



Completion Report

Project Number: 32525
Loan Number: 1902-FIJ
October 2008

Fiji Islands: Fiji Ports Development Project

Asian Development Bank

CURRENCY EQUIVALENTS

Currency Unit – Fiji dollar (F\$)

		At Appraisal (15 November 2001)	At Project Completion 15 June 2006
F\$1.00	=	US\$0.4395	US\$0.56785
US\$1.00	=	F\$2.2753	F\$1.76103

ABBREVIATIONS

ADB	–	Asian Development Bank
EA	–	executing agency
EIRR	–	economic internal rate of return
FCL	–	full container load
FIRR	–	financial internal rate of return
FPCL	–	Fiji Ports Corporation Limited
LCL	–	less than container load
LIBOR	–	London interbank offered rate
MPAF	–	Maritime and Ports Authority of Fiji
NPV	–	net present value
PPER	–	project performance evaluation report
PSC	–	port service charge
PTL	–	Ports Terminal Ltd
RRP	–	report and recommendation of the President
SDP	–	Fiji Islands Government Strategic Development Plan (2007–2011)
TA	–	technical assistance
TEU	–	twenty-foot equivalent unit
VAT	–	value-added tax

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BASIC DATA

A. Loan Identification

1.	Country	The Republic of the Fiji Islands
2.	Loan Number	1902-FIJ
3.	Project Title	Fiji Ports Development Project
4.	Borrower	Maritime and Ports Authority (subsequently Fiji Ports Corporation Limited)
5.	Executing Agency	Maritime and Ports Authority (subsequently Fiji Ports Corporation Limited)
6.	Amount of Loan	US\$16.8 million
7.	Project Completion Report Number	1059

B. Loan Data

1.	Appraisal	
	– Date Started	24 March 1999
	– Date Completed	30 March 1999
2.	Loan Negotiations	
	– Date Started	13 July 1999
	– Date Completed	16 July 1999
3.	Date of Board Approval	5 March 2002
4.	Date of Loan Agreement	23 July 2002
5.	Date of Loan Effectiveness	
	– In Loan Agreement	23 October 2002
	– Actual	3 September 2002
	– Number of Extensions	None
6.	Closing Date	
	– In Loan Agreement	30 June 2006
	– Actual	1 March 2007
	– Number of Extensions	1
7.	Terms of Loan	
	– Interest Rate	LIBOR plus commitment charge (0.75%), front-end fee (1%)
	– Maturity (number of years)	25 years
	– Grace Period (number of years)	4 years
8.	Terms of Relending (if any)	Not applicable
	– Interest Rate	
	– Maturity (number of years)	
	– Grace Period (number of years)	
	– Second-Step Borrower	

9. Disbursements

a. Dates

Initial Disbursement	Final Disbursement	Time Interval
3 September 2002	9 February 2007	53 months
Effective Date	Original Closing Date	Time Interval
3 September 2002	30 June 2006	33 months

b. Amount (US\$)

Category or Subloan	Original Allocation	Last Revised Allocation	Amount Canceled^a	Net Amount Available	Amount Disbursed	Undisbursed Balance
Civil works Suva	7,020,000	8,653,768	0	8,653,768	8,653,769	0
Civil works Lautoka	5,170,000	4,536,039	0	4,536,039	4,536,039	0
Consulting services	1,590,000	1,837,846	0	1,837,846	1,837,847	0
Front-end fee	168,000	168,000	0	168,000	168,000	0
Interest and Commitment	980,000	924,500	0	924,500	924,500	0
Unallocated	1,872,000	679,847	679,847	0	0	679,847
Total	16,800,000	16,800,000	679,847	16,120,153	16,120,155	679,847

^a Cancelled on 30 January 2007.

10. Local Costs (Financed)

- Amount (US\$)	0
- Percent of Local Costs	0
- Percent of Total Cost	0

C. Project Data

1. Project Cost (US\$ million)

Cost	Appraisal Estimate	Actual
Foreign Exchange Cost	17,610,000	19,930,000
Local Currency Cost	14,650,000	16,300,155
Total	32,260,000	36,230,155

2. Financing Plan (US\$ million)

Cost	Appraisal Estimate	Actual
Implementation Costs		
Borrower Financed	14,560,000	19,210,000
ADB Financed	15,650,000	15,027,655
Other External Financing		
Total A	30,210,000	34,237,655
IDC Costs		
Borrower Financed	900,000	900,000
ADB Financed	1,150,000	1,092,500
Other External Financing		
Total B	2,050,000	1,992,500
Total A and B	32,260,000	36,230,155

ADB = Asian Development Bank, IDC = interest during construction.

3. Cost Breakdown by Project Component (US\$ million)

Component	Appraisal Estimate	Actual
Civil Works Suva Port Component	11.40	16.18
Civil Works Lautoka Port Component	12.59	15.77
Consulting Services	2.65	2.29
Physical and Price Contingencies	3.57	
Total	30.21	34.24

4A. Project Schedule: Suva

Item	Appraisal Estimate	Actual
Date of Contract with Consultants	Sep 2002	Oct 2002
Completion of Engineering Designs	May 2003	Jun 2003
Civil Works Contract (1)		
Date of Award	Oct 2003	Feb 2004
Commence Construction	Oct 2003	Feb 2004
Completion of Work	Oct 2005	Dec 2005
Civil Works Contract (2)		
Date of Award	Oct 2003	Feb 2004
Commence Construction	Oct 2003	Feb 2004
Completion of Work	Oct 2005	Dec 2004

4B. Project Schedule: Lautoka

Item	Appraisal Estimate	Actual
Date of Contract with Consultants	Sep 2002	Sep 2002
Completion of Engineering Designs	Jan 2003	Jan 2003
Civil Works Contract	Jul 2003	Apr 2005

