved productivity will allow SIPA and the Government to pressure shipping lines to reduce and, in due course, remove this THC surcharge. An initial reduction by 50% of the THC, followed by its elimination in subsequent years, is used as a measure of benefit. Similarly, a 50% reduction in the present excessive dwell times per container is allowed as an economic benefit.

The economic impacts are calculated taking into consideration the direct benefits from the port redevelopment project; a reduction in congestion and delay costs that are currently driving shipping lines to apply a loading of $100–$300 per TEU on freight rates that collectively are already higher than other Pacific Island states for similar origin ports and commodities.

It is considered that the substantial improvement to both vessel and cargo handling will positively affect the operation of container carriers serving the trade to the Solomon Islands and should influence, over time, adjustments to their commercial application of market freight rates:

- Lower freight rates, by 5 to 10% (or $125 to $250 per TEU), with savings coming from:
    - Less container storage costs payable by carriers due to faster turn times

    - Reduction in carriers container inventory resulting from better managed fleets and ability to evacuate required empty units back into their cycle of usage
    - Operational ship stays in Honiara Port being substantially reduced in terms of number of days (anchorage or alongside)
    - Stevedoring charges reduced to reflect real cost (Note: Future concession agreements may define maximum rates)
    - Reduction in costs in Australia and NZ to meet the quarantine standards for container cleanliness (pre cleaning quality meeting minimum standards)
- Improved vessel schedule keeping which translates into reliability of delivery times giving benefits from:
    - More efficient planning for handling goods on arrival in store
    - Better delivery reliability leading to lower inventories being possible - less costs for good in transit
- With fewer days in transit and faster store to store times, the cost of inventory on the water will be reduced
- Lower maintenance costs and higher equipment availability will reduce other on-costs
- Improved surveillance of unpacking of containers and hence the correct declaration of goods and the proper collection of related excise
- Safer operations leading to less probability of injuries and their resultant economic costs.

Another consideration of economic impact and benefits derived from the port redevelopment process is the potential for deployment of permanent mobile harbour cranes onto Honiara Port wharves. This enhancement would allow Honiara to be immediately accessible by carriers operating gearless container vessels that would increase port coverage and expose Solomon Islands to a greater choice of international carrier and introduce greater competition onto the berth. The outcome would be lower freight rates for both imports and exports through Honiara and its deployment of harbour crane fixtures.

In addition to the immediate operational benefits declared above, there are further economic benefits to the greater internal economy of the Solomon Islands including:

- Lower freight rates would benefit domestic business activity creating competitive movements in wholesale and retail pricing;
- Lower freight rates for export commodities would immediately transfer to the international C&F price creating a more competitively positioned product on world markets. This would allow exporters to increase sales and stimulate investment;
- A combination of lower freight rates and increased competition evolving in the market would expand the number and scope of businesses engaged in international trade and those deriving a livelihood from interaction with traded goods;
- Employment would grow upon increased volume throughput for those engaged directly in the handling of freight and businesses needing increased staff numbers to handle increases in transactional activity derived from imports or export activity;
- Tourism and construction would immediately benefit through access to greater volumes at lower freight and landed cost of building materials and essential inputs required for the hotel and hospitality industries;
- Greater transactional activity in the domestic market would lead to increased sales tax and excise duties and produce greater disposable income and shared wealth in the wider community.

Appendix O - EIRR analysis of port improvement plan (indicative) for the first preliminary assessment of the economic effects of the proposed capital investments, results in an EIRR of 19% by year 2023 and 31% by year 2037. A more detailed assessment would be required in association with the recommended business and master planning process.

9.5 Risks and Assumptions

The risks likely to emerge relate to institutional behavior and the lack of deliberate measures to arrest the evident causes of doubtful debts incurring a repetition of income write offs evident in the past five years (provision of SBD3.4 million), weak cost control associated with operating activities resulting in SBD16.9 million outstanding with SBD9.2 million outstanding over 90 days, and ad hoc capital works and capital expenditure.

Another risk associated with the port improvement project and its ultimate aims of delivering increased productivity and efficiency gains that translate to more competitive transactions in the internal economy is the requirement to improve management controls and work processes. This is needed to assist SIPA port management operating two separate waterfront facilities in Honiara, one for coastal vessels and one for international cargo and tanker vessels which demand different sets of diagnostics and management process to deliver gains in vessel, cargo handling productivity, and passenger controls and safety. To deliver required gains associated with port development, it is important that a business plan be integral to the redevelopment of both infrastructure and institutional process at Honiara port and at SIPA.

The Solomon Islands is heavily reliant upon imported materials including refined petroleum products, foodstuffs, chemicals, building products and machinery and vehicles. The balance of trade is considered against the agricultural export base including fisheries transshipment and processing which has provided a consistent trade deficit throughout its recent history since 2001 (when statistics resumed). It should be noted with a degree of optimism that in 1996 the trade balance was almost at equilibrium and this potential exists again but set against the cautionary notes mentioned earlier in this Section.

Other risks that should be considered are:

- Foreign currency exchange rate fluctuations: particularly USD and Australasian currencies against SBD forcing inflationary pressures on the recovering economy;
- Urbanization from rural and outlying Islands to Honiara, placing pressures on utilities, public services, employment and renewing fears of ethnic conflict;
- Availability of qualified and skilled persons reduces as a result of increased demand by the expanding public sector as Government replaces donor partner foreign staff with locals;
- Management of the EEZ fishing license scheme including limits of fishing days and the policy to force onshore processing investment;
- Competition in the fisheries sector from other Pacific states with similar ambitions to attract greater fish processing onshore and provide bases for foreign fishing fleets;
- Continued increases in shipping freight rates for delivered products to Solomon Islands, resulting from inefficiencies at Honiara port and rising port tariffs;
- Rationalization and formation of consortia in the Asia to South Pacific shipping fleets creating a network of feeder services to smaller volume ports;
- Repeated shock effect from a Global Financial Crisis (GFC) that immediately impacted on the demand for fresh fish and saw the collapse of sashimi world markets in 2008;
- Depletion of forestry resources resulting in a potential collapse of the entire industry;
- Fluctuations in global demand and prices for palm oil, copra, cocoa, and coffee; and
- Lack of investment in tourism to secure greater market share of the Pacific cruise ship and airplane arrivals tourist market.

10 Climate Change and Social Issues

10.1 Climate Change Impacts

10.1.1 Background

The Inter-governmental Panel on Climate Change (IPCC), in their most recent Technical Summary (IPCC, 2007), states:

"Throughout the 20th century, the global rise of sea level contributed to increased coastal inundation, erosion and ecosystem losses, but the precise role of sea-level rise is difficult to determine due to considerable regional and local variation due to other factors."

and

"Anticipated climate-related changes include: an accelerated rise in sea level of 0.2 to 0.6 m or more by 2100; further rise in sea surface temperatures of 1 to 3°C; more intense tropical and extra-tropical cyclones; generally larger extreme wave and storm surges; altered precipitation/runoff; and ocean acidification. These phenomena will vary considerably at regional and local scales, but the impacts are virtually certain to be overwhelmingly negative. Sea-level rise has substantial inertia and will continue beyond 2100 for many centuries."

and

"Climate change is likely to heavily impact on coral reefs, fisheries and other marine-based resources (high confidence). Fisheries make an important contribution to the GDP of many island states. Changes in the occurrence and intensity of El Niño- Southern Oscillation (ENSO) events are likely to have severe impacts on commercial and artisanal fisheries."

The IPCC has not been able to provide accurate predictions of sea level rise for specific regions around the globe. It states:

"Sea-level changes are of special significance, not only for the low-lying atoll islands but for many high islands where settlements, infrastructure and facilities are concentrated in the coastal zone. Projected globally averaged sea-level rise at the end of the 21st century (2090 to 2099), relative to 1980 to 1999 for the six SRES [Special Report on Emission Scenarios] *scenarios, ranges from 0.19 to 0.58 m... Climate models also indicate a geographical variation of sea-level rise due to non-uniform distribution of temperature and salinity and changes in ocean circulation. Furthermore, regional variations and local differences depend on several factors, including non-climate related factors such as island tectonic setting and postglacial isostatic adjustment."*

10.1.2 Sea level rise

Based on IPCC predictions, a reasonable estimate of sea level rise over the next 90 years (i.e. to 2100) at Honiara is 0.5m. The existing overseas wharf structure was constructed in 1984 and 1990 with a deck level of+7.7 ft. (+2.35m) relative to Chart Datum/LAT. The tidal range at Honiara is 0.5m between MLLW and MHHW.

Based on these predictions, in 2100 the combined effect of high tide and sea level rise will result in a still water level of up to +1.00m relative to MLLW, which reduces the Berth's freeboard to 1.35m. This freeboard, while small, should continue to be sufficient for the berth to operate satisfactorily for the vessels presently visiting Honiara.

It is also recognised, that the present wharf structure is already nearly 30 years old, and will undoubtedly reach the end of its useful life within the next 20 years or so. At the end of its life, it will be necessary to replace this structure with a new wharf structure, either of similar form or other structural form. The need to reconstruct this wharf structure entirely will present an ideal opportunity to raise the deck level a suitable amount, in the event that sea level rise is found to actually be occurring as predicted.

10.2 Other impacts

While the IPCC suggests that other impacts from climate change, such as more frequent storms and stronger winds, may occur, no guidance is available for applying such possible impacts to specific locations. Hence, immediate action to counter these intangible impacts is not considered necessary. [21]

10.2.1 Social Issues

The improvement strategy contained in Section 11 of this report must give due consideration to the integration and coordination process necessary in other sectors such as land transportation, land use, social services and the impact on the community in Honiara and the Solomon Islands. The community support for such programs would be provided from proper engagement and community information sessions to communicate the planned increase in sea transport activity and management which would deliver safer and more secure port operation. These would present opportunity for other related sector growths in Honiara which may occur to satisfy what will be essential infrastructure growth. In addition, there will be the added benefits of a potential expansion of the commercial and industrial sectors, which would bring about developments related to commercial investment and construction.

The range of social implications requiring further evaluation on the basis of such improvements taking place would be:

- Transportation to and from the sea port along the same arterial route as private and public passenger vehicles could create congestion to a point where consideration of industrial traffic may have to operate outside peak hours or take other steps to mitigate issues.
- The constrained domestic shipping operations with associated congestion present a risk for a maritime incident within harbour limits. Such occurrence of significance could render the harbour inaccessible to general cargo vessels and fuel tankers. This would produce considerable hardships to the community for a short and midterm period until such obstruction was cleared.
- Limited pollution controls and shortfall in required environmental patrolling and enforcement of regulations may create a suspicion from the community that this is not a priority for SIPA.
- A limited approach to recruitment of apprentice and trainee workers at SIPA may be seen by the community as a reservation of job positions for those selected by internal mechanism only.

[21] Parry, M.L., O.F. Canziani, J.P. Palutikof and Co-authors 2007: Technical Summary. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*.

- Any attempts to engage with tourism development in the cruise line sector would, it is suggested, require professional assistance from experts in public relations to handle community engagement and the existing sensitivities and concerns such mass volumes of tourist arrivals would cause to the cultural conditions and natural environment.
- Productivity improvements are often associated with social and commercial factors which offset them[22]. The trend of shorter working hours and the resistance to working at night or at weekends in industry in general, may become important factors in ports of the future.

Based on the above there is a need to assess the impact of port operations on the living, working and transport conditions of the town of Honiara. It is recommended, at some point of time during the next 10 years (and prior to making any major investment in expanding operations at the current site of the port), to assess the current position of the port of Honiara within the context of the general urban development of Honiara itself.

[22] UNCTAD Port Planners Handbook for Developing Countries.

11 Port Improvement Strategy

11.1 Strategic direction

SIPA is the sole operating entity at the port of Honiara for all infrastructure, plant equipment, maritime and cargo services. As such, it employs, regulates, and assumes the financial burden for delivering related statutory and commercial tasks; and thus maintains the status of a full service port authority. Financial statements for 2009 and 2010 show a year-on-year net loss for the SIPA stevedoring operation.

SIPA is experiencing challenges associated with maintaining sole responsibility for delivery of all port services by operating as a full service port. Such commercial and competitive pressures are transferred from shipping lines, importers, traders, exporters and agents to port operators including stevedores and port authorities for the effective and competitive delivery of port services. Increased trade volumes and ship visits have created the need for SIPA to proceed with investment based around infrastructure expansion and acquiring more expensive and sophisticated plant equipment and developing extra wharf services to cater for the demand.

In SIPA's case the investment decisions are multiplied by maintaining the position as a direct supplier of all port services and it would be commercially advantaged by divesting responsibility of stevedoring to private parties under a concession agreement, thus removing the ongoing costs for plant equipment replacements, fuel and maintenance and maintaining a large dedicated permanent and causal stevedore workforce.

The transition towards a Landlord port model would deliver significant savings in labour and equipment and will allow SIPA to better focus on port productivity, use of land and core assets and position SIPA into a managing entity that selects partners and operators through contracted and concessioned service agreements whilst still allowing it to enter into joint servicing arrangements or separate business ventures for such services. The revenues derived from the concession agreements to one or more service providers entering into agreement with SIPA combined with the savings derived from labour and plant equipment would produce a greatly improved bottom line result.

Releasing the management and direct financial operating burden of port services will reposition SIPA to concentrate on essential activities of the port authority, namely the responsibility to manage and execute the planning of the port and the development and use of land within the port area and the regulatory function of the port. It also involves the upkeep of basic port infrastructure such as fairways, berths, access roads, jetties and ramps. This is best done by adopting a corporatized style of business entity. SIPA should also position itself as the lead joint venture management partner for port-related activities based upon its inherent knowledge and experience in operating such services. This would allow SIPA to enter the private sector through a special JV company to recruit and contract management and staff required by the operating entity.