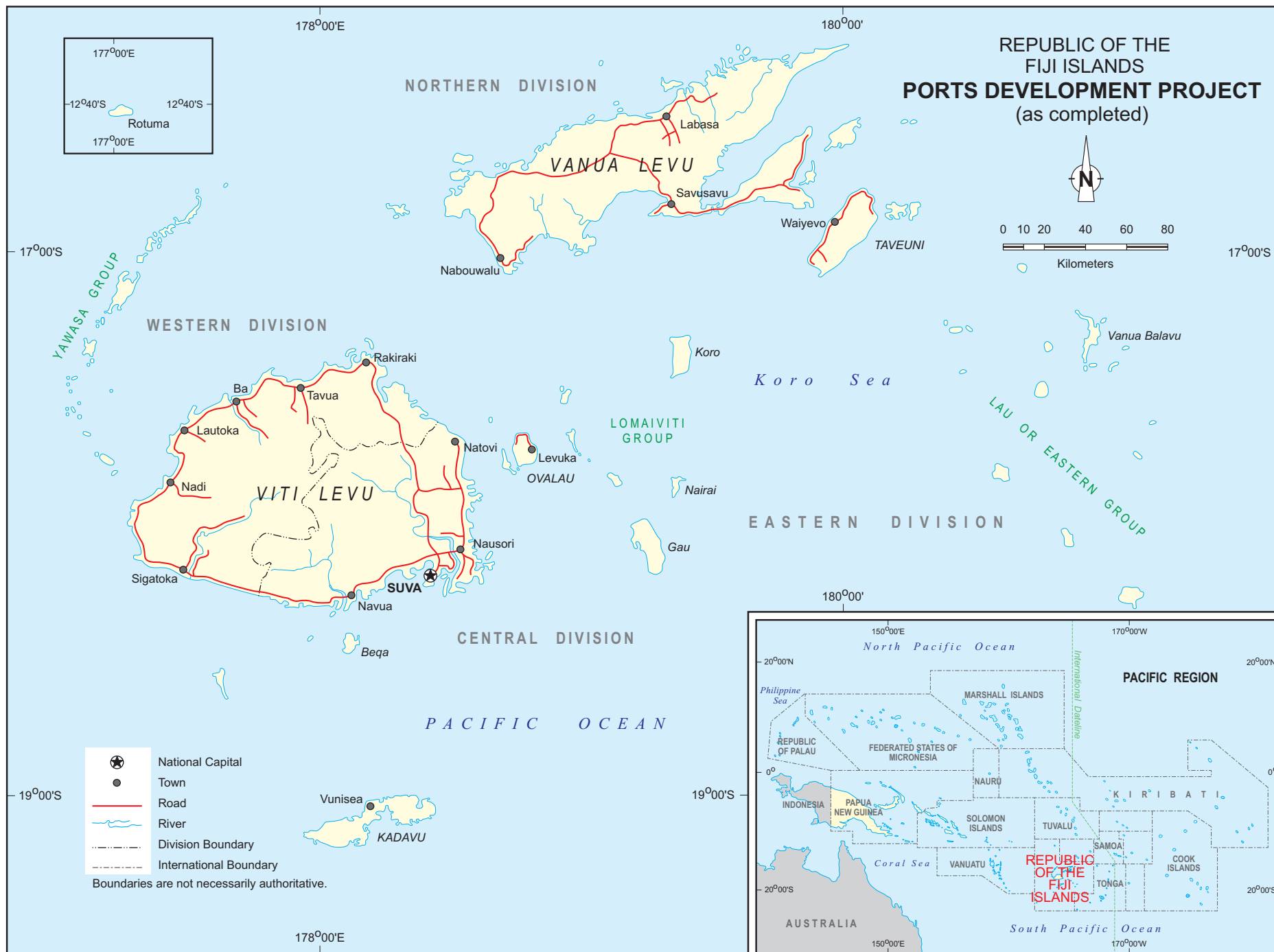
5. Project Performance Report Ratings

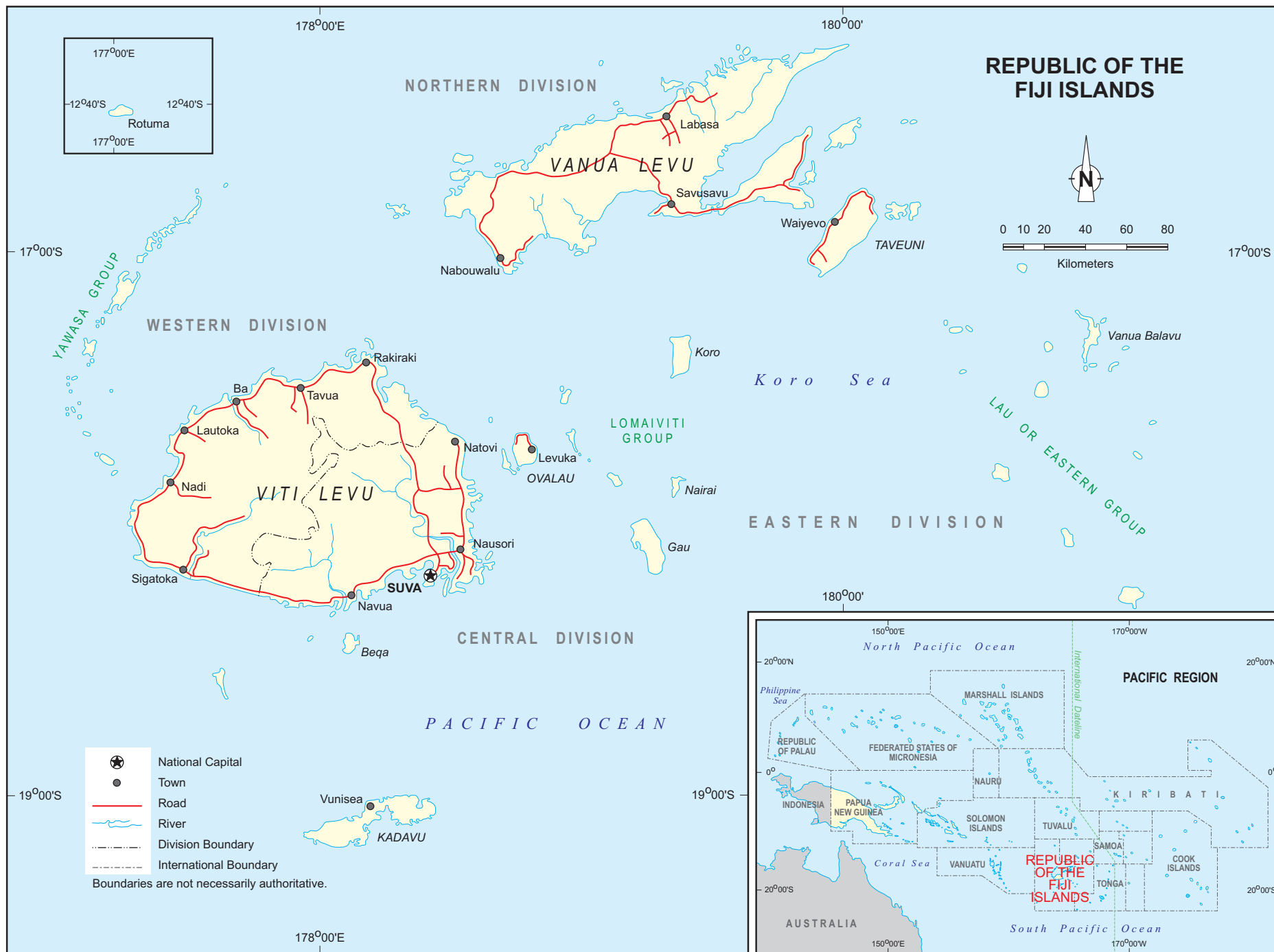
Implementation Period	Ratings	
	Development Objectives	Implementation Progress
From September 2002 to December 2005	Satisfactory	Satisfactory

D. Data on Asian Development Bank Missions

Name of Mission	Date	No. of Persons	No. of Person-Days	Specialization of Members ^a
Project Reconnaissance	Dec 1998	—	—	—
Loan Fact-Finding	Jan 1999	—	—	—
Appraisal	Mar 1999	1	6	—
Appraisal Follow-Up	Sep 1999	1	—	a,b
Inception Mission	Dec 2002	3	24	a,b
Review Mission	Aug 2003	1	11	a,d
Review Mission	Mar 2004	1	6	a,d
Review Mission	Oct 2004	1	10	a,d
Technical Review Mission	May 2005	3	15	a,d

^aa - engineer, b - financial analyst, d - economist, — - various.





I. PROJECT DESCRIPTION

1. The Fiji Ports Development Project¹ comprised wharf improvements at the ports of Suva and Lautoka, on the island of Viti Levu, the principal gateways for Fiji's international trade. The Project's objectives were to achieve a stable macroeconomic environment; support trade, investment, and private sector development; and enhance the economy's competitiveness through sustained improvements in port productivity. Operations in both ports were constrained by the deteriorated condition of the wharves and by capacity limitations.

2. Maritime trade is central to the Fiji Islands economy, which is open and driven by exports. Its main markets are Australia, United Kingdom, and United States. Exports of goods and services correspond to about 70% of GDP, while imports of goods and services equal about 50% of GDP. The provision and efficient operation of adequate port facilities is therefore essential to the country's prosperity.

3. King's Wharf in the port of Suva is the country's main container and multipurpose port facility. Originally built in 1963, it was rehabilitated and developed to handle containers under the first Asian Development Bank (ADB) loan to the port sector, approved in 1979.² Twenty years later, at the end of the rehabilitation's expected life, the condition of the facility was deteriorating. The wharf apron was aging and its load-carrying capacity was reduced; the reclamation on which it was built was below minimum seismic standards; and efficient port operations were hindered by lack of container storage capacity.

4. The port of Lautoka, constructed in 1961, was rehabilitated and upgraded with European Investment Bank financing in 1992, but extension of the port's berth and storage space was needed due to increasing demand. The feasibility of developing King's Wharf was confirmed by an Appraisal Mission in May 1999.

5. A master plan developed by the port authority³ and confirmed by the national government⁴ proposed eventual replacement of Suva Port by a multipurpose cargo facility at Rokobili, a site 5 kilometers from the current Suva Port. At the time the Project was proposed, this development was scheduled for 2015. Until the new port is commissioned, Suva and Lautoka will remain Fiji's major international ports. The master plan demonstrated a need for repair and rehabilitation of Suva Port to extend its life to 2020. The proposed rehabilitation would also improve efficiency of the port's operations and its capacity to cope with the anticipated throughput while establishing King's Wharf as a lifeline wharf in the event of seismic activity in the area.

6. The master plan also provided for extending facilities at Lautoka to boost capacity for cargo storage and handling. The proposed project in Lautoka was expected to provide long-term benefits to local export industries by encouraging more international calls at Lautoka and consequently reducing exporters' inland haulage costs. It was also expected to postpone the

¹ ADB. 2002. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Maritime and Ports Authority of Fiji for the Fiji Ports Development Project in the Republic of the Fiji Islands*. Manila.

² ADB. 1979. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Ports Authority of Fiji for the Suva Port Project*. Manila.

³ Maritime Ports Authority of Fiji (MPAF). 1996. *Suva Port Master Development Plan*. Suva (Funded by the European Investment Bank).

⁴ PSA International Pte Ltd. 2001. *Study on Port Developments in Fiji Islands, Final Report*. Singapore (March).

time at which development of the new Rokobili port would be required by improving load sharing between the two existing ports and consequently making better use of existing port capacity.

7. The initial project scope included only improvements at the port of Suva. Project processing was delayed by an attempted coup in May 2000, however, and, by the time the Government was in a position to move forward, further growth in demand had put more pressure on capacity of Lautoka port. The Project was reappraised in June 2001 and expansion of the port of Lautoka was added. The loan was approved by the Board on 5 March 2002.

8. The Project was designed to (i) extend the life of King's Wharf (Suva) by 15 years, (ii) ensure that the wharf complies with the appropriate seismic standards, (iii) improve the wharf deck and container yards to efficiently handle the increasing cargo loads, and (iv) extend Lautoka port facilities to increase capacity and improve efficiency. The Design and Monitoring Framework is at Appendix 1.

9. The main physical components of the Project in Suva comprised (i) strengthening of King's Wharf to allow the operation of heavy forklifts and mobile harbor cranes at a berth of sufficient length to handle simultaneously two container vessels of the largest size anticipated in its lifespan, (ii) soil stabilization and associated work to ensure that a 140-meter (m) "lifeline" berth would remain operational after the design seismic event, (iii) reorganization and improvements to the container storage area (including gates, new light towers, and refrigerated container power sockets) to improve traffic flows, (iv) demolition of old storage sheds and resiting of the electrical substation, and (v) repairs to damaged and delaminated wharf structures (southern end). Figure A2.1 of Appendix 2 shows the plan for the works at Suva port.

10. The main physical components of the Project in Lautoka comprised (i) provision of a second container berth, (ii) increase in berth capacity to accommodate bulk vessels and container vessels to Panamax size (70,000 deadweight tons), and (iii) improvements to the bridge connecting the wharf structure to the shore and container-and-cargo storage areas. Figure A2.2 of Appendix 2 shows a plan of the works at Lautoka port.

II. EVALUATION OF DESIGN AND IMPLEMENTATION

A. Relevance of Design and Formulation

1. Consistency with Country Strategy and Development Objectives

11. ADB's sector strategy for the new millennium⁵ supports reform in public sector management, private sector development, and transport. The focus of ADB's country strategy for 2003–2005 was to support economic growth by (i) fostering good governance in improved essential public services through appropriate institutional arrangements, regulatory framework, and tariffs; (ii) enhancing local capacity and participation for stimulating economic activities and poverty alleviation, including alternative livelihoods and resolution of land use issues; (iii) strengthening policy formulation and reform implementation capacities to increase accountability and responsiveness in key government departments; and (iv) assisting in creating enabling conditions for private sector growth and developing public-private partnerships in revenue-generating projects.⁶ As part of this strategy, the lending program supported the transport, urban,

⁵ ADB. 2000. *A Pacific Strategy for the New Millennium*. Manila.

⁶ ADB. 2002. *Country Strategy and Program Update (2003–2005): Republic of the Fiji Islands*. Manila.

and tourism sectors with a focus on poverty reduction. In implementing the Program, institutional issues were emphasized under sector-based lending to reduce constraints (footnote 1).

12. The Project was consistent with ADB's country strategy in that it addressed the transport sector's ability to contribute to growth in international trade by boosting the capacity of the country's primary port infrastructure and improving the port management system. It incorporated measures directed to reform institutional arrangements, improve the regulatory framework, and create new opportunities for private sector participation. In addition, the Project targeted establishing a lifeline and a relief port system to ensure supply of goods at times of national disasters. Since it is generally the poor that suffer most when transport of essential supplies is interrupted, this aspect of the project design is consistent with the goal of poverty alleviation.

13. In its Strategic Development Plan 2003–2005, the Government identified as a key policy objective the improvement of shipping services and shipping infrastructure. An explicit target under this policy was the upgrading of Suva and Lautoka ports by 2005.⁷ The Project was consistent with this objective as it was specifically designed to achieve this target.

14. The Project is also consistent with the current strategies and programs of both the Government and ADB. The Government's Strategic Development Plan 2007–2011 (SDP)⁸ identified the need to achieve faster and sustainable economic growth through, among other things, exports and "through more fundamental restructuring of the public and private sectors." The SDP's 12 strategic priorities include restructuring to promote competition and efficiency and raising export earnings. The draft country partnership strategy for Fiji Islands 2007–2011⁹ is consistent with the SDP. It has development of economic infrastructure as a key theme and a specific focus on the three key sectors—transport, power, and water and sanitation.

2. Soundness of the Project Design

15. Future expansion of the capacity of the Suva port (new Suva-Rokobili terminal¹⁰) will require major investment. The Project extends the life of Suva's King's Wharf, delaying the need for this new development. Strengthening the wharf also makes possible the use of more advanced cargo-handling equipment, allowing more cargo to be handled over the same length of wharf. This increases the capacity of existing facilities and further defers the time at which new facilities will be needed.

16. In Suva, the Project provided for major reorganization of the container storage backup areas in Suva and the gate area to improve operating efficiency and capacity. In Lautoka, capacity will be improved by lengthening the wharf and adding a second berth to allow berthing of larger vessels. A connecting bridge to the wharf will improve connectivity to road transport. Together, these developments provide a working environment conducive to commercializing port operations, including to allow competition in stevedoring and cargo handling services, thus encouraging private sector development and greater public sector accountability.

⁷ Government of Fiji. 2002. *Strategic Development Plan 2003–2005*, Parliamentary Paper No 72. Suva (November).

⁸ Government of Fiji. 2006. *Strategic Development Plan 2007–2011*. Suva (November).

⁹ ADB. 2006. *Fiji Islands 2007–2011: Tackling the Poverty Challenge by Laying the Foundations for Growth – Draft for Consultation*. Suva (7 December).

¹⁰ Fiji Port Corporation Pty Ltd (FPCL), with support from the Fiji Government, is planning a new port development at Rokobili, within Suva Bay, as contemplated in the 1995 Suva Port Master Development Plan funded by the European Investment Bank. It is proposed that this greenfield development, providing container and break-bulk wharf facilities and an area for ancillary activities, will support growth as the existing King's Wharf complex reaches capacity. FPCL has obtained development leases, and a preliminary environmental impact assessment has been completed. The Master Development Plan suggests possible capacity thresholds will be reached as early as 2012.

3. Adequacy of the Formulation Process

17. The design of the Project responds to the issues identified at fact-finding and also to changes in the forecasts for exports through Lautoka port that arose during project formulation.

B. Project Outputs

18. The Project was carried out within budget and without significant delay. A variation was required to the method of soil stabilization at the Suva wharf, and it provided a technically robust alternative. The lifeline wharf length, initially designed to be 150 m, was reduced to 140 m to offset the additional soil stabilization cost. Net additional costs were accommodated within a contingency allowance. Reduction of the wharf length will have no effect on the Project's technical sustainability or on the economic and financial rates of return. A summary of the project outputs is included in the project framework (Appendix 1).

C. Project Costs

19. At appraisal, the Project's overall cost was estimated at US\$32.26 million. The Project was to be financed by a loan of US\$16.8 million from ADB, with Maritime and Ports Authority of Fiji (MPAF) securing financing from the Australia and New Zealand Bank and the Fiji National Provident Fund for the balance. The ADB loan was made to MPAF and guaranteed by the Government.

Table 1: Project Costs
(US\$ million)

Component	Appraisal Estimate			Actual Cost ^a		
	ADB	MPAF	Total	ADB	MPAF	Total
Civil Works Suva Port	7.02	4.37	11.39	8.65	7.53	16.18
Civil Works Lautoka Port	5.16	7.44	12.60	4.54	11.23	15.77
Consulting Services	1.59	1.06	2.65	1.84	0.45	2.29
Physical and Price Contingencies	1.87	1.70	3.57	0.00	0.00	0.00
Financing Charges	1.15	0.90	2.05	1.09	0.90	1.99
Total	16.79	15.47	32.26	16.12	20.11	36.23

ADB = Asian Development Bank, MPAF = Maritime and Ports Authority of Fiji.

^a An average exchange rate of US\$1.00 = F\$1.88 was used to compute actual costs financed by MPAF in US\$ terms.

Sources: Asian Development Bank estimates and Fiji Ports Corporation Limited.

20. Table 1 provides a comparison of actual costs and those estimated at appraisal. The final cost in Fiji dollar terms (F\$67.9 million) was below appraisal estimates (F\$74.1 million) due to lower costs for both civil works and consulting services. Due to a significant decline in the value of the US dollar against the Fijian dollar of about 32% early in the physical implementation period, however, the Executing Agency (EA) financed a greater share of the project cost in Fiji dollar terms (61%) than estimated at appraisal (39%). Due to the strength of the EA's financial position, it was able to provide the needed financing in a timely manner. Nevertheless, US\$679,845 was cancelled from the loan as the EA financed the cost of two locally bid contracts at Suva port (for demolition of storage sheds, pavement reinstatement, removal of lighting towers, and relocation of the electrical substation) for about US\$0.80 million from its own resources.

D. Disbursements

21. Disbursement from the loan account began in September 2002 with the first capitalization of the front-end fee, and it was completed in February 2007. Yearly disbursements by category are shown in Table 2. Most disbursements from the loan account (a total US\$14,567,538) were by direct payment. Use of the imprest fund procedure was separately approved on 19 February 2003.

22. There were delays with withdrawal applications and with replenishment and final liquidation of the imprest account (which required an extension of the loan closing date), but these did not impact significantly upon project implementation. Delays were primarily due to the EA's submitting incomplete supporting documents.

Table 2: Yearly Disbursements by Category
(US\$'000)

Category	2002	2003	2004	2005	2006	2007	Total
01A Civil Works – Suva Port	0	0	3,106	5,442	106	0	8,654
01B Civil Works – Lautoka Port	0	0	2,720	1,816	0	0	4,536
02 Consulting Services	236	518	509	520	0	55	1,838
03 Front-End Fee	168	0	0	0	0	0	168
04 Interest and Commitment Charge	5	33	111	422	354	0	925
Actual Total	409	551	6,447	8,199	460	55	16,121

Source: Asian Development Bank estimates.

E. Project Schedule

23. Adjustment of the contractor's construction schedule was necessary to accommodate the technical problems with soil stabilization at the Suva port. This led to no delay overall, however, as work proceeded in other areas while the problem was resolved. The Project was completed 20 weeks later than anticipated in the Report and Recommendation of the President (RRP). There was a delay of 16 weeks in commencing civil works owing to a global shortage of steel. Actual implementation is compared to the tentative schedule from the RRP in Appendix 3.

F. Implementation Arrangements

24. The RRP envisaged that MPAF would be the EA for the proposed Project. It was intended that MPAF's general manager of technical services would be responsible for project implementation and would handle overall administration of the Project, including procurement, disbursement, administration, monitoring, and reporting on the consulting services and works. Contract supervision and quality control was to be done by MPAF, assisted by the consultants. As MPAF was the agency responsible for strategic development of the two ports, and had the technical skills required to manage the Project effectively, the role assigned to MPAF in the project design was appropriate.

25. During the early stages of the project, MPAF performed the roles intended by the project design. Under the sector reforms implemented during the latter stages of the Project, however, MPAF ceased to exist. Most of its functions were transferred to a new entity, Fiji Port Corporation Limited (FPCL), which took over the role of EA. The newly created FPCL has a management structure and capacity similar to that of MPAF. The General Manager, Technical Services of MPAF, became the General Manager, Infrastructure and Services of FPCL. It was therefore possible to maintain consistency and continuity in the management of the Project, and the change had no negative consequences for the Project.

G. Conditions and Covenants

26. Loan covenants, and compliance with them, are listed in Appendix 4. The covenants are relevant to supporting successful project outcomes and align with the Government's policies of the time for sector reforms.

27. The following covenant under Schedule 6, para. 11 of the Loan Agreement has not yet been complied with:

“By no later than 30 June 2002, the Borrower or Guarantor shall adopt amendments to the Port Regulations which provide for the new or increased penalties for violations of the environmental provisions of the Port Regulations.”

The International Convention for the Prevention of Marine Pollution, to which the Government is a signatory, states in its Article 4 that “penalties must be adequate in severity to deter violations of regulations.” The existing penalties under the Port Regulations (a maximum fine of F\$400) are inadequate, and, to align with the requirements of the Convention, these penalties needed to be increased significantly. Penalties of at least F\$50,000 for a company or F\$10,000 for a vessel's master were considered appropriate. New Port Regulations have been proposed, but these are currently awaiting Government approval. The draft regulations provide for fines of up to F\$250,000 or a term of imprisonment (generally up to a 3 year maximum) for most breaches of environmental regulations.

28. Greater emphasis on protecting the maritime environment is consistent with the policies of both ADB and the Government. The required modifications to port regulations are not complex, and there is no obvious technical reason why compliance could not have been achieved within the Project's timeframe. The covenant is therefore both appropriate and realistic. The FPCL advised ADB that the amended port regulations will be adopted by December 2008.

29. The following covenant under Schedule 6, para. 2 of the Loan Agreement has not yet been complied with:

“By no later than 1 February 2002, the Borrower shall have awarded and made effective two or more nonexclusive licenses to different firms for cargo handling and stevedoring operations. Within 6 months of that date, the Borrower shall have completed deregulation of relevant charges.”

The port reform process included introducing competition for the provision of marine services. This intent was set out in the “Charter for Reform” that established the MPAF (now FPCL) and Ports Terminal Ltd (PTL). It was intended that PTL (a government commercial company) would initially be a subsidiary of FPCL, but, within a defined period, PTL would become a separate entity with employee shareholding. Stevedoring would then be made accessible to others on a competitive basis. The Government transferred responsibility for this to the board of FPCL, but no progress has so far been made.

30. One issue that has caused difficulty with both the strategy and its timing relates to ownership of the two mobile harbor cranes at Suva and one at Lautoka. The cranes were purchased by FPCL with financing from the Australia and New Zealand Bank. The loan to FPCL has a similar maturity date as does the ADB loan. Ownership of other plant and equipment required to run the stevedoring operations has been transferred to PTL. However, the cranes are owned by FPCL and leased to PTL at a concessional rate. Thus, FPCL has liability for the

debt (guaranteed by the Government) and receives income from PTL to set against the loan costs. FPCL is concerned that a private sector stevedore, or PTL in a fully privatized state, may choose not to employ the cranes or not be able to pay FPCL enough to cover its debt servicing.

31. A second and more fundamental issue has been the difficulty in securing an adequate level of political support for the change. Privatization of stevedoring activities is almost always politically difficult, as it often involves expectations of job losses or, at the least, a reduction in job security among the stevedoring labor force. In the case of Fiji, this has been compounded by a fragile political situation and the fact that the stevedoring labor force is largely indigenous. Nevertheless, FPCL's formal position continues to be that it is committed to competition in stevedoring services and is exploring ways to deal with this particular problem.