SIPA would reduce its overhead of permanent staff and direct self-imposed responsibility for maintaining and owning and operating every available asset (fixed and mobile), cargo-handling activities and labour employed.

11.2 Governance

11.2.1 General

To enable SIPA to better define and report cost and profit activities along with the need to become customer responsive and focused can be achieved through restructuring the organization as defined in Section 11.3. The restructuring of the port authority also calls for a definition and acceptance by SIPA board and management of governance standards to ensure the positive outcome of an improvement strategy.

In the case of the SIPA, the Solomon Islands government has delegated decision rights to the SIPA Board and management to act in the best interests of the State in administering and operating the seaport assets. The SIPA board of directors plays a key role in governance. It is their responsibility to endorse the organization's strategy, develop directional policy, appoint, supervise and remunerate senior executives and to ensure accountability of the organization to the government as dictated by the laws of the land.

The scope of the SIPA's jurisdiction and governance over services provided to seaborne trade has a direct impact on the costs of international shipping links and translates directly into the economy of the Solomon Islands at a number of levels. In respect to governance, the following are high level findings for consideration by SIPA management and Board in respect to its port operations:

- An adequate, safe and secure wharf infrastructure and waterfront services for international and domestic vessels using the port – SIPA faces infrastructure developments based upon forecast demand of vessel and cargo throughput;
- Security and adherence to health and safety regulations as required by law – SIPA maintains ISPS compliance and faces Port State Control compliance reporting as a result of SIMSA becoming operational;
- A safe and sheltered anchorage area monitored for security and statutory obligations - The security monitoring of the anchorage area is lacking;
- A safe channel for vessels arriving, maneuvering in and departing the port – as larger sized vessels visit Honiara there will become a need to reduce current channel and berth hazards;
- Competent pilotage services and effective line handling services – SIPA has an aging pilot staff with replacements undergoing training;
- Ancillary services and supply of electricity and fresh water to visiting vessels; and
- A qualified stevedoring operation either directly or via a performance based concession agreement – SIPA would benefit commercially from concessioned stevedore arrangements.

SIPA has a responsibility to oversee:

- The safety, security and environmental control of craft operating within its harbour limits – SIPA has limited oil spill control materials at its disposal;
- Tenants within its port area to ensure their activities are complementary to transport or port business and comply with lease terms and conditions – several SIPA tenants are occupying useful port land and are not associated with port or transport activity;
- The commercial activities of the stevedore are price competitive – SIPA maintains a tariff that has scope for increase without losing its competitive position thus making it an attractive concession;
- The stevedoring range of services are adequate and performance and handling rates are to international acceptable standards – SIPA delivers acceptable service; and

- Occupational health and safety (OH&S) performance of the stevedores and other service providers engaged in contractual services and that of SIPA – OH&S standards are lacking.

11.2.2 Stevedoring operations

In anticipation of moving towards a more customer focused business entity capable of creating an attractive environment for private port investors SIPA should immediately adjust operating hours at Honiara port terminal to include two shifts classified as normal working hours (no overtime or extra attendance fees). The adjusted normal work hours could e.g. be:

Morning shift: 07:30 to 17:00 (meal break 11:30 to 12:30)

Afternoon shift: 17:00 to 02:00 (meal break 21:30 to 22:30)

SIPA should commission a detailed financial and technical study of cargo handling operations at Honiara with a view towards the most efficient structure to organize such operations, including the option of sub-contracting activities through a concession arrangement to the private sector.

It is recommended that SIPA move away from the adherence to a service port model and set the timing to move towards a landlord port model and commence constructing a strategic plan declaring milestones for divestment of cost centers currently held and concession, contract and lease agreements to replacement such legacies.

In such model the fundamental planning should include infrastructure being leased to private operating companies and to industries such as oil companies requiring manifolds for pumping bulk liquids, tank farm terminals and bulk materials handling businesses. The lease to be paid to the Port Authority should be a fixed sum per square meter per year, typically indexed to some measure of inflation. The level of the lease amount should be related to the initial preparation and construction costs (e.g., land reclamation, pavement seal, roadways, port authority erected warehouse structures, and quay wall construction). The private operators should provide and maintain their own superstructure including buildings (e.g., offices, sheds, warehouses, container freight stations, workshops) and purchase and install their own equipment on the terminal grounds (e.g., mobile quay cranes, fork lift trucks, transtainers, conveyors etc.) as required by their business. In landlord ports, dock labor is employed by private terminal operators or through a port-wide labor pool system, but the port authority carries no burden of responsibility for labour agreements or labour supply.

11.2.3 Human resources

The HR policy at SIPA is sound in its construction and prescriptive intent. However, succession planning is missing and senior positions are left vacant for too long. The organization structure of SIPA shows evidence of consolidating too many staff under single line reports. There is a need for more divisional sections to allow better focus and control over specific activities; this is very much the case in the operations area. In addition, SIPA should adopt a competency based HR policy and introduce active practices to ensure staff has adequate skills and experience required to deliver against defined position descriptions. SIPA should maintain key result areas (KRA) for each position set against task achievement and performance monitoring. It is recommended that:

- A full audit of competence for assigned duties is undertaken for all positions related to SIPA activities. This should be overlaid with an assessment of number of personnel required to deliver such duties.

- Key result areas of responsibility and key deliverables be described for each division providing services for SIPA and those linked to each individual staff member whom in turn would have KRA's assigned that are working in that division. Performance measures to be introduced to assess the achievement of ongoing assigned tasks and used to identify areas where skills need to be improved and used to identify staff with capability in succession planning.
- A workforce plan should be considered which would include identifying those approaching retirement, succession planning, recruitment and selection criteria for all roles engaged in seaport services and recruitment of apprentices for trades related roles, and graduate trainees for management support and succession consideration.

With a view to SIPA divesting ownership of stevedoring and other cost centers, SIPA should review staffing positions with view to emphasizing commercial skills required for managing under a landlord port authority regime.

11.2.4 Board of Directors governance

The SIPA Board should be required to endorse any capital expenditure greater than SBD250,000 per one item or single project, as well as endorse any newly created permanent management position at SIPA.

A SIPA Board Charter (Governance framework) should be prepared for either insertion into Solomon Islands SOE regulation or another regulatory mechanism that would create binding arrangements that detail the Board's functions and responsibilities.

The SIPA Board Charter would guide appointments of members to include business persons who have backgrounds in the following areas or where they might be lacking, need to appoint a non-executive director as an advisory function (no voting rights) who has knowledge of: current international seaport or container terminal practice; commerce in Solomon Islands; finance; legal; logistics and /or transport development and marketing; and employment practices.

The SIPA Board Charter should guide the members to delivering against key responsibilities that might include:

- Ensuring Port Master-planning framework is established;
- Review and approval of an annual Business Plan;
- Approval of financial plans and budgets (endorse capital expenditure <SBD250,000 per item or project);
- Reviews of accounting practices and ensuring debtor policies are subscribed to;
- Signing off against audit procedures, both internal and external;
- Review of risk assessment policies and controls including insurance covers and compliance with legal and regulatory requirements;
- Review of the Authority's code of conduct and ethical standards;
- Approval of all company policies;
- Scrutiny and endorsement of monthly management reports including financial statements;
- Review of customer and supplier relationships and contracts; and
- Scrutiny of human resource strategies and procedures including employment and remuneration, as well as endorse newly created permanent management position at SIPA.

11.2.5 Revenue management

Annual tariff increases are recommended in order to keep pace with inflation and labour costs plus any capital purchases which are incurred in foreign currency. A tariff enhancement program should be timed for commencement mid 2012 which would allow for a 10% increase (approximately $500,000) across all services and repeated every 12 months until the quantum of increase arrives at parity with other Pacific ports.

The CAF is planned to be discontinued as a financial measure to recover losses faced from taking on the ADB loan transfer from SIG when it has been fully repaid, estimated to be in 2019. This will cause an immediate loss of cash flow estimated to be $3.94 million and needs to be fiscally managed against other measures to benchmark tariff charges against other Pacific ports of similar size and operational throughput. Other measures to maintain cash flow and protect SIPA against devaluation of the SBD against the USD could be for selected port charges for overseas vessels and cargo movements to be invoiced in USD.

11.3 Organizational strengthening

11.3.1 Commercial department

The organisational structure at SIPA retains a legacy emphasis upon operational functions with an absence of a commercial or marketing department. A port authority with vessel and cargo throughput and cashflow of the magnitude at Honiara port should retain a permanent commercial manager along with marketing and sales staff. The responsibilities of such a department would include establishing and maintaining good relationships with port users, customers, tenants and other stakeholders including local and central Government and the community users of CSO provided land and services. The core functions of a commercial department would be control over pricing including tariff charges, provision of trade forecasting and establishing sales budgets and targets for operational revenue and reporting against variations in revenue by sector. The commercial department would be responsible for establishing a revenue budget and then on pass this to the operations departments for their inclusion into their consolidated cost and revenue budgets. It would be the responsibility of the commercial director to report quantum and reasons for variances of revenue against budget.

The Commercial Department could take the lead on public relations initiatives including announcements on development, public consultations and establishment and leading of port users groups and community services users groups. Such activities would raise public awareness of port development and provide it with the potential to develop and maintain working relationships with stakeholders at a variety of levels.

The Commercial Department will also enhance SIPA’s ability to develop a strong competitive position and allow it to better manage its revenue sources and deliver informed direction towards strategic business planning and future cost benefit direction of a master plan.

11.3.2 Departmental responsibility

The Operations Department of SIPA would be better able to deliver core functions if it was split into two separate departments, one for harbour control and the other for cargo operations and stevedoring services.

The staffing and overheads for management and maintenance of all plant equipment associated with cargo services be removed from the engineering department and consolidated under the new cargo services and stevedoring department. This will better

present the costs associated with SIPA operating its own stevedoring operations and allow for easier evaluation of the potential for concession arrangements. Both departments should be designated as profit centers and be individually responsible for staff and reporting activities against separate departmental annual cost and revenue budgets. This would then clearly demonstrate the financial position of each, the return on investment and assist with the future planning of resources and activities. Performance targets and operational benchmarking is another essential responsibility of the two designated operations departments.

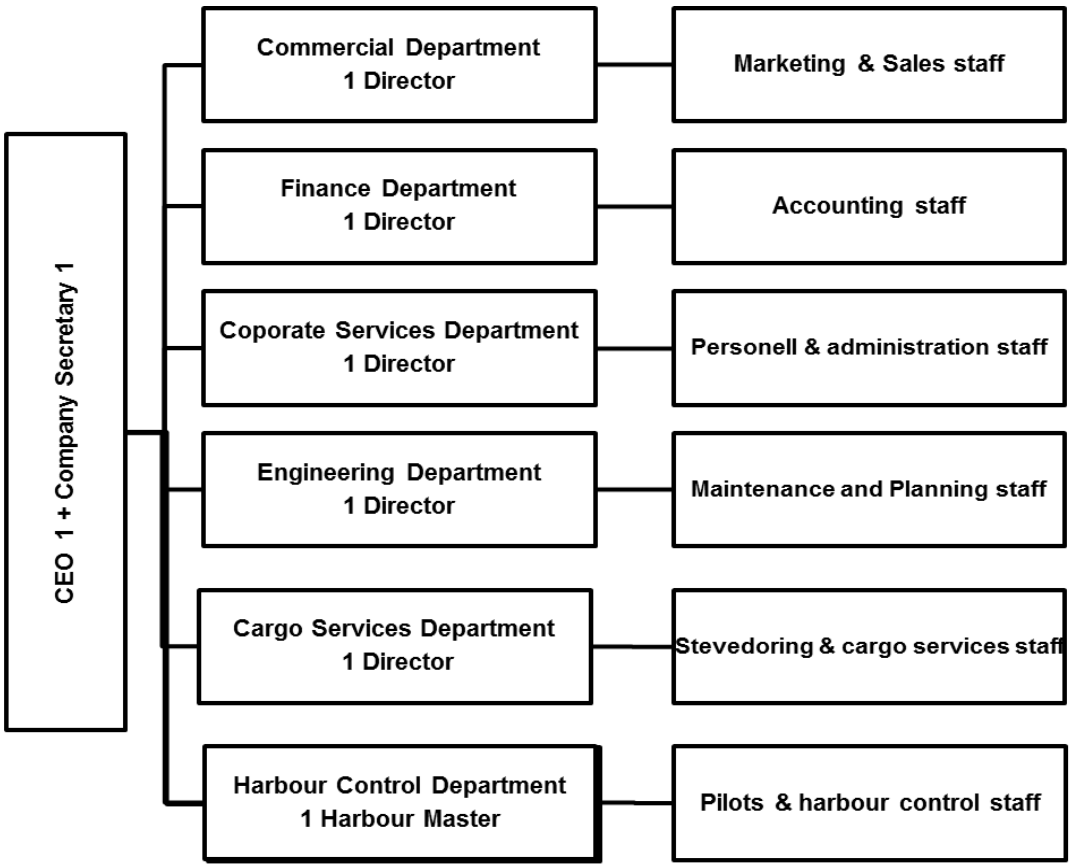
The three other departments should be designated as cost centers having core defined functions as supporting the port authority from financial and accounting, personnel and administration and maintenance and planning. There is also a strong need for these separate departments to individually establish and report against annual budgets and performance targets to assist in cost controls and clearly determine their operating condition and financial position versus options to outsource or contract elements of their functions.

11.3.3 New organisation structure option

Figure 455 shows the proposed organizational structure for SIPA.

The SIPA organization structure needs to adapt to the new shipping service environment and trade conditions presented to it from port users, stakeholders and customers, and emerging competition from other Pacific ports, majority of which are aiming to become transshipment hubs.