32. The covenant was designed to support improved efficiency in stevedoring and hence more effective use of the infrastructure supported by the loan. It is therefore both relevant and appropriate. It is also technically realistic, as the corporate and institutional changes required could have been completed within the project time frame, and appropriate technical assistance (TA) was provided to facilitate this. The political difficulties of achieving the change may have been underestimated by all parties, however, and these have been aggravated by subsequent political developments.

33. The covenant under Schedule 6, para. 7 of the LA was not complied with. The covenant states:

“The Borrower shall cause to be carried out during the design stage of each Part of the Project, a benchmark survey to establish baseline data for the Project. The Borrower shall compile and analyze data to facilitate project performance monitoring and evaluation and shall forward this information to ADB and the Guarantor in accordance with the schedule of performance measurement indicators agreed with ADB.”

The intended procedure for a benefit monitoring evaluation program and measurement indicators is in Appendix 10 of the RRP. FPCL has confirmed that there has been no agreement on a set of performance indicators and that required data had not been systematically collected.

34. The covenant was designed to assist in expert evaluation of the Project's effectiveness, and the baseline indicators included in the covenant are well designed to support this objective. The covenant is therefore both relevant and appropriate. However, the process for developing and implementing the baseline data could have been better designed. More support for the EA in developing the baseline data (perhaps by including assistance for that purpose as part of TA3199-FIJ) would have increased the likelihood of timely compliance with this covenant.

H. Related Technical Assistance

35. The Project was developed as a continuation of previous work carried out at Suva under an ADB loan (footnote 2) and in the context of the Suva Port Master Development Plan funded by European Investment Bank.¹¹ The EA had well-developed technical plans for the civil works. Dedicated project preparatory TA was therefore unnecessary. Although no associated TA was provided with the loan, the Project ran parallel to, and had some interrelationship with,

¹¹ MPAF. 1996. *Suva Port Master Development Plan*. Suva.

TA3199-FIJ.¹² That TA, which related to maritime sector structural reform, supported the Project's institutional elements and defined the loan covenants. The TA was rated "successful."

36. The draft reorganization charter prepared with the support of the TA outputs gained widespread support and was approved by the Cabinet in July 2004. As a result, in July 2005, MPAF became the government commercial company Fiji Ports Corporation Limited. The regulatory functions of MPAF were transferred to Fiji Islands Maritime Safety Authority. The Sea Ports Management Act was adopted in June 2005. The retrenchment of surplus staff was completed in August 2005.

I. Recruitment and Procurement of Consultants and Contractors

37. Design and supervision consultants were selected in accordance with ADB's *Guidelines on the Use of Consultants* for the detailed design of the civil works, preconstruction activities, and construction supervision. Beca International, in a consortium with Maunsell Australia and Fiji-based Erasito, was selected for the Suva works. Sinclair Knight Merz (Fiji) was appointed by direct engagement for the Lautoka component, as agreed and incorporated in the loan agreement. In this case, the consultant had already prepared detailed designs for the Lautoka improvement, and there were clear cost and quality advantages in ensuring continuity. Direct engagement was an appropriate and effective way of achieving this.

38. Procurement of civil works and for the supply of fenders was carried out using international competitive bidding in accordance with ADB's *Procurement Guidelines*. Minor civil and electrical works were procured through local competitive bidding.

39. While recruiting a contractor to carry out the civil works component in Lautoka, there was some uncertainty as to whether value-added tax (VAT) was to be included in the tendered price. Some tenderers included VAT, some excluded it, and some were silent on the issue. The supervising consultant adjusted tendered prices to align them. The action of the supervising consultant was supported in general terms by the Borrower and ADB, as well as by a legal opinion that was subsequently obtained. One bidder challenged this process, however, stating that it felt the actual process did not conform to the guidelines. Clearer definition in the bidding documents of the way in which VAT is to be treated would have been desirable. Procurement processes were otherwise satisfactory.

J. Performance of Consultants, Contractors, and Suppliers

40. Performance of consultants was generally satisfactory. The Project was delivered on time, within budget, and to an acceptable quality. Beca International, in resolving the soil stabilization issue, successfully mitigated any adverse effects on cost and timely completion. The consultants failed to guide the EA in preparing a benchmark survey to establish baseline data for the project, however, thus potentially compromising project evaluation.

41. Performance of the contractors was satisfactory. Works were of the specified quality and completed on time.

K. Performance of the Borrower and the Executing Agency

42. Under the EA's supervision, the Project's physical works were completed satisfactorily.

¹² ADB. 1999. *Small Scale Technical Assistance Project to Fiji Islands on Port Asset Management Improvement*. Manila (TA 3199-FIJ, approved on 31 May for \$150,000).

43. The institutional capacity of MPAF and its successor, FPCL, is satisfactory. The reform process by which the company was restructured during the course of the Project was soundly executed to create an organization in line with the Project's expectations. There have been significant changes in board and senior staff recently that may have had some short-term negative impact on institutional capability. Periodic reviews of the company's performance since its formation in 2005 are undertaken by the Government, and these should be taken into consideration in the project performance evaluation report (PPER).

44. New software systems have recently been introduced into the operational areas of PTL and FPCL. Together with restructuring of the management of the wharf and container storage operations, these have contributed to greater efficiency. They have also made recording performance in cargo and container handling activities easier and will support collecting data for future performance monitoring.

45. The performance of the Borrower and EA is generally considered satisfactory. The Borrower did not prepare its own project completion report, however, and did not ensure that benchmark surveys and performance monitoring were adequately undertaken and documented. Potential efficiency improvements at the ports may also be unrealized if progress toward competition in stevedoring services remains stalled. There has been considerable delay, too, in introducing the agreed changes in port regulations.

L. Performance of Asian Development Bank

46. ADB's performance during project preparation was satisfactory. Delay and disruption to the process arising from the coup of May 2000 was mitigated with a clear focus on delivering the Project and the accompanying institutional reforms. ADB responded flexibly and appropriately to amend the project scope at a late stage in project formulation. During implementation, ADB responded to issues as they arose and dealt with them promptly and efficiently. ADB was diligent in pursuing compliance with loan covenants, and particularly regarding that relating to the continuing delay in issuing additional stevedoring licenses. However, this covenant was heavily dependent upon the Reorganization Charter,¹³ the formulation of which was also delayed by the coup, and the need to incorporate the findings and recommendations of TA 3199 (footnote 13) (also delayed by the coup) in delivering such findings. Furthermore, the Reorganization Charter provided for transitional arrangements that included explicit protection of stevedoring services from privatization for a period of 12 months from 1 January 2005. ADB's response to the EA's failure to comply with the covenant was appropriate, notwithstanding that it did not result in compliance during the project implementation period.

While ADB maintained dialogue with the EA concerning delays in complying with some covenants, no effective action was taken over the failure to prepare performance indicators and baseline data.

¹³ A Reorganization Charter for the restructuring of Fiji's marine ports was formulated and approved by the Government on 15 June 2004 under Section 21 of the Private Enterprise Act.

III. EVALUATION OF PERFORMANCE

A. Relevance

47. The Project was, and remains, highly relevant to meeting the objectives of FPCL and contributing to the wider objectives of the Government's SDP and ADB's country partnership strategy for 2007–2011.

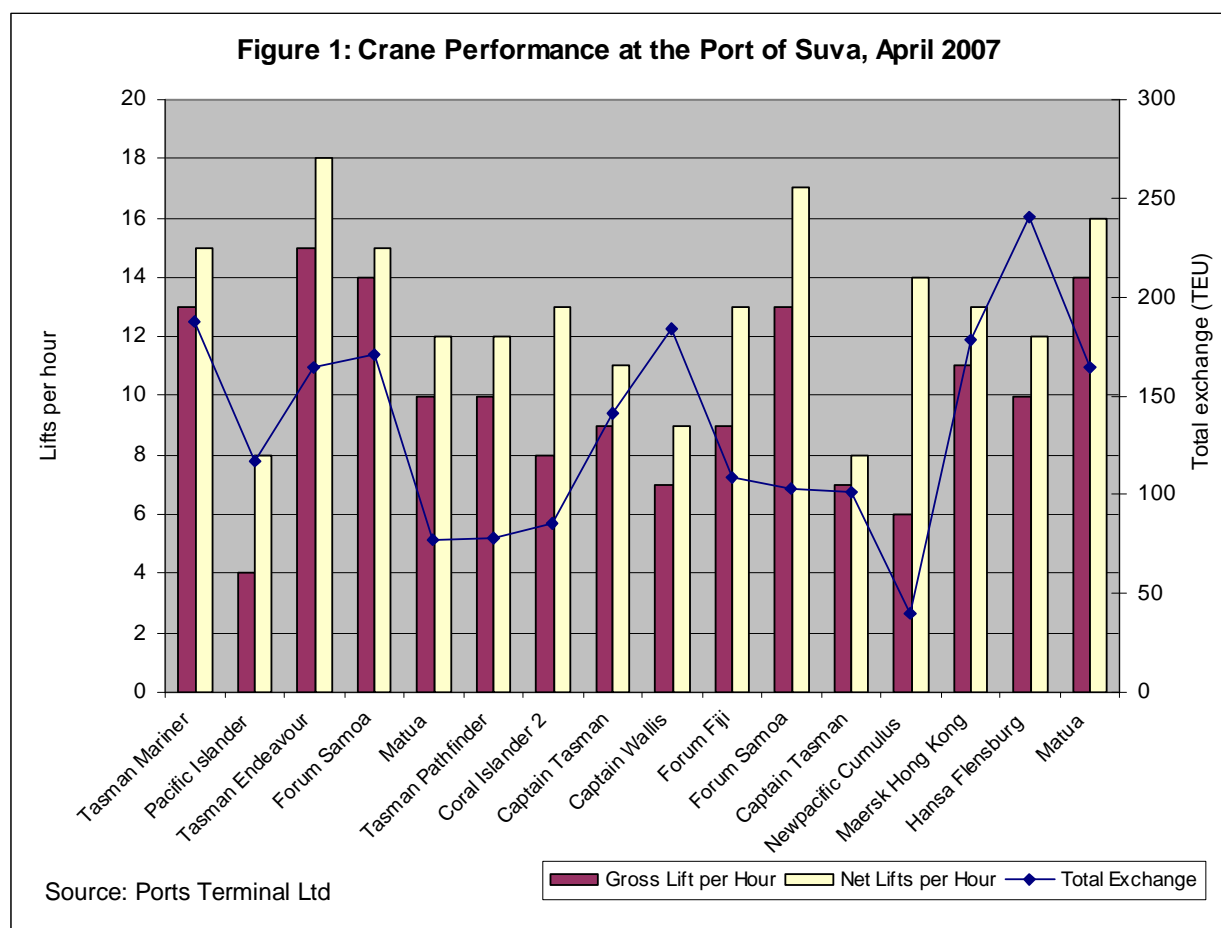
B. Effectiveness in Achieving Outcome

48. The outcome of positioning the ports (Suva particularly) to accommodate future growth in trade and to secure a major port facility against major seismic events has been effectively achieved. The Project aimed to provide sufficient capacity in Suva to cater for growth over the next 15 years. Productivity improved from 5.23 containers per vessel hour in 1998 to 8.00 containers per hour using ships' gear at the time of the appraisal. FPCL statistics show that by early 2006 the average rate over 90 ship calls was 8.35 lifts per hour per hook. Immediately before the new harbor cranes were commissioned, rates of around 11 moves per hour were being reported for larger vessels, with a range of 6 to 12 moves per hour depending on the vessel and the stow. An efficient port could expect to achieve 15 to 17 moves per hour with ship's gear. These rates are unlikely to be achieved at Suva since visiting vessels pass through multiple ports and containers will not be block stowed.¹⁴

49. Since the terminal reorganization and commissioning of the cranes, exchange rates of up to 20 moves per hour have been achieved. The improvement has resulted from the wharf improvements, which allow better utilization of heavy container handling forklift trucks, the use of harbor mobile cranes, and other efficiency measures. Figure 1 charts the gross and net crane rates¹⁵ achieved in April 2007 on vessels being worked by shore cranes. The rates are compared to total exchange, which is the total number of containers discharged and loaded during the particular call. "Lifts per net hour" indicates productivity over the actual duration of cargo work. Rates have improved—reaching 14 to 20 lifts per hour on particular vessels. Although there is some correlation between higher net crane rates and total exchange, this varies. Vessels showing slower rates may be those on complex schedules with multiple ports, which makes block stowing of containers difficult and results in slower working. Compared with rates discussed in para. 48 above, the general trend is clearly toward faster working and therefore faster vessel turnaround time. The lowest net rates achieved in April 2007 (8 lifts per net hour) are approximately the same as average rates being achieved before improvements to the wharves allowed the deployment of heavier cargo handling equipment and cranes. The average rate achieved in April 2007 is 12.1 lifts per net hour, higher than the best rate achieved prior to project completion.

¹⁴ Containers consigned for Suva, having been loaded at multiple ports, will not necessarily be placed together on the ships with complex Pacific Island schedules, as could be expected when the ship is making only a few visits to larger ports.

¹⁵ "Elapsed time" is the total time over which a ship is worked, measured from first labour aboard to last labour ashore. "Gross time" is the elapsed time less the time that the ship is unable to be worked due to ship's fault, weather, awaiting cargo, industrial disputes, holidays, or shifts not worked at the ship owner's request. "Net time" is the gross time less award shift breaks. "Crane rates" are the number of container moves per hour based on gross or net time as defined above. (Definitions from Parliament of Australia. 1998. *Parliamentary Library Research Note 43 1997–98 Understanding Container Handling Statistics*. Canberra.).



50. Reorganization of the container stacking area (container yard) has allowed containers to be moved to and from the wharf apron more efficiently and increased the terminal's effective storage capacity. Rigorous measurement of productivity gains is impeded by the lack of baseline data for key performance indicators, but new systems now in place provide a basis for future monitoring.

C. Efficiency in Achieving Outcome and Outputs

51. The Project has been efficient in bringing about institutional changes by separating regulatory functions from day-to-day management of Fiji's major port. The physical works have allowed the port of Suva to defer forecast major port developments in a cost-effective manner. At Lautoka, desired outcomes have similarly been effectively achieved.

52. Suva port may reach its physical capacity, which will drive relocation to new port facilities during the period between 2012 and the end of the loan period, 2031. Plans to replace Suva port by a multipurpose cargo facility at Rokobili were initiated in 1998 and postponed to 2015. FPCL, with government support, is still planning to proceed with this, and recent forecasts suggest 2012–2013 as a possible threshold for commencing the development. Recent trends in volumes growth suggest that this threshold may be delayed to 2013–2015. To allow for this and to align with the objective of allowing for a further 15 years of life after project completion (2006), the financial and economic rate of return have been calculated to show impacts both over the whole life of the loan and over the period ending in 2021, the 15 years additional life for Suva.

53. A new port tariff is currently being discussed with users. The new tariff proposes an increase of approximately 15% across the board. This aims at producing a 3% return on capital invested. The new tariff is expected to be implemented during 2008.

54. Expenses have been generally below projected levels. Return on assets employed has exceeded the 2% threshold in 2 years (2004 and 2005) but shows a decline in 2006 and 2007, the first years in which the increased capital base has been brought to account. Financial performance will need to be closely monitored to ensure that there is compliance with the 2% minimum return on assets required under the covenant in the Loan Agreement.¹⁶ It is expected that the Project's financial internal rate of return (FIRR) will remain negative until 2019–2020, with a net present value (NPV) of –US\$8.4 million over this period. The FIRR over the life of the loan is estimated at 12.8%, with an NPV of US\$1.84 million. From a financial perspective, the port operation will be sustainable. A financial analysis is in Appendix 5.

55. Shipping lines currently apply a F\$250 (approximately US\$160¹⁷) per 20-foot equivalent unit (TEU) port service charge (PSC). The PSC had been increased in 2005 from F\$150 (US\$64¹⁸) at appraisal. The PSC is justified by the lines on the basis of the increased costs that they incur as a result of congestion and poor handling performance in the port. The improved port performance resulting from the project will remove the justification for this charge and allow FPCL and the Government to pressure shipping lines to reduce and, in due course, remove this surcharge. In estimating the economic benefits of the Project, it has been assumed that the PSC would be reduced by 50% in 2009 and eliminated completely in 2010.

56. A lack of direct shipping services to Lautoka meant that containers have been carried by road between Lautoka and Nadi and Suva at a cost of F\$100 (approximately US\$64—see footnote 17) per TEU. Improved handling rates and greater berth availability in Lautoka are encouraging more ships to call directly at that port, reducing the need for this landbridging operation. It is estimated that before the Project was undertaken approximately 10% of containers were carried by road between the two ports and that this percentage has now been reduced to 5%.

57. Given these cost reductions, the economic internal rate of return (EIRR) becomes positive in 2012–2013. Considering the period to 2021, the EIRR is estimated at 19.8% and the Project's NPV at US\$11.7 million using a 12% discount rate. Over the full life of the loan, EIRR is estimated at 22.7% and NPV at US\$28.0 million. For comparison, the economic analysis at appraisal indicated EIRR of 15.8% for the Suva component and 17.6% for Lautoka, with NPVs of US\$2.2 million and US\$4.2 million, respectively. An economic analysis is in Appendix 5.

D. Preliminary Assessment of Sustainability

58. Trade and traffic through the port of Suva in 2000 totaled 1.2 million tons of cargo, 940 ship calls, and 32,706 TEU of containers. The expectation at appraisal was for a doubling of non-container cargo volumes by 2025 and for container trade to grow to 50,000 TEU by 2011.¹⁹ Total volume, measured in revenue tons, had grown to 1.7 million tons by 2006. Container

¹⁶ Loan Agreement Schedule 6, para. 4(a).

¹⁷ US\$1.00 = F\$1.56 from August 2008.

¹⁸ US\$1.00 = F\$2.27 at appraisal.

¹⁹ ADB. 2002. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Maritime and Ports Authority of Fiji for the Fiji Ports Development Project in the Republic of the Fiji Islands*. Manila (Section 3. Suva Port: para. 32, p. 7).

growth has exceeded expectations. Total container movements were 63,403 TEU in 2006, of which 46,657 TEU were full containers.²⁰

59. In 2000, 1.2 million revenue tons of cargo were handled in Lautoka and container traffic through the port was 4,467 TEU of containers.²¹ By 2006, this had grown to 16,767 TEU.

60. Ship call numbers have been volatile, rising from 961 in 2002 to a high of 1,427 calls in 2003 but falling away to 1,005 in 2006. This volatility is mainly due to changes in the number of fishing vessels calling. Calls by container vessels show a steadier, upward trend. Calls at Suva port have risen from 211 in 2002 to 325 in 2006, an increase of 54%. The call pattern over the same period at the port of Lautoka shows a particularly strong increase in container vessels, with ship calls nearly doubling from 102 to 194 calls. This can be attributed at least in part to improved facilities as a result of the Project and, potentially, a tendency to call direct at Lautoka as a result of the second container berth. This will have had some impact on landbridging and truck numbers in the Suva–Lautoka corridor, although this has not been measured.

61. In the short term, the growth of port trade is expected to slow due to the recent economic downturn. Over the long term, however, the volumes anticipated at appraisal appear achievable.

62. In addition to the financial impacts, use of the new harbor cranes has for the first time allowed shipping companies the flexibility to deploy gearless vessels, as well as to use shore cranes either solely or in conjunction with ship's gear. It is too soon to quantify how this may affect ships deployed, as it will take some time for lines to adapt to changed conditions and many other factors, such as the lack of similar equipment at other ports in a vessel's rotation, will influence decisions on vessel deployment. However, the opportunity is now there to employ vessels without cranes. These will be (i) cheaper to charter and operate since they do not have cranes; and (ii) more cost-effective, as they are commonly larger vessels. The unavailability of customs services on a 24-hour basis is a constraint on realizing the full productivity benefits of the improvements. Trade and traffic growth is analyzed in Appendix 6.

E. Impact

63. From an institutional perspective, the Project successfully facilitated continuation of the reform process through which the regulatory role of the ports administrator was to be separated from its operational management role. The regulatory functions are now covered by the Fiji Islands Maritime Safety Authority and with other government entities (e.g., the Commerce Commission) providing overview in specific areas. The divestment of PTL and opening up of competition in stevedoring and other marine services has not yet been achieved.

64. At the port of Suva, the project has had three main impacts. First, the effective life of the main wharf at Suva has been extended, and capacity increased, by the physical improvements to King's Wharf. These improvements should extend the time before which expensive investments in new port facilities at Rokobili need to be undertaken. Second, the wharf's improved load-bearing capacity allows the use of more productive cargo-handling equipment, including the newly installed mobile cranes. This will lead to more rapid turnaround of ships in port, reduced port congestion, and ultimately lower freight rates and shipping surcharges. This

²⁰ PTL. 2007. *Personal Communication*. (29 November).

²¹ ADB. 2002. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Maritime and Ports Authority of Fiji for the Fiji Ports Development Project in the Republic of the Fiji Islands*. Manila (Section 3, Lautoka Port: para. 40, p. 10).

should provide a stimulus to Fiji's international trade. Third, the ability of the critical infrastructure to withstand seismic shocks has been improved. This will lower risk of interruptions to essential supplies to the Fijian community in the aftermath of a natural disaster.