Figure 45 – Proposed New Organisation structure, SIPA



11.4 Financial

11.4.1 Debtors control policy

A tariff enhancement program should be timed for commencement mid-2012 which would allow for a 10% increase across all services. SIPA should immediately suspend the extension of credit to new customers. It should immediately activate notice of a new credit policy to come into force that demands all existing customers holding credit terms are required to complete and lodge with SIPA new credit applications within 30 days. A new credit application should include a requirement for a bank guarantee for businesses owning SIPA any monies in excess of 90 days or company guarantee for businesses and SOE that owes SIPA monies less than 30 days within current terms. New credit limits and terms are to be designed in accordance with normal operating standards expected of a port authority, for example:

- Liaise on a daily basis with Port Finance Officers (PFO) to ensure that daily collection of debt is timely and consistent;
- Prepare reports on all default debtors to management and in accordance with credit policy;
- Monitoring, coordinating and identifying bad debts for write-off and referral to Legal Department when necessary;
- Attend to all client queries in a timely manner;
- Ensure that monthly reconciliations are carried out for respective clients (esp. major clients) ;
- Liaise with accounts receivable staff for customer account corrections;
- Identify default clients whose debts are unrecoverable through normal credit terms and refer to the Legal Department for legal proceedings; and
- On a monthly basis, prepare a report for inclusion in monthly management reports

Good debtors control ensures client debt is maintained in a responsible manner and their debts are within the credit terms and conditions extended. Also, this will assist the port authority in meeting its own cash flow projections and maintain its liquidity to meet its own obligations on loan agreements, borrowings and other operational creditors.

11.4.2 Budget planning and forecasting

SIPA should introduce a budget process that is constructed from the bottom up by each department and declaring by chart of accounts their expected month by month expenses and revenue. This should then be consolidated and signed off by the CEO for presentation to, and endorsement by, the SIPA Board.

There should not be a separate estimate held for capital works or capital equipment purchases integrated and evaluated as part of the annual budget. The budget should show all revenue and costs for the current financial year which is then reported on each month to show variances against actuals with full commentary from the responsible port authority department director which is then endorsed or returned for further explanation by the SIPA Board at monthly meetings.

From 2011/2012 budget, SIPA Finance Department should deliver a report showing variances against budget expenditure / revenue and actuals. The variances in this report would then be required to be formally commented upon in writing by the responsible department director for presentation at monthly board meetings.

11.5 Capacity of the existing port

An assessment of the capacity of Honiara Port demonstrates that there is adequate area (3 hectares) available for container storage to serve the present container throughput of 15,500 TEUs per year. A container yard of 5 hectares in size is estimated to be needed by 2020, for a throughput of 18,500 TEUs per year. By vacating non-core tenants from the Port and extending the hardstand pavement to the northern limits of the present reclaimed area, these 5 ha of container yard can readily be developed without even extending the current reclaimed area.

From 2016, the current available container yard area of 3 ha will be inadequate, and additional container yard space will need to become available. SIPA should be planning to develop and deliver an additional area of up to one hectare of hardstand container yard by 2016 and a further one hectare by 2020 to accommodate the forecast growth in container volume.

A fleet of six FLTs should be adequate for operating the container yard at the forecast container throughput of 18,540 TEUs per year in 2020. It would be prudent to replace the ageing Hyster FLT in the next couple of years with a suitable replacement machine.

Additional berth space will also be needed from 2014, based on predicted growth in the number of ships wanting to use the berth, including container ships, copra bulk ships and crude palm oil tankers. By developing a stand-alone copra export terminal on the north-west side of the port, this will most likely be adequate for relieving congestion at the main berth, thereby obviating the need to construct a second international berth before 2020.

11.6 Road Traffic Congestion in Honiara

11.6.1 General

Future expansion of the port will provide capacity to handle the predicted growth of trade over the next 10-20 years. However, this growth in trade will also generate significant additional heavy truck traffic, to transport containers, general cargo, palm oil, fuels and other imported and exported cargoes to and from the port. A number of measures can be instigated by SIPA to assist in reducing the traffic load on the roads in proximity to the port.

11.6.2 Cooperation with Government

SIPA can actively engage with all arms of Government to assist in setting up a multi-agency working group charged with developing a road improvement plan. This plan should include measures to improve the existing road network into and out of the port. Furthermore, the road plan needs to prepare for longer term improvements by identifying new road alignments to filter other traffic through and around the Honiara CBD.

It is understood that MID has plans to construct a bypass road to the south of the Honiara CBD, and this would assist in relieving some traffic congestion in Honiara. There are also plans, supported by SIPA for MID to construct a new port access road along the foreshore from the domestic wharves area east for about 0.6 km which would divert container trucks and other port traffic away from Mendana Avenue.

The MID and the Guadalcanal Provincial Government will benefit from cooperation with SIPA to seek broad-ranging solutions to Honiara’s traffic congestion.

11.6.3 Inland Container Terminal

The TA consultants proposed a concept of an Inland Container Terminal which includes a range of facilities primarily designed to relieve congestion at the Honiara Port. The purpose of an Inland Container Terminal is to provide a facility which significantly contributes to reducing the traffic congestion in Honiara. The Terminal will operate by allowing imported containers to be delivered by SIPA to the Terminal from the port, exclusively as a night-time-only operation. Export containers, including empties, would also be transferred from the Terminal to the Port at night. Customers would then be able to deliver and receive containers to and from the Terminal at any time, day or night, thereby avoiding the need to deliver and receive from the Port. This would significantly reduce the commercial truck traffic around the Port and the Honiara CBD during the day. SIPA would charge customers for this service on a user-pays basis. This is reasonable since customers would make savings by not having to pay for the high transport cost of day-time deliveries and receivals at the Port. The Terminal will operate 24 hours per day, with day-time operation focused on customer deliveries and receivals, while night operation will focus on transfer of containers to and from the Port.

The facility should comprise:

- A plot of land located well away from the Honiara Port and close to the majority of port customers. The logical locality would be in or near the Ranadi industrial estate east of Honiara. Access roads to the Terminal need to be sealed for heavy duty truck traffic;
- The terminal includes a heavy-duty pavement, container-handling equipment and secure perimeter fence. Lighting is essential for 24-hour operation;
- A small 3-shift workforce will operate the Terminal and truck transfers between the Port and the Terminal;
- A small number of side-lift container trucks for container transfers between the Port and the Terminal. Although side-lift capability would not be needed at the two sites, this capability would be useful for providing an additional service for delivery and collection of containers for customers, at an additional fee;
- A small office and amenities building will support the SIPA workforce in their normal operations.

To improve the accessibility of truck traffic to the Inland Container Terminal, it is recommended that the SIG implement a program to seal all the roads inside the Ranadi Industrial Estate.

11.6.4 Bulk liquids facilities relocation

At present all bulk liquids imported into and exported from Honiara pass through the Point Cruz site. This includes bulk fuels unloaded from bulk tankers at the tanker moorings and crude palm oil loaded from the GPPOL tank farm inside the port to tankers moored at the main wharf.

Road traffic generated by bulk liquids trade includes:

- Road tankers delivering crude palm oil from the GPPOL factory located east of Honiara to the GPPOL tanks located inside the secure port area. GPPOL operates one or two 30 tonne tanker trucks every day from their factory to their Port storage facility;

- Road tankers transferring fuels (diesel, petrol, aviation fuels) from the Markwarth and South Pacific Oil tank farms located adjacent to the port, to a wide range of customers including SIEA, GPPOL, Gold Ridge Mine and retail fuel outlets. The number of tanker truck trips generated by this distribution network is about 30 trips per day.

Traffic congestion in Honiara would be significantly improved if these bulk liquid road tankers were diverted away from Honiara. To achieve this, the bulk liquids loading (palm oil) and unloading (fuels) facilities need to be relocated out of the Point Cruz port and established elsewhere. For efficient logistical purposes, the preferred location for these facilities is in or near Ranadi. This location is close to most of the larger fuel customers and is also closer to the GPPOL factory.

11.7 SIPA's Capital Works Program

The Capital Works Program described in detail in Section 8.5 outlines an ambitious schedule of capital works for the Port and environs proposed by SIPA. Upon consideration of the items on the list, it is readily apparent that the proposed investment over the next five years is beyond the capacity of SIPA to absorb from their operating budget.

Furthermore, and just as importantly, none of the items in the program appears to have been assessed either in terms of an overall development plan for the port, nor from a case-by-case cost benefit perspective.

The only item which the Study Team would endorse as a high priority is the SSIL jetty (at a cost of SBD 2.6 million/$ 336,000). This development will meet the needs of a specific new customer at a modest level of outlay. The arrangement for cost sharing between the customer and SIPA is a sound investment decision. It is not clear, however, what the rental for the facility will be, and it is therefore uncertain whether this facility will provide a positive return for SIPA.

The four other items which appear to show merit are the extension to the container yard pavement, the new copra wharf, the new passenger terminal and the fuel pipeline relocation. However, these proposals will require thorough planning and detailed design to be successfully executed. The initial assessment made for this Study suggests that all four proposals have sound reasons for proceeding. However, the Study Team does not unequivocally endorse these proposals because further cost-benefit assessment is considered necessary to demonstrate their viability and positive return on the investment.

It is apparent that the new overseas (JICA) berth will only be required from 2020 onwards, provided that the new copra berth proceeds. SIPA needs to evaluate this in more detail before committing to this development.

While both Customs and SIPA have agreed to proceed with procurement and construction of a Customs inspection shed, it would be worth investigating options for locating this facility inside the Port secure area. The selected location just inside the entry gate may not be the best location for this shed, as undue congestion at the entry gate is likely to result.

The proposal to procure a 60-tonne bollard pull (TBP) tug boat is not supported, considering the relatively approachable berth configuration at the main wharf, and the modest size (by world standards) of the vessels visiting Honiara. A far more practical approach would be to consider acquiring a small push-boat which could serve as a combined line boat and push tug for assisting vessels in windy or otherwise adverse conditions.

The Point Cruz building development is a very ambitious project and needs to be fully investigated for its viability and suitability to be included as part of SIPA's core business of operating a port. It is difficult to understand the value of a development of this magnitude in relation to SIPA's mission and business objectives. It is strongly recommended that this development project be shelved. Alternatively, it could be transferred to a private developer for further assessment before being implemented.

11.8 Infrastructure Rehabilitation and Expansion

11.8.1 Point Cruz reclamation

Within the next 10 years the area of container yard required to support the growing volume of trade is estimated to be 5 ha, an increase over the existing yard area of 3 ha. All of this expansion can be achieved using existing port land which is currently occupied for non-productive purposes, and hence no additional reclamation will be needed to further expand the Port.

11.8.2 Container yard hardstand pavement

As the reclamation at Point Cruz is extended, further concrete hardstand pavement will be required to enlarge the present yard. Over the next 10 years, two hectares of pavement will be needed, at a total cost of $6,300,000.

11.8.3 Extension of existing overseas wharf

As general cargo and container ships get larger in the future, it will become more difficult to accommodate these ships at the existing main wharf which is presently limited to 120m in length. One solution to this problem would be to add an extension onto the outer (eastern) end of the existing structure. An extension of at least 60m would be appropriate for accommodating vessels of 200m LOA or more. However, because the water rapidly deepens in close proximity to the end of the main wharf, constructing an extension of this size would entail piling of considerable length to support the extended deck structure.

11.8.4 New copra wharf

Congestion at the main wharf has been discussed in Section 8.9. These sources of congestion would be removed if a separate dedicated copra berth is provided as a separate facility located away from the main wharf. SIPA has a conceptual plan to construct a new wharf dedicated to the copra trade on the north-western side of Point Cruz. This conceptual plan shows the location of a new wharf but does not show any other facilities to support this wharf.

In order for this wharf to adequately operate as a dedicated copra facility it needs to include on-shore infrastructure to support both importing and exporting of copra. This will include the capacity to berth domestic (coastal) vessels for unloading bags of copra. One or more sheds will be needed where bagged copra can be delivered for unpacking and storage in bulk. This bulk copra can then be loaded directly onto export ships berthed at the new copra wharf from these sheds. The weighbridge presently located on the east side of the port will need to be relocated between the new bulk copra shed and the copra berth to facilitate efficient weighing and loading.

A new Copra Export Terminal has been estimated by SIPA to cost $6 million. This copra terminal could be an opportunity for outsourcing the entire copra handling operation as a concessioned facility.

11.8.5 New fish unloading berth

SIPA and SSIL have agreed to jointly construct a new jetty to facilitate the unloading of fresh tuna within the Port of Honiara for pre-processing in preparation for export by air to northern Asia. Design of the 42m jetty has been completed and procurement of construction materials has commenced. On-site construction should commence in 2011. The cost of this development has been estimated by SIPA to be $336,000.

11.8.6 New passenger terminal

Congestion at the domestic wharves is caused by mixing the traffic generated by domestic cargo unloading and handling operations with the traffic generated by passenger arrivals and departures.

To relieve this congestion and hence achieve efficiencies with cargo handling and passenger movements, a new passenger terminal is needed. SIPA has developed a preliminary conceptual design for a new passenger terminal located between the fuelling wharf (Island Wharf) and the market wharf. This facility includes a strip of reclamation along the foreshore and one or more finger jetties to allow passenger vessels to berth safely for embarking passengers. A new passenger shelter and ticket office will complement and enhance the operation of a new passenger facility. A new passenger facility has been estimated to cost $800,000.

11.8.7 New bulk fuels pipeline

The existing bulk fuels pipeline which connects between the bulk fuel ship mooring and the Southern Pacific Oils and Markwarth terminals is partly located within private land which has a significant annual lease cost attached to it. To avoid this lease cost, the pipeline should be relocated to run entirely within port land. About 150m of the pipeline needs to be relocated. The cost of relocating this pipeline has been estimated by SIPA to be $260,000.