65. The capacity of the port of Lautoka has been improved, and larger ships can be accommodated. The provision of two berths instead of one for major container vessels was intended to reduce potential congestion and encourage vessels to call directly at Lautoka. Ship call data already show a significant increase in the number of container vessels calling there. This trend should continue, as FPCL is expected to give concessions in tariff rates to encourage the second call. This will avoid the additional cost of discharging or loading Lautoka cargo at Suva and trucking to or from the Nadi and Lautoka area. This is expected to relieve the load on the Suva–Lautoka road, leading to reduced road maintenance costs and improved road safety.

66. In both ports, the Project can be expected to bring improvements in environmental standards, particularly water quality, resulting from better management of ships' waste. Stronger penalties for environmental breaches by ship operators and masters should also deter polluters.

67. The full impact of the Project on the pattern of vessels calls and the types of vessels deployed is not yet discernible. There is a considerable lead-time involved in shipping lines' vessel deployment decisions, and changes in port tariff expected to take effect during 2008 may drive other changes. These should be measured at the PPER stage.

IV. OVERALL ASSESSMENT AND RECOMMENDATIONS

A. Overall Assessment

68. The Project was implemented as designed. It was completed within budget and within the time anticipated at appraisal. The overall assessment is that the Project was successful.

B. Lessons

69. Failure to adequately establish performance indicators, targets, and baseline data has made systematic evaluation of the Project more difficult than it may have been. High priority should be given in project implementation to ensuring that data (which in this case should have been available in the normal course of port operation and record keeping) is systematically collated as a project progresses. However, FPCL and PTL have subsequently introduced a systematic performance management system. This was reviewed and enhanced in 2007 under their continuous development program.

70. The major investment in three mobile cranes by FPCL has complicated the introduction of competition in stevedoring. While the investment has clearly added to port efficiency gains, and could not have been made without the physical improvements delivered by the Project, the consequences for the institutional reform agenda were not identified in time to review and plan in advance for the impact. In designing and implementing projects, the EA should be required to assess the probable effects of other investments in the sector upon the loan project and advise ADB accordingly. Similarly, the probable effects of changes to conditions of employment arising from privatization should be assessed, and TA should be provided for change management if deemed necessary.

C. Recommendations

1. Project Related

71. The Borrower has not yet complied with a loan covenant requiring it to legislate for new and increased penalties for breach of the environmental provisions of the port regulations. The EA has stated that the required legislation has been prepared and is in process. It is recommended that ADB follow up with the EA as part of its ongoing sector dialogue, with a view to securing compliance before the end of 2008.

72. The Borrower has not complied with a covenant requiring it to introduce competition in stevedoring services. However, the EA and the Borrower have said that privatization of stevedoring services is high on its agenda.²² Competition for stevedoring services remains relevant and necessary for achieving efficient port operations. It is recommended that ADB follow up with the EA as part of its ongoing sector dialogue and also in the context of its Private Sector Development Initiative. Future engagement by ADB in the ports sector should be conditioned upon compliance with this covenant.

73. The Borrower has failed to comply with a covenant requiring it to carry out benchmarking surveys to monitor the performance of the Project. A set of performance indicators is in Table A10 (Proposed Performance Measurement Indicators) from the RRP. It is recommended that: (i) the indicators be reconfirmed with FPCL, and (ii) as much of the baseline data as is practicable be recorded as a matter of urgency.

74. FPCL is reviewing the performance of the company since its formation in 2005. It is recommended that the EA be asked to provide the findings of the review to ADB so that implications (if any) for project outcomes may be determined.

75. The performance of the Project should be assessed after 12 months, as set out in the covenants to the Loan Agreement, and again after 5 years. Monitoring should cover financial performance including return on investment and debt coverage. As a prime objective was to increase capacity and improve productivity, these aspects should be monitored using the proposed performance measurement indicators or by means of other indicators developed by FPCL under its performance management regime.

2. General

76. The EA's failure to meet the loan covenants is a matter for concern. In future project design, the risk of noncompliance could be reduced by (i) better support for implementing covenants that require some technical input (such as the design and implementation of appropriate performance measures), (ii) closer monitoring and a stronger dialogue with the central government on the timely implementation of covenants that are beyond the EA's control (such as implementation of environmental regulations), and (iii) incorporating effective and proportionate sanctions for noncompliance in the loan agreement.

²² Government of Fiji website. 2008. *Press release announcing the appointment of a new CEO for FPCL*. Suva (18 January).

3. Timing of the Project Performance Evaluation Report

77. The minimum elapsed time before evaluation is 18 months of operating revenues, with audited accounts for at least 12 of these months. The Project was effectively complete for the commencement of FPCL's 2006 fiscal year. The earliest date for preparing a PPER is therefore mid-2008. However, the economic situation can be expected to impact on FPCL's revenue for the 2007 year and potentially for the 2008 year. Cargo volumes can be expected to return to previous levels by early 2009, provided that there is progress toward political stability. A second factor will be the implementation of a revised tariff on 1 January 2008 aimed at boosting revenue to provide a minimum rate of return.

78. For both of these reasons, a mid-2008 review date cannot be expected to provide a sound indication of financial and economic impacts. It is therefore recommended that the PPER be scheduled for no earlier than first quarter 2009, but it should be planned for the earliest date thereafter at which audited accounts for 2008 are available.

DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Indicators/Targets	Actual Project Performance	Monitoring Mechanisms	Key Issues and Recommendations
Goal Economic growth through port sector support to trade, investment, and competitiveness	Increase in trade through Suva and Lautoka	Trade growth in both Suva and Lautoka has equaled or exceeded forecasts of RRP.	Fiji Ports Corporation Limited (FPCL) annual reports	Concerted industry and government action may be necessary to put pressure on ship owners to pass on the benefits of increased port productivity to importers and exporters.
	Increase in container ship calls at Lautoka	Container ship calls in Lautoka increased from 211 in 2002 to 325 in 2006.	FPCL annual reports	
	Reduction or elimination of port services charge of F\$150	Port service charge has increased to US\$250.	PPER Public reports of Commerce Commission	
	Reduced level of ocean freight rates	No data available.	PPER	
Purpose Sustained improvement in port efficiency and in port productivity	Increased cargo handling rates to 15 containers per hook per hour	Average crane rate increased from 8 to over 12 lifts per hour.	FPCL performance reporting system	ADB should follow up on the introduction of competition in stevedoring as part of its ongoing sector dialogue and also in the context of its Private Sector Development Initiative. Completion of baseline data and full implementation of performance measurement are imperative to monitor whether potential performance improvements are achieved and maintained.
	Reduced deterioration of Queen's Road	Reduction in landbridging traffic due to more ship calls at Lautoka will reduce deterioration.	FPCL annual reports PPER	
	More effective use of container stacking areas	Reorganization of the container stacking area (container yard) has increased the effective storage capacity.	FPCL performance reporting system	
	Competition in stevedoring services	Ports Terminal Ltd retains monopoly.	PPER Public reports of Commerce Commission	
Postponement of expensive new port project	Physical life of wharf extended.	Physical life of King's Wharf at Suva rehabilitated and strengthened.	PPER	
	Port capacity increased.	Improved cargo handling performance has increased effective port capacity.	Ship agent's reports on cargo handling FPCL performance reporting system	

Design Summary	Performance Indicators/Targets	Actual Project Performance	Monitoring Mechanism	Key Issues and Recommendations
Outputs				
1. Suva port component				
Civil works: Repair and rehabilitation of King's Wharf	Strengthen sections of wharf to meet seismic standards (Lifeline, 150 m wharf).	Wharf strengthened. Cost changes were within contingency amounts. Lifeline length amended to 140 m for budget reasons.	Asian Development Bank (ADB), Maritime Ports Authority of Fiji (MPAF) and Fiji Ports Corporation Limited (FPCL) review	
	Strengthen wharf deck.	Wharf strengthened to allow the operation of heavy forklifts and harbor mobile cranes. Expected output achieved.	Reports of the supervising contractors	
	Install fendering.	Fendering installed.		
Civil works: Reorganization of container yard	Reorient container stacks. Demolish and replace substation. Provide lighting and reefer power points. Realign traffic circulation and access.	Container stacks reoriented. Substation demolished. Lighting and reefer points provided. Traffic circulation realigned.		
	Demolish disused transit sheds.	Sheds demolished.		
2. Lautoka port component				
Civil works: Wharf extension	New extension to Queen's Wharf, 154 m long, 48 m wide, including fendering and lighting	Extension to Queen's Wharf, 154 m long, 48 m wide, constructed.	ADB and MPAF and FPCL review Reports of the supervising contractors	
Civil works: Access bridge	Access bridge from southern reclamation to island wharf	Access bridge constructed.		
Civil works: Reclamation	Reclaim 5.7 ha north of Queen's Wharf.	5.7 ha reclamation completed.		

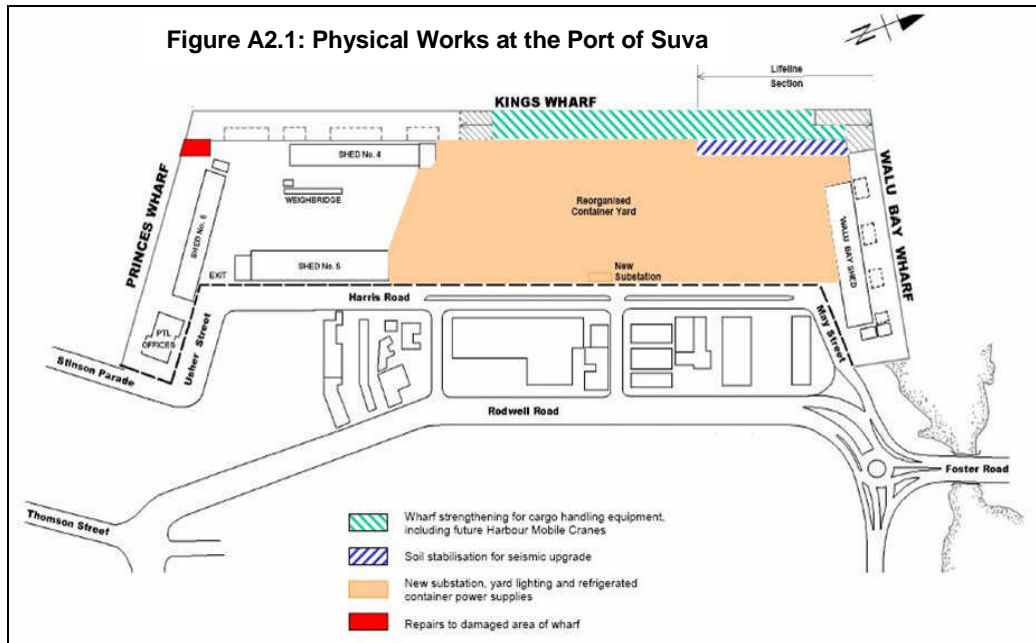
Design Summary	Performance Indicators/Targets	Actual Project Performance	Monitoring Mechanisms	Key Issues and Recommendations
Inputs				
Consultant services for design and construction of civil works to restore Suva's King's Wharf, extend its life by 15 years, and rehabilitate and improve Lautoka's Queen's Wharf	Award of consultant services contract in an estimated value of US\$2.7 million for engineering design of works and to supervise the civil works	Consultant's services provided at a cost of approximately US\$2.0 million.	ADB, MPAF and FPCL review reports Reports of the supervising contractors ADB, MPAF and FPCL files	Clearer specification of value-added tax treatment in contract specification would reduce risk of disputes about contractor selected.
Civil works for restoration of King's Wharf to extend its life by 15 years	Award of contracts for US\$2.4 million to: (i) rebuild longitudinal beams, (ii) restore fender panels and supports, (iii) rebuild the south-west corner of the wharf, (iv) repair all cracked piles, (v) repair bridge beams and pile muffs, and (vi) install ship-to-shore sewerage	(i) Longitudinal beams rebuilt. (ii) Fender panels and supports restored. (iii) Southwest corner of the wharf rebuilt. (iv) All cracked piles repaired. (v) Bridge beams and pile muffs repaired. (vi) Ship-to-shore sewerage installed.		
Civil works for establishing minimum seismic standard	Award of contracts for US\$4.5 million to: (i) strengthen sheet piles, and (ii) install rock anchors	Minimum seismic standards achieved through (i) strengthening of sheet piles, and (ii) installation of rock anchors.		

Design Summary	Performance Indicators/Targets	Actual Project Performance	Monitoring Mechanisms	Key Issues and Recommendations
Inputs (continued)				
Civil works for wharf deck strengthening and reorientation of the container yard	Award of contracts for US\$3.3 million to: (i) strengthen bridge beams, (ii) strengthen wharf edge beams, (iii) strengthen wharf deck overlay, (iv) regrade pavements, (v) relocate light towers, (vi) remove sheds 2 and 3, and (vii) reinstate pavement in locations of sheds	(i) Bridge beams strengthened. (ii) Wharf edge beams strengthened. (iii) Wharf deck overlay strengthened. (iv) Pavements regraded. (v) Light towers relocated. (vi) Sheds 2 and 3 removed. (vii) Pavement in locations of sheds reinstated.	ADB, MPAF and FPCL review reports Reports of the supervising contractors ADB, MPAF and FPCL files	
Remedial rehabilitation of Queen's Wharf	Award of contracts for US\$0.52 million to carry out remedial repair work and backlog maintenance	Remedial repair work and backlog maintenance undertaken.		
Extension of Queen's Wharf in Lautoka and access bridge	Award of contracts for US\$9.1 million to (i) supply and install piles, (ii) construct reinforced concrete deck, and (iii) install fenders	(i) Piles supplied and installed. (ii) Reinforced concrete deck constructed. (iii) Fenders installed.		
Additional container storage space	Award of contracts for US\$3.0 million to (i) prepare seabed reclamation of 6 ha, (ii) install associated services, and (iii) construct a short road and public park	(i) Seabed reclamation of 6 ha prepared. (ii) Associated services installed. (iii) Short road and public park constructed.		

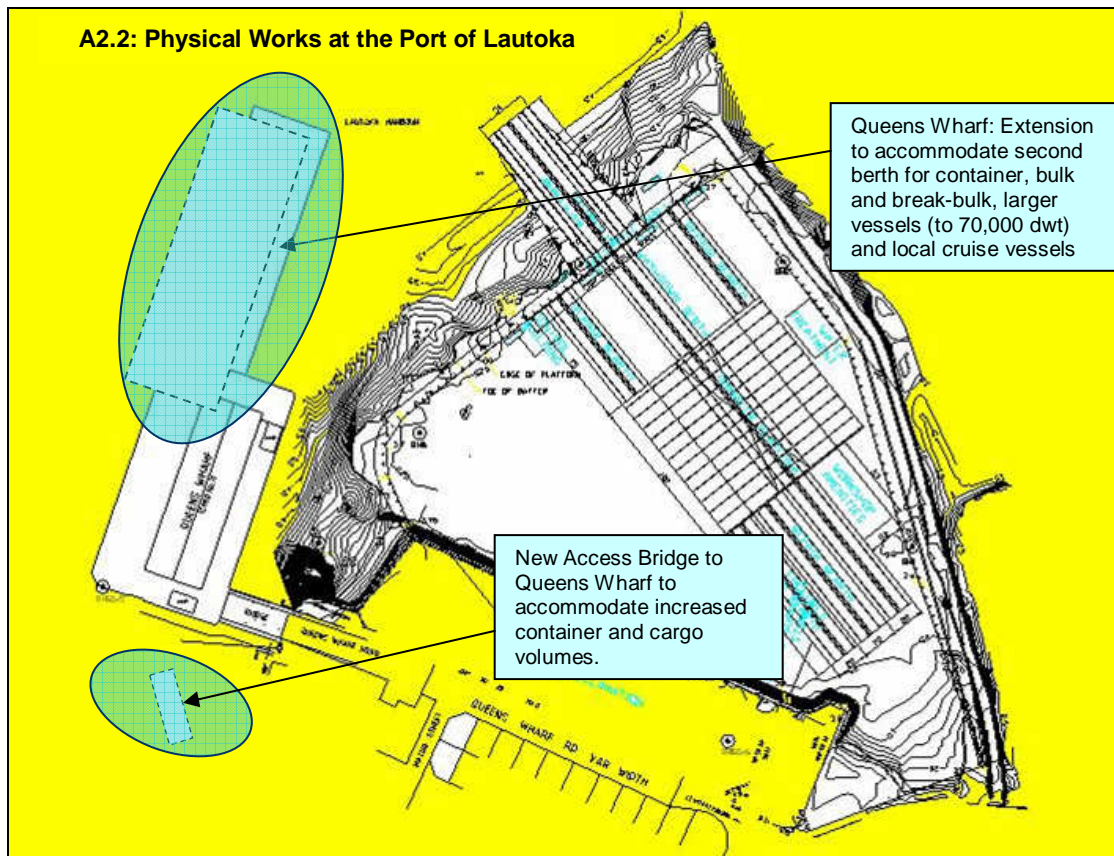
ADB = Asian Development Bank, FPCL = Fiji Ports Corporation Pty Ltd, ha = hectare, m = meter, MPAF = Maritime and Ports Authority of Fiji, PPER = project performance evaluation report, RRP = report and recommendation of the President.

SITE PLANS

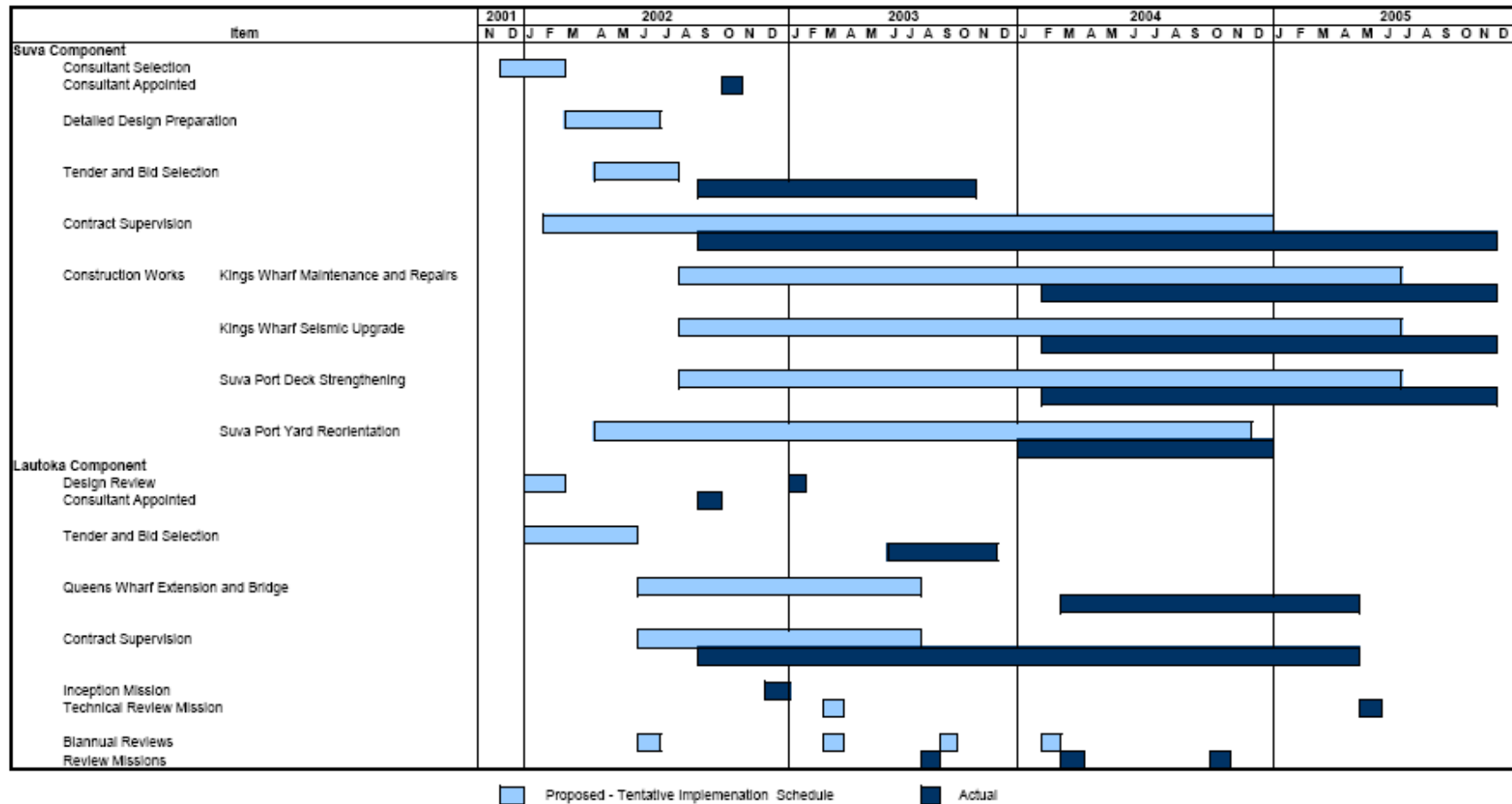
Figure A2.1: Physical Works at the Port of Suva



A2.2: Physical Works at the Port of Lautoka



PROJECT IMPLEMENTATION



Sources: Fiji Ports Corporation Ltd, Asian Development Bank.