11.8.8 Minor works and improvements

Minor works needed to bring the Port of Honiara up to a safe and functional port include:

- Replacement of main wharf fenders and bollards ($500,000);
- Structural condition survey of main wharf ($150,000);
- Demolish non-productive and redundant buildings, retaining any structures in sound condition which can be re-erected at a new location for new uses (e.g. new copra berth) ($65,000);
- Remove obsolete and non-productive plant and equipment to release additional land for operations (no cost);
- Install fire mains and hydrants for port-wide fire protection ($300,000);
- Erect perimeter fence to fully enclose the port secure area ($100,000);
- Repair of all area lights for night operation ($5,000);
- Grade and seal the operating area serving the domestic wharves ($400,000); and
- Conduct a detailed condition survey of all the existing domestic wharves ($150,000).

11.8.9 Estimates of Costs

Table 24 - Summary of estimated costs of infrastructure improvements

Item	Description	Cost, US$
Development Stage 1 – Immediate Improvements		
1.1	Demolish any non-productive and derelict sheds	65,000
1.2	Remove all obsolete and non-productive plant and equipment	No cost
1.3	Perimeter fence	100,000
1.4	Yard lighting	5,000
1.5	Structure condition survey, main wharf	150,000
1.6	Detailed condition survey of domestic wharves	150,000
1.7	Repair Pilot Boat	100,000
1.8	Southern Seas Investment Limited jetty	336,000
Development Stage 2 – Five Year Plan		
2.1	Port Master Plan & Business Plan	200,000
2.2	Fire ring mains and hydrants	300,000
2.3	New fenders and bollards, main wharf	500,000
2.4	New copra export terminal	6,000,000
2.5	Extend Point Cruz reclamation (1 hectare)	1,200,000
2.6	Container yard hardstand expansion (1 hectare)	3,100,000
2.7	New passenger terminal	800,000
2.8	Grading and sealing domestic wharf operations area	400,000
2.9	New domestic wharves, 2 no. @ $300,000 every 5 years	600,000
2.10	Multi-purpose work boat	250,000
2.11	Oil pipeline re-route to mooring buoys	260,000

11.9 Strategy Options

11.9.1 Staged Development

The Port of Honiara should only be upgraded and developed in line with available funds and with actual growth in import and export trade volumes. Development therefore needs to be staged so that development is implemented in a planned manner and that the level of investment is kept within manageable limits of the capacity of SIPA to service from available funding sources.

Three Development Stages have been prepared, which provide SIPA with guidance for immediate, five-year and long-term measures to improve the performance and management of the Port.

The three Development Stages are:

(i) Development Stage 1 - Immediate Rehabilitation Measures (2012-2014)

This stage includes all recommended measures which are needed as soon as possible, to meet safety and operational standards, and which will immediately improve the operational performance of SIPA and the Port.

(ii) Development Stage 2 - Medium Term Improvements (2014-2022)

This stage addresses a range of improvements needed to the Port's infrastructure to address the predicted growth of trade volumes over the next ten years, as well as addressing some operational shortcomings or where safety is not as good as it should be.

(iii) Development Stage 3 – Long-Term Port Development (2022 – onwards)

Long-term improvements need to be planned and implemented to bring on-going and continuous improvement to both the port's infrastructure and to the business of operating and managing the Port for long-term benefits to all stakeholders.

11.9.2 Development Stage 1 – Immediate Rehabilitation Measures (2012-2014)

(i) Short Term Operational Improvements

A number of improvements to the operation of the port will improve safety and the efficiency of the running of day-to-day port activities. These measures are directed at improving operations and safety within the port. Recommended operational improvements include:

- Revise the port operating hours to better reflect the requirements of customers delivering and collecting cargoes;
- Restrict or ban the activity of un-stuffing containers by customers within the secure port area;
- Establish, in cooperation with MID, a Working Group to seek improvements in the road network in proximity to the Port;
- Improve the recording and tariff collection for occupancy at the domestic wharves by coastal vessels; and
- Improve security surveillance of all secure port entry gates to prevent the entry of unauthorized persons.

(ii) Short Term Infrastructure Improvements

A number of improvements to the infrastructure of the port will provide direct benefits to SIPA and their customers for moderate financial outlay. These measures are directed at improving operations and safety within the port. Recommended rehabilitation measures include:

- Demolish non-productive and derelict sheds;
- Remove all obsolete and non-productive plant and equipment;
- Install missing perimeter fence;
- Repair yard lighting;
- Complete a structure condition survey of the main wharf;
- Complete a detailed condition survey of the domestic wharves;
- Repair the Pilot Boat;
- Proceed with the SSIL jetty (funding already in place).

The total costs of Stage 1 investments are estimated at approximately USD906,000. In addition to the above improvements, during this period, a Port Master Plan and Business Plan will need to be prepared and approved as a basis for continued investments to be implemented in development stage 2.

11.9.3 Development Stage 2 – Medium Term Improvements (2014-2022)

These improvements are aimed at making optimal use of and obtaining the greatest benefit from SIPA's existing port secure area and other useable land on Point Cruz.

A range of medium-term improvements to the Port infrastructure has been identified as being beneficial to the operation and future capacity of the port to accommodate the existing and growing trade volumes. Infrastructure improvements include:

- Construct fire ring mains and hydrants;
- Procure and install new fenders and bollards to the main wharf;
- Plan, design and construct a new copra export terminal;
- Continue to extend Point Cruz reclamation (1 ha);
- Continue with container yard hardstand expansion (1 ha);
- Plan, design and construct new passenger terminal;
- Grading and sealing domestic wharf operations area;
- Commence a prioritised rolling program of replacing old and unserviceable domestic wharves (50-60m long each);
- Procure a multi-purpose work boat; and
- Oil pipeline re-route to mooring buoys.

The total investments of Stage 2 are estimated at about USD13,610,000.

11.9.4 Development Stage 3 – Long-Term Port Development (2022-Onwards)

A detailed assessment of the long-term development for the Port of Honiara is beyond the Scope of this Study. As noted in previous discussion, a Port Master Plan and a Business Plan need to be prepared as soon as practicable. These Plans will define the long term future development of the Port. However, this Study has assessed the capacity of the existing port to cater for the present trade volumes and predicted future trade volumes.

Figure 466 shows a draft scheme for enlarging the footprint of the port site at Point Cruz by reclaiming to the north and east to the edge of the existing natural reef. The edge of the reef defines the line of transition from shallow to deep water beyond which it will not be practical to place further reclamation fill. The total area of this potential reclaimed area measured from Dowling Drive at the western boundary is approximately 10 ha. On the assumption that about one hectare is needed for the GPPOL tank facility, the SIPA administration office and the plant maintenance workshop, and a further hectare will be used for the new copra export facility (berth, back-up area and bulk storage shed) then up to about eight hectares can be available for the container yard to occupy. It is estimated that a container yard of this size can support a container throughput of up to about 40,600 TEUs per year. Based on the estimated trade growth in containers, this throughput is estimated to occur around 2037.

Figure 46: Point Cruz Ultimate Layout (Draft)

Beyond 2037, based on the natural limitations constraining the enlargement of the Point Cruz site with reclamation it is likely that Point Cruz will no longer be able to accommodate the size of port needed to provide adequate services for the trade through Honiara. From this point in time, the Long-Term Port Development Plan may need to include consideration of relocating part or all of the core business of SIPA's activities to a new location within reasonable proximity to Honiara. While no obvious site presents along the northern coastline of Guadalcanal within reasonable proximity to Honiara for the development of a new sheltered port, it is logical that a site should be identified at or near Ranadi, where substantial industrial activity has been established. A new port close to Ranadi may need to incorporate an artificial harbour for adequate shelter from the prevailing weather and sea conditions. Another option to be considered is development and expansion of the proposed fishery development at Doma to include capacity for accommodating some of SIPA's cargo handling operations, perhaps including an international wharf for general cargo and containers.

The Master Plan needs to consider whether the port at Point Cruz is retained and a new overflow port developed near Ranadi or elsewhere, or whether the Point Cruz site is vacated in its entirety to be replaced with a new port at a new location. The size, location and extent of facilities needed at the new port site should all be considered as part of the Master Planning process.

11.9.5 Fish Processing Facility Options

An assessment has been made in relation to locating a fish processing facility within the Port of Honiara at the Point Cruz site. This assessment is conclusive in demonstrating that developing a fish processing facility at Point Cruz is neither viable nor desirable.

The assessment has identified a number of significant reasons for this conclusion. These include:

- A minimum area of vacant land of at least 5 ha in size will be required to develop a viable facility for producing tuna loins, and a further 2-3 ha would be needed for a canning factory. Land of this size is not available at the Point Cruz site, even if the maximum extent of reclamation to the edges of the reef was constructed; and
- The adverse environmental and social impacts of a fish processing facility located in the center of the city of Honiara would be intolerable and would not be mitigated. Such impacts include odour, noise, increased traffic congestion and discharge and disposal of production wastes.

12 Conclusions and Recommendations

12.1 General

Point Cruz has been the main location in the Solomon Islands for international and coastal vessels and freight movements for over 60 years since the capital moved from Tulagi in the 1950s.

The legacy issues associated with port infrastructure in the Solomon Islands today are common to those facing the original planners, whereby Point Cruz was selected due to the absence of any other suitable naturally occurring deep water harbour location near to the capital and population center on the north coast of Guadalcanal.

Point Cruz international port is now facing a wide range of constraints.

12.2 Organisational Structure

There is an urgent need to implement modern seaport management controls and performance benchmarking, as described in the improvement strategy. This will have a positive impact on implementing facility improvements as well as encourage the economic growth potential and competitive position of Honiara. It is noted that the Solomon Islands has existing performance information that displays cost and performance comparisons against its Pacific Island neighbours. These statistics highlight an under performance against key indicators which need to be addressed if Honiara Port is to be regionally competitive.

12.2.1 Board of Directors

There is a need for the Board to improve its directives by the introduction of more specific sets of instructions to management on reporting requirements. These should include controls for reporting operating costs and revenue variances against budget and performance on port productivity including vessels and cargo handled.

There is also a need to establish clearer operating policies and objectives and this can be achieved through the introduction of a formal business plan that maps the strategic direction of the business. The Board should also take an active role in ensuring compliance with the business plan objectives and timing of achieving milestones in the modernization of SIPA.

The new SIPA Board is required by SOE Act regulations to meet at least four times a year.

- *Recommendation 1: Strengthening of the Board to include business professionals with shipping, commodity trading, or ports and terminals management experience to allow it to provide better advice and direction to the strategic benefit of SIPA. This may include non-executive (non-voting rights) directors from local business.*
- *Recommendation 2: The Board to meet more often, perhaps every two months or even every month during the initial modernization phase and business plan implementation. This would enable the board to undertake a closer monitoring role on the operation and performance of SIPA using consistent and meaningful benchmarked performance indicators.*

12.2.2 Management Structure

There is a need to modernize the SIPA management structure by creating more defined lines of responsibility covering key aspects of the businesses operations. In addition, a stronger business focus by SIPA management is needed to develop an understanding of the commercial aspects of operating Honiara port in the South Pacific region, and to achieve this

it is recommended that a Commercial Department should be established within SIPA to improve operating performance and financial results.

- *Recommendation 3: Split the Operations Department into two new departments, Cargo Operations and Harbour Control, and appoint Department Managers to provide specialized direction and leadership. The Cargo Operations Department should focus on stevedoring and cargo handling activities whereas the Harbour Control should dedicate its attention to marine and navigation services.*
- *Recommendation 4: Addition of a new Commercial division to add strength for client engagement and deliver needed management focus on strategic business direction.*
- *Recommendation 5: Outsourcing of the stevedoring operation under a private concession. This would probably include SIPA divesting all interest in cargo handling within the container yard, loading and unloading vessels, operating and maintaining all cargo-handling plant and equipment, and managing and monitoring deliveries and collections of cargoes by customers. SIPA would retain responsibility for maintaining and expanding the container yard pavement and all other infrastructure to permit efficient stevedoring operation and maintaining adequate infrastructure capacity for future growth in trade.*

12.3 Financial Performance

There exists a need for a modernization of the financial management of SIPA that will allow it to better understand its expenditure and revenue sources. Budget performance measures are an integral part of this activity and would be a key component of the business plan that maps this strategy.

The organizational changes should deliver clear lines of operating activity and place an emphasis on departmental accountability derived from designation as either profit or cost centers. Several aspects of financial management that would benefit from easy fixes include the need to prepare an asset register and asset condition report similar to that under preparation for the Solomon Government under the ADB/AusAID Transport Project. This could be extended to assist SIPA to update their asset register for plant equipment and other assets.

In the period 1996-2010, SIPA has been marginally profitable for seven years, had one year of solid profit and incurred actual losses in 2000, 01, 02, 03, 05, 06, 07. The loss making years resulted from adverse trading conditions due to the ethnic conflict era. It is considered that margins in the profitable years have not been sufficient to cover the true cost of capital, and accumulated losses over the preceding years amounting in excess of SBD18.59 million ($2.4 million).

The current situation showed SIPA earned a net operating profit of SBD2.96 million from a turnover of SBD42.4 million in its 2010 financial statements. In the same period, SIPA reported total assets of SBD76,018,593 and total liabilities of SBD24,993.052.

The annual rate of return for SIPA from years 2002 to 2008 was -0.19%. Performance improved in 2009 and 2010 to 5.27% and 5.68% which were in line with the 1988 ADB loan condition (to provide an annual rate of return of no less than 5%).

SIPA had a Current Ratio (assets to its current liabilities) of 2.4 at the end of 2010. This demonstrates it had a reasonably sound working capital position. Cash at bank was low with SBD2.9 million in the bank, insufficient to pay its creditors amounting to SBD4.7 million.

A major problem is the high level of accounts receivable with latest aging debtor report (July 2011) showing SBD16.9 million outstanding with SBD9.2 million outstanding over 90 days.

SIPA has made an ongoing provision of SBD3.4 million for writing off bad debts each year for the last five years.

SIPA has a current loan liability of SBD16.8 million resulting from the Solomon Island Government on-passing ADB loans in 1983 and 1988.

The potential for increased revenue and cashflow from growth in trade activity over the last five years has been constrained by the rebuilding of the economy following the ethnic conflict era. Improved port revenue would be achieved by attention to the low base of existing port tariffs and modernization of tariff calculation methods.

SIPA's plans to embark upon unbudgeted major capital works and capital equipment purchases without due diligence of a Master Plan combining with existing loan liabilities, poor debtor recoveries from operating activities, and outdated tariff structures may well result in immediate liquidity issues.

- *Recommendation 6: SIPA to urgently develop a new debtor control policy that would improve revenue collections and reduce outstanding debtors and reduce the need for writing off bad debts.*
- *Recommendation 7: SIPA to develop a policy to deal with the impending loss of revenue from the cessation of the CAF which is anticipated to cease upon repayment of ADB loans in 2019.*
- *Recommendation 8: SIPA to improve budget planning and forecasting to allow better transparency and accountability of those SIPA operating divisions responsible for costs and revenue by activity. This would include designation of SIPA divisions as either cost or profit centers and enable each to provide monthly budget reports against actual results and commentary on trading variances.*
- *Recommendation 9: SIPA should implement a revenue enhancement program including tariff review with the purpose to set commercial tariffs that will be competitive as compared to other ports in the region and simultaneously generate sufficient financial resources to cover the short and long term financial requirements of the organization and a profit for its shareholders.*
- *Recommendation 10: SIPA to make formal representation to the Solomon Island Government with a proposal to replace the current on lending interest rates of the ADB loans with a combined reduced repayment scale to facilitate expedited settlement of this liability.*
- *Recommendation 11: SIPA to engage the services of external port consultants to perform an audit on the financial condition and operational productivity of the SIPA stevedoring operations. This will allow policy decisions to be concluded by modeling current fiscal results against the proposal to concession out cargo operations.*

12.4 Prospects for Growth and Expansion

Total trade volumes through the port of Honiara are forecast to grow from the present (2010) volume of 476,000 revenue tonnes to 786,000 revenue tonnes in 2020. This is a growth of 65% or about 5% per year over the next 10 years and is derived from the most recent statistics available on GDP and population growth. The details supporting these observations are contained in the body of the report.

The port currently handles the range of cargoes as a mix of containers, break-bulk, bulk liquids and bulk solids. All these cargo types, both as imports and as exports, are forecast to grow in volume over the next decade which requires sufficiency of land at the port to support the operational activities. Activities that will provide greater revenue opportunity include:

- Container growth and the demand for off-dock terminal operations at Ranadi;
- Growth in the copra yield and export market that demands more frequent vessel arrivals and greater capacity for storage;
- Increased tonnage of imported bulk petroleum products providing more frequent tanker arrivals and berthage activity;
- Growth in bulk palm oil export sales from expansion of plantation and yields resulting in greater wharfage and storage and more frequent vessel arrivals;
- Development in the fisheries sector providing onshore processing will add to the volume of exported product in containers and resupply materials for manufacturing plants.

Analysis has shown that the port land at Point Cruz should be large enough, if expanded by reclamation to a total footprint size of about 10 ha, to accommodate the predicted growth in trade for at least the next 20-25 years. This can only be achieved, however, if the port area is cleared of non-port related activities and efficient use is made of the available land. Over this period, investment in staged development of new infrastructure, including a new copra terminal and expansion of the container yard hardstand will be needed. This should achieve the objective of being able to manage and operate an efficient port capable of serving the import and export trade volumes expected.

It is also likely that, within this period of the next 25 years, a second international wharf will be needed to accommodate the growing number of ships expected to call at the port.

A measure which will assist in maximizing the available capacity of the port to handle trade growth will be to relocate the bulk liquids handling facilities away from the port. These need to include dedicated facilities for importing bulk liquid fuels and export of bulk liquid crude palm oil. A bulk liquids berth or mooring could be established east of Honiara, closer to customers. Benefits deriving from this option include the removal of bulk fuel tank farms out of Honiara, thereby releasing land for expansion of the Port, and reduced traffic congestion on Honiara's road network.

An additional option for decentralizing port operations, with the aim of reducing commercial truck traffic on the roads through Honiara comprises an inland container terminal. This facility could possibly be located near the Ranadi industrial estate, and would operate by transferring containers to and from the port during off-peak (night-time) hours to reduce the day-time traffic around the port.

A vital component of the port activity at Honiara is the domestic shipping operating through the domestic wharves adjacent to the main port area. This domestic trade comprises a number of activities, including domestic importing of agricultural products for export, distribution of consumer goods, fuels and building materials to outlying communities, and movement of passengers between Honiara and outlying communities. The domestic wharves are ageing and most will need to be replaced over the next 10 to 20 years. A rolling program of wharf replacement is recommended to ensure that domestic shipping services continue to be well served at this facility. To improve the safe operation of passenger services, an option is to construct a new passenger terminal some distance away from the cargo-dominated domestic shipping services.

The planned construction of a 12-storey port office complex (SIPA Haus) for an estimated SDB170 million ($22 million) under SIPA design contract would detract management from core port operating activities. Such a major project would better be placed outside of the Port authorities' direct involvement (Appendix P – SIPA HAUS Office Tower). Another government agency controlling this development on a PPP/BOT is the suggested vehicle to

advance such a large scale commercial building project. SIPA administration staff would then become tenants of the completed office structure and SIPA would benefit from ongoing income for the complex occupying SIPA land.

12.5 Port Improvement Strategy

While a wide range of options have been suggested for improving the port to accommodate the forecast growth in trade, the historical ways in which infrastructure has been undertaken at the port in an unplanned and ad hoc way is unsatisfactory. This has led to inefficient use of available capital and little understanding of the long term direction for the port and resulted in a lack of focus on core port related activities.

Immediate measures can be undertaken to provide low budget fixes allowing better functionality at SIPA in the short term. Such remedial measures would include:

- Revise the port operating hours to better reflect the requirements of customers;
- Restrict or ban the activity of un-stuffing containers by customers within the secure port area;
- Establish a Working Group with MID to seek improvements in the road network in proximity to the Port;
- Improve the tariff recording and collection for occupancy at the domestic wharves by coastal vessels;
- Improve security surveillance of all secure port entry gates to prevent the entry of unauthorized persons;
- Demolish non-productive and derelict sheds;
- Remove all obsolete and non-productive plant and equipment;
- Install missing perimeter fence;
- Repair yard lighting;
- Complete a structure condition survey of the main wharf;
- Complete a detailed condition survey of the domestic wharves;
- Repair the Pilot Boat; and
- Proceed with the Southern Seas Investment Limited jetty (funding already in place).

A Port Improvement Strategy consisting of a Master Plan and Business Plan are needed to provide clear direction for the future development and expansion of the port at Honiara. A Master Plan will present the port's broad strategic intentions over the medium to long term. It should investigate the port's main markets and principal trades; its expectations for future traffic growth; and any predicted expansion of the port or changes in the way it operates. A Business Plan will draw on the Master Plan and provide further guidance specifically for operating of the port as a viable and profitable business. The Business Plan will provide advice relating to business benchmarking and performance measurement, establishment of essential systems and streamlining of business processes.

- *Recommendation 12: It is recommended that SIPA urgently initiates the preparation of a Port Improvement Strategy, consisting of a port master plan for the medium term and a related business plan for SIPA in order to plan for a structured and systematic development of the port and SIPA to meet future growth in demand for port facilities and services.*

12.6 Master Plan and Business Plan

The Port Improvement Strategy will involve two components:

(i) Restructuring and modernization of SIPA (reflected in a new Business Plan) and
(ii) Improvement of port infrastructure and operations, reflected in a Port Master Plan.

The transition to a Landlord port model will allow a better placed focus on the essential activities and core business of SIPA, primarily the responsibility to manage and execute the planning of the port and the land within the port area, together with the regulatory function of the port. Management includes the economic optimization, the long-term development of the land and the upkeep of basic port infrastructure such as fairways, berths, cargo storage areas, access roads and jetties and ramps. This creates the opportunity to seek further enhancement of corporatization of the business and also presents an opportunity to replace the current SIG Port Act with a new better aligned operating mandate in conjunction with the SOE Act.

Favorable investment opportunities for both Solomon Islands business and international service providers will present for various types of BOT and PPP propositions including all categories of freight terminal and waterfront service activities. SIPA can also position itself as the lead joint venture management partner based upon its inherent knowledge and experience in operating such services. This would maintain SIPA's involvement in such activities and allow SIPA to enter the private sector through a special JV company to recruit and contract management and staff required by the operating entity. SIPA would reduce its direct overhead of staff and direct self-imposed responsibility for maintaining and owning and operating every available asset (fixed and mobile), cargo-handling activities and labour employed.

The shift towards a Landlord port allows better focus on port productivity, use of land and other assets and positions SIPA as a managing entity that selects partners and operators through contracted and concessioned service agreements and chooses whether it wishes to enter into joint servicing arrangements or not via separate business structures.

- *Recommendation 13: It is recommended that SIPA develops into a client oriented and commercially operating Port Authority based on a Landlord Port model which will enable it to focus on its core functions of planning and managing basic port infrastructure, arranging for essential port services, the long term planning and development of the port and the land within the port area and to carry out the regulatory function within the port. This change will be reflected in a new Business Plan that will need to be approved by the SIPA Board.*
- *Recommendation 14: It is recommended to take immediate action to develop an Inland Container Terminal which would include a range of facilities primarily designed to relieve congestion at the Honiara Port. The purpose of an Inland Container Terminal is to provide a facility which significantly contributes to reducing the traffic congestion in Honiara, seen as an immediate need and benefit to the city.*

12.7 Longer Term Infrastructure Expansion

Point Cruz has a physical limit to its expansion by reclamation, amounting to total available area of about 10 ha. As noted this should be able to accommodate core trade volume growth for the next 20-25 years. Beyond this, further expansion of the port will need to consider potential options for developing new port facilities at a new site in reasonable proximity to Honiara. It is unlikely that any site west of Honiara will be suitable, since most present and future industry investment and development will occur around Ranadi and other areas east of Honiara. However, the shallower offshore waters around Ranadi pose their own special challenges for developing a sheltered deep-water port east of Honiara. Alternative port locations west of Honiara have already been identified, in particular at Doma, and there should be further investigation before these sites are disregarded, as there may be significant benefits in selecting a site which provides a sheltered location. The main disadvantages of a port located west of Honiara is the significant compounding of traffic

congestion through Honiara and the large travel distances and long travel times from the west to most customers located east of Honiara.

By transferring bulk liquids shipping operations away from Point Cruz allows container and general cargo operations to remain operating at Point Cruz for as long as possible before a new port location needs to be identified and developed.

- *<u>Recommendation 15:</u> In the medium term it is recommended that SIPA commences planning for the preparation of a long term Master plan for the Port of Honiara to provide an in depth assessment of all options for the future development of the port, including expansion and/or possible relocation. This master plan is to be closely linked to the urban/regional development of Honiara and Guadalcanal.*

APPENDICES

Appendix A - Terms of Reference

Business Assessment

1) Review of existing documentation (e.g., country development plans and strategies, corporate plans, budgets, proposals, etc.) and consultations with key government officials, port users, and the private sector involved in the port.

2) Analysis of current and projected likely future demands on Honiara Port's facilities and services in terms of the requirements of the shipping industry and commercial fisheries sector. This will include analysis of shipping movements at the port over the last five years, identifying changes in shipping services including patterns of usage and likely developments going forward such as ship-wharf transshipment of fish; assessment of commercial cargo movements; specialized shipping activities (inter island services/oil/chemicals etc.); and fishing vessel usage. Consult with the Ministry of Fisheries and Marine Resources and other specialized organizations on the specific requirements and potential of the fisheries sector.

3) Analysis of other relevant port usage to build an understanding of the changing pattern of shipping activity and the implication that these changes have on the future infrastructure capacity and service delivery capability of the port.

4) Identification and assessment of existing port facilities and support infrastructure (e.g. water supply, power, drainage, etc.), services provided, logistical chains, operations and performance efficiency; assess reasons for deterioration of current infrastructure such s berthing facilities; and assess capacity of broader economic infrastructure to accommodate future growth (e.g., capacity of roads, land availability for extension, additional water/power facilities).

5) Undertake a financial analysis of the Port and in particular, determine current sources of revenues, tariff structure and capital expenditure programs; assess current financial viability of operations; determine whether revenues are maximized based on the current availability of core facilities and the extent to which trade-offs among different services may be exercised; and determine the scope for improvement in financial performance and development funding options.

6) Review the current organizational capability of the Solomon Islands Ports Authority and its planning and operational capacity, including the Authority's understanding of the linkages between the projected future commercial and economic development activities at the port and the possibility of implementing and managing capital investment development programs. Assess the potential for private sector involvement in port operations, e.g. through various forms of service and management contracts.

Port Improvement Strategy

Using the results of the above assessments and analysis, the study will determine if a port improvement/upgrading or an expansion program is needed and warranted and assess the need to look into alternative port options. If the former, develop together with the local authorities the options for a Port Improvement Strategy that will assist in the mitigation of the significant challenges presently confronting port operations, services delivery and organizational performance. It is envisaged that the strategy will tackle the following issues:

- Optimize commercial shipping and fishing vessel movements within the port facility. An improved scheduling of shipping movements using logistical tools that would lead to immediate improvements in vessel turnaround times and cargo/material handling.
- Propose possible financial strategic options designed to lift financial performance. The plan should be based on a review of tariffs, savings resulting from changes in operational processes, improved management of overhead expenditure and if appropriate, changes to the capital structure of the port.

- Determine needed changes in governance and set out organizational capacity strengthening requirements for the effective implementation of the strategic and tactical actions for the strategy.
- Reflect on the impact of potential improvement of the port's operations on the associated infrastructure such as the main road in Honiara city which is already experiencing capacity issues and how increased traffic of containerized trucks could be resolved, or
- Assess the need for a possible relocation of part(s) of port operations such as the fisheries wharf to for example the proposed Doma Township west of Honiara
- If an expansion program for Honiara Port is needed, identify the location, determine the scope of civil works and major facilities, prepare preliminary cost estimates, and determine the layout of the requirements, and prepare an outline action plan for the Government for the conduct of a feasibility study.
- If alternative port site(s) are warranted, identify site options, identify likely infrastructure requirements and preliminary costs, and draft terms of reference for extended scoping.

Appendix B - List of organisations met with during the project

Honiara Port Study – Stakeholder meetings

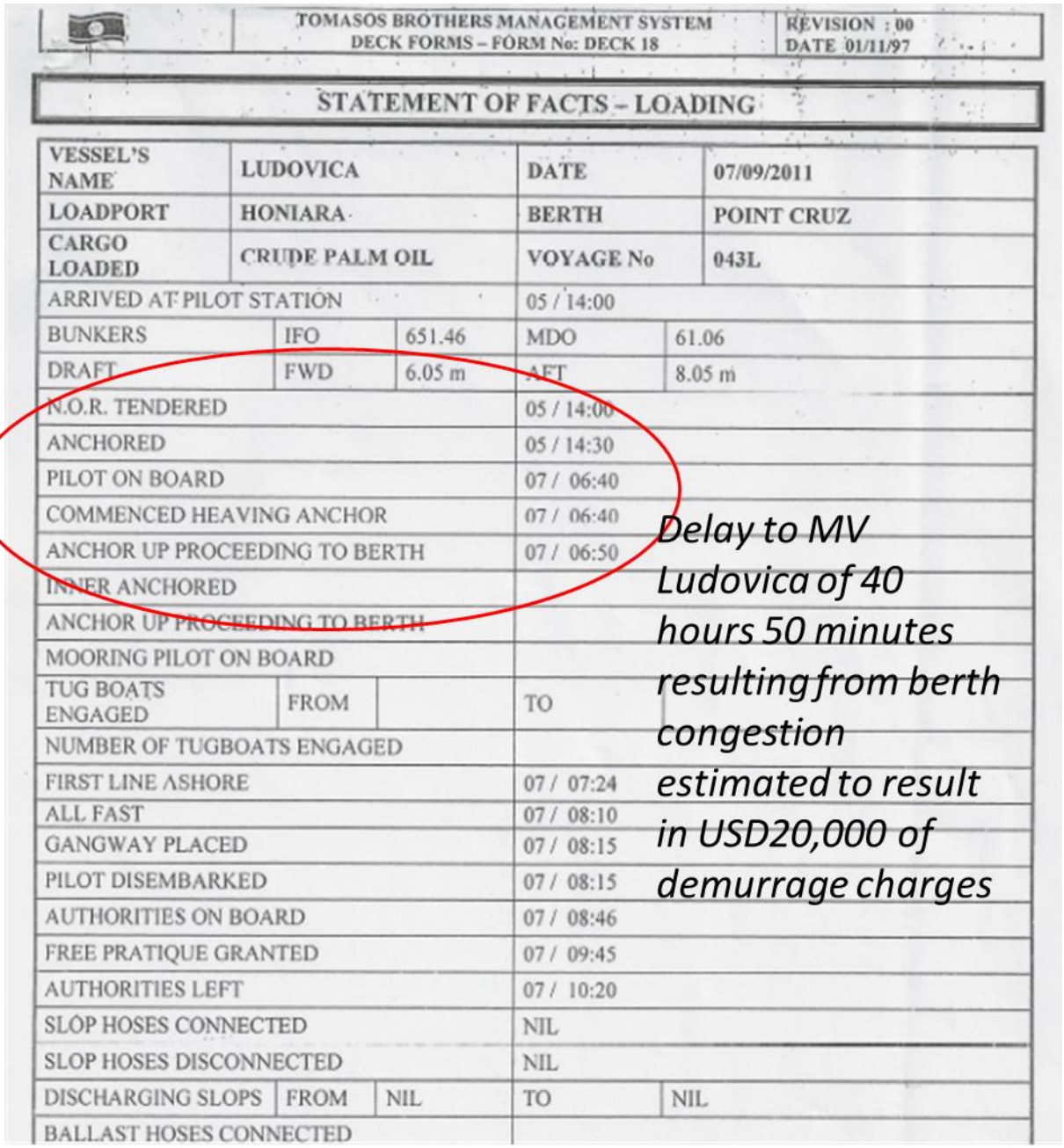
- ADB Mission Office: Paula Uluinaceva
- AusAID: Peter O'Connor & Belinda Conn
- Commodities Export Marketing Authority (CEMA): Alfred Ranu
- Forum Fisheries Agency: Len Rodwell
- Gold Ridge Mining Ltd (clearing Agent PAC): Chris Conroy
- Guadalcanal Plains Palm Oil Ltd: Dominic Thor
- Honiara City Council: Lovelin
- IFC Mission Office Honiara: Marcus Vaena
- IFC Consultant (Fisheries) Peter Cusack
- Japan International Cooperation Agency: Yoko Asano
- Korean Int'l Co-operation Agency (KOICA): Koh Hee Sook
- Markwarth Oil Limited: Jim Blanking
- Master of MV Pacific Voyager – 185m LOA (Borys Kalayev)
- Master of MV Cape Nati: George Unapkoshvili
- Ministry Fisheries & Marine Management: Louisa Hodge-Kopa (Advisor)
- Ministry of Culture & Tourism (Cruise ship policy): Mark Tokuru, Gregory Aut'a & Savita
- Ministry of Finance & Treasury: Matt Hopa-Lodge & Nelia
- Ministry of Finance Economic Reform Unit: David Cavanagh / Sandy Iro
- Ministry of Fisheries & Marine Resources: Christian Ramofafia (Permanent Sec)
- Ministry of Foreign Affairs and Trade: Barrett Salato & Laura Norris
- Ministry of Infrastructure Development: Moses Virivolomo (Permanent Sec)
- NZ High Commission: Matthew Howell
- ORIGIN Energy: Henry Kapu
- Ronald Ivupitu: SIPA Engineer (DOO)
- Silentworld Barge & Ferry Limited: David Holder
- SIPA: Glyn Joshua, Jackson Warihiru, George Rausi, Ronald Ivupitu
- SIPA Board Director: Justice Deni (transition board member)
- SIPA Engineers Department
- SIPA General manager Bill Barile
- SIPA Harbour Master: Capt. Judah Kulabule
- SIPA Statistic officer: Dean
- SIPA Stevedoring Manager: Leonard Bava
- SKM Engineering: Don Townsend (roads and bridges contractor)
- Solomon Island Chamber of Commerce: Calvin Ziru
- Solomon Islands Copra Export Ltd: David Kirk
- Solomon Islands Customs & Excise Authority: Nathan Karma, Roger Batch
- Solomon Islands Customs Authority: Donald (Boarding Officer)
- Solomon Islands Maritime safety Administration: Capt. Michael Ahikau
- Solomon Rice Company Ltd: Brian Hutchinson
- SOLTAI Fisheries: Kenwood Harry
- South Pacific Oil Limited: Carson Korowa
- Southern Seas Investment Co: Tony Ting
- Sullivans Shipping Agency & Trading Company: Kevin Chant
- Swire Shipping Line - Singapore: Will Hamilton
- TOLL Remote Services (RAMSI Contractor) Bob Norton & Gary Harvey
- TRADCO Shipping Agency: Gerald Stenzel

Appendix C - Honiara coastal vessel arrivals

2010	Copra	Wate	Ramp 1	Kingfisher	Kwaeota	Iris	Ramp 2	Vaukei	Kwalemanu	Island	Total
Jan	25	36	1	26	32	20	24	45	55	75	**339**
Feb	30	20	0	30	16	15	18	30	40	60	**259**
Mar	32	32	2	34	24	17	18	30	50	52	**291**
Apr	34	19	1	32	19	22	23	34	44	58	**286**
May	28	24	2	20	15	21	10	29	40	54	**243**
Jun	29	12	1	18	22	23	14	35	51	60	**265**
Jul	39	20	1	29	15	27	20	35	70	70	**326**
Aug	40	24	2	31	30	22	15	33	50	66	**313**
Sep	30	30	1	19	24	15	15	37	54	55	**280**
Oct	34	15	2	24	15	18	17	30	51	53	**259**
Nov	24	28	0	30	15	24	20	40	40	58	**279**
Dec	29	31	1	26	25	19	17	42	49	54	**293**
Total	**374**	**291**	**14**	**319**	**252**	**243**	**211**	**420**	**594**	**715**	**3433**

2011	Copra	Wate	Ramp 1	Kingfisher	Kwaeota	Iris	Ramp 2	Vaukei	Kwalemanu	Island	Total
Jan	26	37	2	28	37	22	28	50	60	81	**371**
Feb	32	22	2	37	18	18	20	35	43	52	**279**
Mar	31	34	2	37	31	18	20	34	51	76	**334**
Apr	32	21	4	32	19	26	25	32	46	62	**299**
May	29	25	0	26	17	21	13	25	44	58	**258**
Jun	40	14	0	21	25	25	13	35	54	54	**281**
Jul	24	21	1	33	15	27	19	36	73	74	**323**
Aug	26	23	0	29	20	18	15	35	54	76	**296**
Sub Total	**240**	**197**	**11**	**243**	**182**	**175**	**153**	**282**	**425**	**533**	**2441**
Annualised	**360**	**296**	**17**	**365**	**273**	**263**	**230**	**423**	**638**	**800**	**3662**

Appendix D - Arrival Statement Honiara Port MV Ludovica



TOMASOS BROTHERS MANAGEMENT SYSTEM
DECK FORMS – FORM No: DECK 18

REVISION : 00
DATE 01/11/97

STATEMENT OF FACTS – LOADING

VESSEL'S NAME	LUDOVICA		DATE	07/09/2011	
LOADPORT	HONIARA		BERTH	POINT CRUZ	
CARGO LOADED	CRUDE PALM OIL		VOYAGE No	043L	
ARRIVED AT PILOT STATION			05 / 14:00		
BUNKERS	IFO	651.46	MDO	61.06	
DRAFT	FWD	6.05 m	AFT	8.05 m	
N.O.R. TENDERED			05 / 14:00		
ANCHORED			05 / 14:30		
PILOT ON BOARD			07 / 06:40		
COMMENCED HEAVING ANCHOR			07 / 06:40		
ANCHOR UP PROCEEDING TO BERTH			07 / 06:50		
INNER ANCHORED					
ANCHOR UP PROCEEDING TO BERTH					
MOORING PILOT ON BOARD					
TUG BOATS ENGAGED	FROM		TO		
NUMBER OF TUGBOATS ENGAGED					
FIRST LINE ASHORE			07 / 07:24		
ALL FAST			07 / 08:10		
GANGWAY PLACED			07 / 08:15		
PILOT DISEMBARKED			07 / 08:15		
AUTHORITIES ON BOARD			07 / 08:46		
FREE PRATIQUE GRANTED			07 / 09:45		
AUTHORITIES LEFT			07 / 10:20		
SLOP HOSES CONNECTED			NIL		
SLOP HOSES DISCONNECTED			NIL		
DISCHARGING SLOPS	FROM	NIL	TO	NIL	
BALLAST HOSES CONNECTED					

Delay to MV Ludovica of 40 hours 50 minutes resulting from berth congestion estimated to result in USD20,000 of demurrage charges

Appendix E - SIPA standard statistical reporting

SOLOMON ISLANDS PORTS AUTHORITY --------- 2010 STATISTIC

HONIARA *** SHIPS TURNAROUND**

	CARGO VESSEL WORKED						ALL VESSEL BERTH						
	31/09/2010						30/09/2010	30/09/2009					
	2010	2009	2008	2007	2006	2005	2010	2009	2008	2007	2006	2005	2004
ARRIVALS	108	103	107	95	87	75	503	617	577	427	423	330	399
AWAITING TIMES (HRS)	1439.98	444.5	682	368	216	365	2103.73	4621.5	5034	5208	3722	2303	5730
BERTH TIMES (HRS)	3902.00	2730.25	3538	2894	2255	2363	5853.70	4102	5396	5072	3791	3502	6220
AVERAGE BERTH (HRS)	36.13	26.51	33.06	30.47	25.92	31.5	11.64	6.65	9.35	11.88	8.96	10.61	15.59
TURN ARROUND TIME	49.46	30.82	39.44	34.34	28.4	36.37	27.12	32.43	55.47	62.3	41.5	38.7	55.84

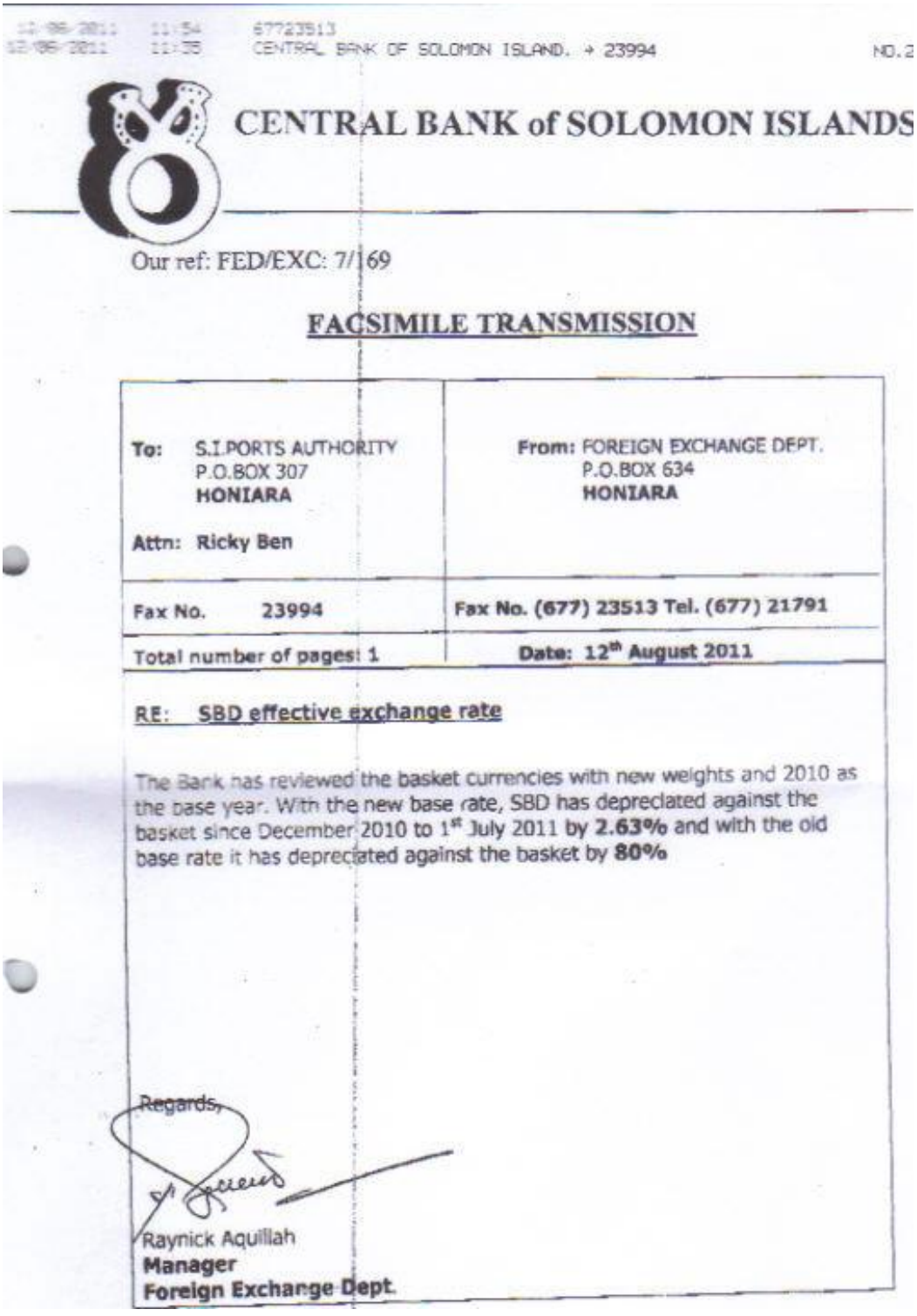
HONIARA ---- CARGO WORKING PRODUCTIVITY

	31/09/2010												
	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998
AVERAGE TONNES/SHIP	3387.52	3156	3230	3321	2724	2864	2002	1898	1647	1542	1342	1413	1951
HOURS WORKED	1969.54	1392.5	1702	1321	1188	1361	1223	912	680	943	1009	1176	1233
%WORKED TO BERTH HOURS	50.48%	51.00%	48.13%	45.63%	52.67%	57.60%	46.41%	56.40%	55.37%	65.08%	50.97%	55.42%	59.20%
TONNES/BERTH HOURS	93.76	119.07	97.69	109.1	105.1	90.89	69.05	86.84	97.83	92.57	76.61	77.93	105.23
TONNES/HOURS WORKED	185.76	203.03	238.91	238.91	199.54	157.8	148.79	153.97	176.81	143.25	150.35	140.61	175.65

Appendix F - Vessel arrivals Honiara main wharf Sept 2011

VESSEL	OWNER / OPERATOR	VESSEL TYPE	HONIARA (Actual arrival)	Facility
PACIFIC DISCOVERER	SWIRE SHIPPING GROUP	CONTAINER - SELF GEARED	01-September-2011	Main wharf Honiara
HIGHLAND CHIEF	SWIRE SHIPPING GROUP	CONTAINER - SELF GEARED	03-September-2011	Main wharf Honiara
SCARLET LUCY	NEPTUNE LINE	CONTAINER - SELF GEARED	04-September-2011	Main wharf Honiara
TURTLE BAY	MBF CARPENTERS SHIPPING	CONTAINER - SELF GEARED	06-September-2011	Main wharf Honiara
CAPE NATI	CSM / NEWPAC / HUB	CONTAINER - SELF GEARED	06-September-2011	Main wharf Honiara
LUDOVICA	Oil Tanker Charter	CRUDE PALM OIL TANKER	07-September-2011	Main wharf Honiara
HIGH COURAGE	D'AMICO	OIL TANKER	07-September-2011	Mooring buoys - Honiara
THOR BLUE	CHARTER	COPRA BULK CARRIER	10-September-2011	Main wharf Honiara
SOFRANA SURVILLE	SOFRANA	CONTAINER - SELF GEARED	10-September-2011	Main wharf Honiara
SOUTHERN REEF	Reef Shipping	CONTAINER - SELF GEARED	10-September-2011	Main wharf Honiara
JAKE VINCENT TRES	Villa Shipping Cebu /	COPRA BULK CARRIER	11-September-2011	Main wharf Honiara
PACIFIC VOYAGER	SWIRE SHIPPING GROUP	CONTAINER - SELF GEARED	18-September-2011	Main wharf Honiara
PACIFIC GAS	ORIGIN ENERGY	LPG TANKER	19-September-2011	Mooring buoys - Ranadi
PAC AQUILA	MBF CARPENTERS SHIPPING	CONTAINER - SELF GEARED	19-September-2011	Main wharf Honiara
SOUTH ISLANDER	GREATER BALI HAI	CONTAINER - SELF GEARED	22-September-2011	Main wharf Honiara
ISLAND CHIEF	SWIRE SHIPPING GROUP	CONTAINER - SELF GEARED	23-September-2011	Main wharf Honiara
SOFRANA TOURVILLE	SOFRANA	CONTAINER - SELF GEARED	29-September-2011	Main wharf Honiara

Appendix G – CBSI CAF Adjustment notice



12/08/2011 11:54 67723513
12/08/2011 11:55 CENTRAL BANK OF SOLOMON ISLAND. → 23994 NO. 2

CENTRAL BANK of SOLOMON ISLANDS

Our ref: FED/EXC: 7/169

FACSIMILE TRANSMISSION

To: S.I.PORTS AUTHORITY P.O.BOX 307 **HONIARA** **Attn: Ricky Ben**	**From:** FOREIGN EXCHANGE DEPT. P.O.BOX 634 **HONIARA**
Fax No. 23994	**Fax No. (677) 23513 Tel. (677) 21791**
Total number of pages: 1	**Date: 12th August 2011**

RE: SBD effective exchange rate

The Bank has reviewed the basket currencies with new weights and 2010 as the base year. With the new base rate, SBD has depreciated against the basket since December 2010 to 1st July 2011 by **2.63%** and with the old base rate it has depreciated against the basket by **80%**

Regards,

Raynick Aquillah
Manager
Foreign Exchange Dept.

Appendix H - SIPA Tariff comparison of charges 2011 / 2007-2010

		2011	2007-2010			
PORT CHARGES		**Amount**	**Amount**	**Change**	**Unit**	**Paying party**
	Port Dues	$8.00	$6.00	33.3%	meter	ship
	Berthage	$2.50	$1.85	35.1%	meter	ship coastal
	Berthage	$5.00	$3.50	42.9%	meter/LOA/Hour	ship foreign
	Anchorage	$6.50	$4.30	51.2%	meter/LOA/day	ship
	Tonnage dues	$6.30	$5.30	18.9%	tonne inward	ship
	Tonnage dues	$3.70	$2.70	37.0%	tonne outward	ship
	Tonnage dues	$1.00			tonne tship	ship
STEVEDORING						
	Lift B/bulk	$20.50	$15.80	29.7%	tonne	ship
	Lift Cntrs	$350.00	$210.00	66.7%	20' cntr	ship
	Storage cntrs	$10.20	$8.30	22.9%	cntr/day	ship
	Cntr washing	$600.00	$200.00	200.0%	20' cntr	ship
	Cntr washing	$900.00	$300.00	200.0%	40' cntr	ship
HANDLING						
	R&D B/bulk	$25.00	$21.80	14.7%	rev tonne	Importer
	R&D B/bulk	$22.00	$17.30	27.2%	rev tonne	Exporter
	R&D Cntrs	$20.00	$15.50	29.0%	rev tonne	Importer
	R&D Cntrs	$20.00	$15.50	29.0%	rev tonne	Exporter
WHARFAGE						
	Marshalling 20' Cntr	$10.50	$6.60	59.1%	rev tonne	Imp/Expt
	Marshalling 40' Cntr	$15.50	$8.60	80.2%	rev tonne	Imp/Expt

Appendix I - SIPA Balance Sheet 2006 - 2010

	Year	2,006	2,007	2,008	2009	2010
ASSETS						
Cash & equivalents		1,170,438	2,717,120	5,813,922	2,591,987	2,095,606
Accounts receivable		7,845,697	5,138,834	8,601,982	12,870,598	14,655,832
Inventories		96,183	53,520	818,339	805,451	476,620
Investments		861,772	871,699	881,774	881,774	881,774
Total current assets		9,974,090	8,781,173	16,116,017	17,149,810	18,109,832
Investment property		5,544,090	5,953,378	6,519,177	6,878,544	6,954,209
Property, Plant & equipment		56,019,757	57,825,904	67,667,520	48,085,580	50,954,552
Total non-current assets		61,563,847	63,779,282	74,186,697	54,964,124	57,908,761
TOTAL ASSETS		71,537,937	72,560,455	90,302,714	72,113,934	76,018,593
LIABILITES						
Trade & other payables						
Interest bearing loans		2,429,851	2,281,339	3,359,370	1,565,686	2,037,730
Emplyee benefits		1,148,913	774,847	4,451,662	1,741,777	1,334,996
Accounts payable		442,440	220,355	1,242,313	215376	3,125,324
Other liabilities		821,052	2,242,796	5,434,653	471,352	928,892
Total current liabilities		4,842,256	5,519,337	14,487,998	3,994,191	7,426,942
Interest bearing loans		17,646,592	17,951,693	16,505,465	17,285,776	14,776,001
Employee benefits		2,751,647	2,945,450	0	4,438,284	2,790,109
Total non-current benefits		20,398,239	20,897,143	16,505,465	21,724,060	17,566,110
TOTAL LIABILITIES		25,240,495	26,416,480	30,993,463	25,718,251	24,993,052
NET ASSETS		46,297,442	46,143,975	59,309,251	46,395,683	51,025,541
SHAREHOLDERS EQUITY						
Grants by SIG		402,824	402,824	402,824	402,824	402,824
Retained earnings		45,894,619	45,741,152	58,906,427	45,992,859	50,622,717
TOTAL SHAREHOLDERS EQUITY		46,297,442	46,143,975	59,309,251	46,395,683	51,025,541

Appendix J - SIPA Honiara Consolidated Profit & Loss 2006 - 2010

HONIARA	2006	2007	2008	2009	2010
Operating income					
Pilotage + CAF	1,224,534	1,688,638	3,561,810	3,130,613	2,577,616
Berthage / Anchorage + CAF	2,122,090	2,521,564	5,589,777	6,610,122	6,028,393
Cargo Handling + CAF	3,347,709	4,516,605	4,795,241	3,691,153	4,128,292
Stevedoring + CAF	5,737,659	7,027,972	10,464,573	8,738,473	9,013,682
Cargo Storage + CAF	3,877,815	4,405,572	6,811,555	4,954,084	5,121,959
Wharfage	1,397,606	1,913,275	2,972,081	3,480,151	3,780,971
Tonnage Dues + CAF	2,615,092	3,114,134	5,094,178	4,757,999	4,528,035
Other income	142,721	219,803	205,155	253,205	340,116
Total operating Income	20,465,226	25,407,562	39,494,369	35,615,801	35,519,064
Non-operating income					
Equipment hire & leases	2,610,980	3,061,807	3,273,938	4,973,593	4,669,113
Total non-operating Income	2,610,980	3,061,807	3,273,938	4,973,593	4,669,113
Operating expenses					
Depreciation, Ins and R&M	9,070,935	10,535,802	12,512,057	12,820,813	13,644,593
Wages, overtime & benefits	6,993,969	7,237,512	8,742,243	11,511,116	12,666,502
Other allowances	1,542,884	1,592,175	2,048,755	2,117,662	3,049,131
Total operating expenses	17,607,788	19,365,489	23,303,055	26,449,591	29,360,226
Non-operating expenses					
Administration	2,760,300	2,977,792	3,320,886	4,534,829	4,245,423
Staff & personell	2,459,419	2,498,163	3,487,542	5,092,724	4,977,612
Finance expenses	1,957,645	2,611,384	1,939,193	2,397,426	615,307
Other expenses	241,404	948,945	98,468	37,485	267,563
Total non-operating expenses	7,418,768	9,036,284	8,846,089	12,062,464	10,105,905
Total Expenses	**25,026,556**	**28,401,773**	**32,149,144**	**38,512,056**	**39,466,131**
Total Income	**23,076,206**	**28,469,369**	**42,768,307**	**40,589,394**	**40,188,177**
Profit (loss)	**-1,950,350**	**67,596**	**10,619,163**	**2,077,338**	**722,046**

Appendix K - SIPA Aging Debtors Full year 2009

7/09/2011 9:21:05AM — Solomon Islands Port Authority — Page 5

A/R Aged Trial Balance by Due Date (ARTBALSY)

Customer No.	Customer Name	Current	1 to 30 Days	31 to 60 Days	61 to 90 Days	Over 90 Days	Total
TCL01H	TRANSWORLD COMMODITIES LTD	21,200.00	0.00	0.00	21,200.00	84,800.00	127,200.00
TCL03H	TONGS CORPORATION LTD	216.00	0.00	0.00	0.00	0.00	216.00
TEM01H	TEMOTU SHIPPING LINE LTD	0.00	0.00	0.00	0.00	52,455.05	52,455.05
TMP01H	TANSRI MARINE PRODUCT	12,364.00	3,580.80	1,555.10	3,544.85	0.00	21,044.75
TOL01H	TOLL REMOTE LOGISTICS	28,032.16	0.00	0.00	0.00	0.00	28,032.16
TON01H	TREMAX SHIPPING CO	1,587.85	898.80	828.80	1,168.90	714.96	5,199.31
TON02H	TREMAX SHIPPING CO	14,000.00	0.00	0.00	12,800.00	0.00	26,800.00
TOP01H	TOP TIMBER COMPANY	90,872.04	12,000.00	0.00	0.00	19,800.00	122,672.04
TRA01H	TRANSOL SHIPPING SERVICE	25,555.90	0.00	3,020.10	3,169.51	0.00	31,745.51
TRE01H	TREDWAY	0.00	0.00	0.00	0.00	39,966.00	39,966.00
TSC01H	TRI-STAR COPRA SOLOMON ISLANDS	0.00	0.00	0.00	0.00	34,146.61	34,146.61
TSL01H	TRADCO SHIPPING SERVICE LTD	709,147.35	0.00	0.00	0.00	0.00	709,147.35
TSL03H	NEW GUINEA AUST LINE	-53,250.82	226,824.07	70,400.00	0.00	144,161.58	388,134.83
TSL04H	SOFRANA UNI LINE	-221,435.60	121,287.52	103,860.90	130,631.64	433,042.47	567,386.93
TSL05H	KYOWA LINE	485,743.30	22,080.50	0.00	0.00	110,392.05	618,215.85
TSL06H	CRUISE VESSELLS	0.00	5,210.00	0.00	0.00	7,635.82	12,845.82
TSL07H	LOG VESSELLS	29,706.99	0.00	58,600.86	0.00	82,052.45	170,360.30
TSL08H	TANKER VESSELLS	106,544.50	18,095.18	21,753.39	34,252.53	30,208.11	210,853.71
TSL09H	FISHING VESSELLS	12,648.79	0.00	0.00	0.00	33,627.34	46,276.13
TSL11H	OTHERS A/C	-180,377.64	44,119.62	130,234.21	17,360.80	2,188,711.77	2,200,048.76
TSL12H	OTHER VESSELS A/C	26,462.76	5,791.62	0.00	0.00	0.00	32,254.38
TTL01H	TAHUA TRADING CO LTD	0.00	0.00	0.00	0.00	107,008.84	107,008.84
TWS01H	TRANSWEST SHIPPING CO LTD	0.00	0.00	333.00	0.00	74,229.21	74,562.21
USS01H	UNIVERSAL SHIPPING SERVICES	0.00	0.00	0.00	0.00	42,265.87	42,265.87
USS02H	UNIVERSAL SHIPPING CO LTD.	0.00	0.00	0.00	0.00	19,124.99	19,124.99
UTA01H	UTA SHIPPING SERVICE	12,777.15	0.00	0.00	345.21	0.00	13,122.36
UTA02H	UTA SHIPPING SERVICE	11,467.00	0.00	0.00	0.00	2,866.00	14,333.00
VET01H	VEALAVIRU ENTERPRISES	0.00	0.00	0.00	0.00	20,868.82	20,868.82
WAL02H	WALULU SHIPPING CO.RENTAL A/C.	0.00	0.00	0.00	0.00	5,820.00	5,820.00
WCP01H	WESTERN COCONUT PRODUCTS	0.00	0.00	0.00	0.00	83,870.47	83,870.47
WDC01H	WESTERN DEVELOPMENT CORP	0.00	0.00	0.00	0.00	28,904.14	28,904.14
WFE01H	WAITARA FISHING ENTERPRISES	0.00	0.00	0.00	0.00	5,868.66	5,868.66
WIN01H	WINWOOD COMPANY LTD	2,009.10	0.00	0.00	0.00	0.00	2,009.10
WMC01H	WEST MAKIRA CONSTITUENCY	11,824.95	5,007.00	4,123.50	3,112.90	802.00	24,870.35
WME01H	WESTERN MARINE ENTERPRISES	0.00	0.00	0.00	0.00	37,200.00	37,200.00
YAK01H	YAKAD COCOA PRODUCERS	0.00	0.00	0.00	0.00	43,420.40	43,420.40
ZHF01H	ZHONGLU FISHERIES	0.00	0.00	0.00	0.00	4,551.54	4,551.54
	Report total	5,249,224.87	954,128.80	766,480.53	687,771.02	9,205,438.89	16,863,044.11
		31.13%	5.66%	4.55%	4.08%	54.59%	

227 customers printed

Appendix L - New Pacific Line THC announcement

Honiara Terminal Handling Charge

NewPac has reviewed the local charges and operations cost within Solomon Island. In view of increased port and operational costs, we will be implementing a Terminal Handling Charge associated with such increases.

The Terminal Handling Charge will be:
SBD 275.00 / per container
SBD 10.00 / per r/ton for break bulk

Terminal Handling Charge will be payable locally in the Solomon Island for inbound and outbound containerized and break bulk cargo handled in Honiara.

The effective vessel/voyage will be **Cape Nassau V1311S/N**:
eta Honiara 07th October 2011

We thank you for your understanding and continued support.

Always at your service,
The Newpac Commercial Team

Appendix M - Swire Shipping THC announcement

SWIRE SHIPPING

1st August 2011

SOLOMON ISLANDS TERMINAL HANDLING CHARGE

Due to recent changes to the port tariff imposed by Solomon Islands Port Authority it has now become necessary for Swire Shipping to implement a Terminal Handling Charge on all import and export cargo transiting Honiara and / or Noro. This charge is not designed to increase revenue but only reflects the increase in costs imposed on carriers calling the Solomon Islands, which we can no longer absorb.

Please be advised that with effect 1st September 2011, Swire Shipping will apply a Terminal Handling Charge on all cargo transiting the Solomon Islands. This will be levied as follows:

SBD 275.00 / container
SBD 10.00 / r/t

This new charge will be applied to all cargo and is subject to adjustment.

For further information please do not hesitate to contact your local Swire Shipping representative.

Kind regards,
Swire Shipping
Sydney
www.swireshipping.com

Appendix N - FIRR analysis of port improvement plan (indicative)

Financial Analysis - FIRR ($US)													
HONIARA													
Item	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
		yr 1	yr 2	yr 3	yr 4	yr 5	yr 6	yr 7	yr 8	yr 9	yr 10	yr 11	yr 12
Revenue													
Revenue projection (constrained)	4,985,000	5,134,550	5,288,587	5,394,358	5,502,245	5,667,313	5,837,332	6,012,452	6,192,826	6,440,539	6,698,160	6,966,087	7,244,730
Forecast growth %		0	3.0%	2.0%	2.0%	3.0%	3.0%	3.0%	3.0%	4.0%	4.0%	4.0%	4.0%
Revenue													
Revenue projection (unconstrained)	4,985,000	5,134,550	5,288,587	5,447,244	5,610,661	5,891,194	6,185,754	6,495,042	6,819,794	7,228,982	7,662,721	8,122,484	8,609,833
Forecast growth %		0	3.0%	3.0%	3.0%	5.0%	5.0%	5.0%	5.0%	6.0%	6.0%	6.0%	6.0%
Expenses													
CAPEX		-1,120,000				-9,876,000							
OPEX	4,895,000	5,041,850	5,193,106	5,400,830	5,616,863	5,841,537	6,075,199	6,318,207	6,570,935	6,833,773	7,107,123	7,391,408	7,687,065
Forecast growth %		0	3.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Net profit (constrained)		**92,700**	**95,481**	**-6,471**	**-114,618**	**-174,225**	**-237,867**	**-305,755**	**-378,109**	**-393,234**	**-408,963**	**-425,322**	**-442,335**
Net profit (unconstrained)		**-1,027,300**	**95,481**	**46,414**	**-6,201**	**-9,826,343**	**110,555**	**176,835**	**248,859**	**395,209**	**555,597**	**731,075**	**922,768**
FIRR project											-37.3%	-27.0%	-19.3%

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
yr 13	yr 14	yr 15	yr 16	yr 17	yr 18	yr 19	yr 20	yr 21	yr 22	yr 23	yr 24	yr 25	yr 26
7,534,519	7,835,900	8,149,336	8,475,310	8,814,322	9,166,895	9,533,571	10,010,249	10,510,762	11,036,300	11,588,115	12,167,520	12,775,896	13,414,691
4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
9,126,423	9,674,008	10,351,189	11,075,772	11,851,076	12,680,651	13,695,103	14,790,712	15,973,969	17,251,886	18,632,037	20,122,600	21,732,408	23,471,001
6.0%	6.0%	7.0%	7.0%	7.0%	7.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
7,994,547	8,314,329	8,646,902	8,992,778	9,352,490	9,726,589	10,115,653	10,520,279	10,941,090	11,378,734	11,833,883	12,307,238	12,799,528	13,311,509
4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
-460,028	**-478,429**	**-497,566**	**-517,469**	**-538,168**	**-559,694**	**-582,082**	**-510,030**	**-430,328**	**-342,434**	**-245,768**	**-139,718**	**-23,631**	**103,182**
1,131,875	**1,359,679**	**1,704,286**	**2,082,993**	**2,498,586**	**2,954,062**	**3,579,451**	**4,270,433**	**5,032,879**	**5,873,152**	**6,798,154**	**7,815,362**	**8,932,880**	**10,159,492**
-13.3%	-8.6%	-4.7%	-1.5%	1.1%	3.3%	5.2%	6.8%	8.1%	9.3%	10.3%	11.1%	11.9%	12.5%
1,591,903	**1,838,108**	**2,201,853**	**2,600,462**	**3,036,754**	**3,513,756**	**4,161,533**	**4,780,463**	**5,463,207**	**6,215,586**	**7,043,922**	**7,955,080**	**8,956,512**	**10,056,309**

Appendix O - EIRR analysis of port improvement plan (indicative)

Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Revenue												
Revenue projection (Re development)	4,985,000	5,134,550	5,288,587	5,447,244	5,610,661	5,891,194	6,185,754	6,495,042	6,819,794	7,228,982	7,662,721	8,122,484
Forecast growth % (Re development)		0	3.0%	3.0%	3.0%	5.0%	5.0%	5.0%	5.0%	6.0%	6.0%	6.0%
Expenses												
CAPEX		-1,120,000				-9,876,000						
OPEX	4,895,000	5,041,850	5,193,106	5,400,830	5,616,863	5,841,537	6,075,199	6,318,207	6,570,935	6,833,773	7,107,123	7,391,408
Forecast OPEX growth %		0	3.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Net profit (Re development)		-1,027,300	95,481	46,414	-6,201	-9,826,343	110,555	176,835	248,859	395,209	555,597	731,075
Economic Benefit												
Eliminate shipping line Honiara THC [2]		0	0	0	0	0	271,561	284,799	299,103	314,125	329,901	346,470
Improve productivity cargo & vessels [3]		0	0	0	0	0	726,100	761,494	799,739	839,905	882,088	926,390
Reductions in container dwell time [4]		0	0	0	0	0	1,815,250	1,903,736	1,999,348	2,099,763	2,205,221	2,315,975
TEU per annum forecast (Re development)		11632	12193	12784	13243	13849	14522	15230	15995	16798	17642	18528
			4.8%	4.8%	3.6%	4.6%	4.9%	4.9%	5.0%	5.0%	5.0%	5.0%
Net effect of project	0	-1,027,300	95,481	46,414	-6,201	-9,826,343	2,923,466	3,126,864	3,347,049	3,649,002	3,972,807	4,319,910
EIRR project								-27.81%	-5.38%	6.90%	14.25%	18.97%

2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
8,609,833	9,126,423	9,674,008	10,351,189	11,075,772	11,851,076	12,680,651	13,695,103	14,790,712	15,973,969	17,251,886	18,632,037	20,122,600	21,732,408
6.0%	6.0%	6.0%	7.0%	7.0%	7.0%	7.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
7,687,065	7,994,547	8,314,329	8,646,902	8,992,778	9,352,490	9,726,589	10,115,653	10,520,279	10,941,090	11,378,734	11,833,883	12,307,238	12,799,528
4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
922,768	1,131,875	1,359,679	1,704,286	2,082,993	2,498,586	2,954,062	3,579,451	4,270,433	5,032,879	5,873,152	6,798,154	7,815,362	8,932,880
363,871	766,335	804,823	845,244	887,695	932,279	979,101	1,028,275	1,079,919	1,134,156	1,191,118	1,250,940	1,313,767	1,379,749
972,917	1,021,780	1,073,097	1,126,992	1,183,594	1,243,038	1,305,468	1,371,033	1,439,892	1,512,208	1,588,157	1,667,920	1,751,689	1,839,665
2,432,291	2,554,450	2,682,744	2,817,481	2,958,985	3,107,596	3,263,670	3,427,584	3,599,729	3,780,521	3,970,392	4,169,800	4,379,222	4,599,163
19458	20436	21462	22540	23672	24861	26109	27421	28798	30244	31763	33358	35034	36793
5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
4,691,847	5,474,440	5,920,343	6,494,003	7,113,268	7,781,499	8,502,302	9,406,343	10,389,973	11,459,764	12,622,819	13,886,813	15,260,039	16,751,456
22.16%	24.55%	26.24%	27.50%	28.44%	29.16%	29.71%	30.15%	30.50%	30.77%	31.00%	31.17%	31.32%	31.44%

Appendix P – SIPA HAUS Office Tower