STATUS OF COMPLIANCE WITH LOAN COVENANTS

Covenant	Reference	Status of Compliance
The borrower shall make available, promptly as needed, the funds, facilities, services, land rights and other resources which are required, in addition to the proceeds of the Loan, for the carrying out of the project and for operational and maintenance of the Project facilities	LA Article IV, Section 4.02	Complied with
In the carrying out of the Project, the Borrower shall employ competent and qualified consultants and contractors acceptable to ADB and to an extent and upon terms and condition satisfactory to ADB and the Borrower	LA Article IV, Section 4.03 (a)	Complied with
The Borrower shall carry out the Project in accordance with the plans, design standards, specifications, work schedules and construction methods acceptable to ADB. The Borrower shall furnish, or cause to be furnished, to ADB promptly after their preparation, such plans, design standards, specifications and work schedules, and any material modifications subsequently made therein, in such detail as ADB shall reasonably request.	LA Article IV, Section 4.03 (b)	Complied with
The Borrower shall take out and maintain with responsible insurers or make other arrangements satisfactory to ADB for, insurance against such risks and in such amounts as shall be consistent with sound practice.	LA Article IV, Section 4.04	Complied with
Without limiting the generality of the foregoing, the Borrower undertakes to insure, or cause to be insured, the goods to be imported for the Project and to be financed out of the proceeds of the Loan against hazards incident to the acquisition, transportation and delivery thereof to the place of installation, and for such insurance any indemnity shall be paid in a currency freely usable to replace or repair such goods.	LA Article IV, Section 4.04 9b)	Complied with

Covenant	Reference	Status of Compliance
<p>The Borrower shall (i) have its accounts and financial statements (balance sheet, statement of income and expenses, and related statements) audited annually, in accordance with appropriate auditing standards consistently applied, by independent auditors whose qualifications, experience and terms of reference are acceptable to ADB; (ii) furnish to ADB, as soon as available but in any event furnish to ADB, not later than six (6) months after the end of each related fiscal year, certified copies of such audited accounts and financial statements and the report of the auditors relating thereto (including the auditor's opinion on the use of the Loan proceeds and compliance with the covenants of the Loan Agreement), all in the English language; and (iii) furnish to ADB such further information concerning such accounts and financial statements, and the audit thereof, a ADB shall from time to time reasonably request.</p>	<p>LA Article IV, Section 4.05 (a)</p>	<p>Complied with.</p> <p>Minor delay in ADB receiving financials was responded to promptly by the Borrower.</p>
<p>The Borrowers shall enable ADB, upon ADB's request, to discuss the Borrower's financial statements and its financial affairs from time to time with the borrower's auditors, and shall authorize and require any representatives of such auditors to participate in any such discussions requested by ADB, provided that any such discussion shall be conducted only in the presence of an authorized officer of the Borrower unless the Borrower shall otherwise agree.</p>	<p>LA Article IV, Section 4.05</p>	<p>Complied with</p>
<p>The Borrower shall enable the ADB's representatives to inspect the Project, the goods financed out of the proceeds of the Loan, all other plants, sites, work, properties and equipment of the Borrower, and any relevant records and documents.</p>	<p>LA Article IV, Section 4.06</p>	<p>Complied with</p>
<p>The Borrower shall, promptly as required, take all action within its powers to maintain its corporate existence, to carry on its operations and to acquire, maintain and renew all rights, properties, powers, privileges and franchises which are necessary in the carrying out of the Project or in the conduct of its business.</p>	<p>LA Article IV, Section 4.07</p>	<p>Complied with</p> <p>During the course of the Project the Loan was, with appropriate authority and changes to documentation, transferred to FPCL as the successor to MPAF.</p>

Covenant	Reference	Status of Compliance
The Borrower shall at all times conduct its business in accordance with sound administrative, financial, environmental, port management and operational practices, and under the supervision of competent and experienced management and personnel.	LA Article IV, Section 4.07 (b)	Complied with (Subject to the findings of the Review of FPCL now being carried out by an independent consultant on behalf of the FPCL Board.)
The Borrower shall at all times operate and maintain its plants, equipment and other property, and from time to time, promptly as needed, make necessary repairs and replacement thereof, all in accordance with sound administrative, financial, engineering, environmental, port management, and maintenance and operational practices.	LA Article IV, Section 4.07 (c)	Complied with
Except as ADB may otherwise agree, the Borrower shall not sell, lease or otherwise dispose of any of its assets, except in the ordinary course of its business.	LA Article IV, Section 4.08	Complied with
By 31 December 2002, the Borrower and the Guarantor shall adopt a time-bound action plan acceptable to ADB to assess the functions of the sector institutions, the planned commercialization of these institutions, and improvements in management and operation of port assets taking into account the recommendations of TA 3199-FIJ. ²³	LA Article Schedule 6, para. 1	Complied with
By no later than 1 February 2002, the Borrower shall have awarded and made effective two or more nonexecutive licenses to different firms for cargo handling and stevedoring operations. Within six months of that date, the Borrower shall have completed deregulation of relevant charges.	LA Article Schedule 6, para. 2	Not complied with
The Borrower shall be the Project Executing Agency. The General Manager for Technical Services of the Borrower shall be the Project Director and shall be responsible for the planning, implementation, management, supervision and coordination of the Project.	LA Article Schedule 6, para. 3	Complied with

²³ ADB. 1999. *Small Scale Technical Assistance Project to Fiji Islands on Port Asset Management Improvement*. Manila. (TA 3199-FIJ approved on 31 May for \$150,000).

Covenant	Reference	Status of Compliance
Except as ADB may otherwise agree, the Borrower shall achieve and maintain an annual return of not less than two percent (2%) on its average net revalued fixed assets in operation.	LA Article Schedule 6, para.4(a)	Complied with during implementation but latest reports indicate FPCL is not currently compliant. Tariff amendments being negotiated for implementation in January 2008 will address the noncompliance.
The Borrower shall maintain a debt service coverage ration (sic.) in historical earnings basis commencing in the fiscal year 2003 and for each year thereafter of at least 1.50. In the event that the Borrower's debt service coverage falls below the required level, the Borrower shall take such steps acceptable to ADB to reach such debt coverage ratio.	LA Article Schedule 6, para.5(a)	Complied with during Project implementation but data should be obtained from FPCL to substantiate the ongoing compliance.
The Borrower shall make no payment to the Guarantor of dividends or other similar payment in the nature of a return to capital unless the covenants in paragraph 4 and 5 of this Schedule shall have been met for two consecutive years immediately preceding the year in which such dividend or payment is proposed to be made.		Complied with
The Borrower shall cause to be carried out during the design stage of each Part of the Project, a benchmark survey to establish baseline data for the Project. The Borrower shall compile and analyze data (sic.) to facilitate project performance monitoring and evaluation and shall forward this information to ADB and the Guarantor in accordance with the schedule of performance measurement indicators agreed with ADB.	LA, Schedule 6, para.7	Not complied with
Without limiting the generality of Section 4.02 of this Loan Agreement, the Borrower shall ensure that all rights to land, rights to dredge, and other rights required for the Project are obtained or otherwise made available prior to the award of relevant civil works contracts under the Project.	LA, Schedule 6, para.8	Complied with

Covenant	Reference	Status of Compliance
The Borrower shall ensure that all environmental mitigation measures recommended in the IEE agreed upon between the Borrower and ADB, are incorporate (sic.) into the Project design and followed during construction, operation and maintenance of the Project facilities. The Borrower shall adhere to ADB's environmental guidelines in carrying out the project.	LA, Schedule 6, para.9	Complied with Minor issues arose during the King's Wharf civil works but were dealt with and/or mitigated satisfactorily
By no later than 30 June 2002, the Borrower or Guarantor shall adopt amendments to the Port Regulations which provide for the new or increased penalties for violations of the environmental provisions of the Port Regulations	LA, Schedule 6, para.11	Not complied with Port Regulations are currently before the Government.
The Borrower shall continuously monitor and assess the physical, financial and economic aspects of Project implementation. Such matters shall be included in reports submitted quarterly to ADB.	LA, Schedule 6, para.12	Complied with Quarterly reports provided.
ADB and the Borrower shall carry out bi-annual review meetings to monitor the progress of the Project implementation. In addition, a technical review meeting will be carried out by ADB and the Borrower in the second quarter of the second year of the Project implementation. The technical review shall focus on major deviations from the Project design, implementation of cost overruns, loan reallocations, if any, including assumptions and risks that might be constraining satisfactory implementation of the Project. Based on the results of the technical review, the Borrower shall modify the implementation arrangements, as necessary.	LA, Schedule 6, para.13	Complied with Minimum standards were met and documentation shows that appropriate supplementary communication took place as required to manage technical issues arising.

ADB = Asian Development Bank, FPCL = Fiji Ports Corporation Pty Ltd, IEE = initial environmental examination, LA = loan agreement, MPAF = Maritime and Ports Authority of Fiji.

FINANCIAL AND ECONOMIC ANALYSIS

A. Notes on Financial and Economic Analysis

1. The financial and economic benefits are based on the net impact of the Project, i.e., the revenue generated from the constrained case, without the loan 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 financial internal rate of return (FIRR). Economic impacts are calculated by taking account of the direct benefits from the wharf improvements, namely a reduction in congestion and delay costs that are currently driving shipping lines to apply a F\$250 per twenty-foot equivalent (TEU) surcharge (the port service charge, or PSC) on freight rates (which includes an increase in 2005 from F\$150 at appraisal), plus the costs incurred in landbridging containers by road between Lautoka and Nadi and Suva. Improved productivity will allow Fiji Port Corporation Pty Ltd (FPCL) and the Government to pressure shipping lines to reduce and, in due course, remove this surcharge. An initial reduction by 50% of the PSC, followed by its elimination in subsequent years, is used as a measure of benefit. Similarly, a 50% reduction in the present practice of landbridging containers, estimated at F\$100 per TEU on 10% of the cargo, is allowed as an economic benefit.

Table A5.1: MPAF/FPCL Financial Performance: Comparison with RRP Assumptions

Item	1998	2000	2001(e)	2002	2003	2004	2005	2006	2007(e)
Actual and forecast (RRP)									
Total operating revenue	14.32	17.24	17.79	18.29	18.8	19.33	19.87	20.43	
Total expenses	10.74	14.01	14.8	15.34	15.9	17.38	17.98	18.6	
Operating profit before interest and tax	3.58	3.23	2.99	2.95	2.9	1.95	1.89	1.83	
Net profit after abnormal items and tax	1.92	1.65	1.08	0.93	0.93	0.38	0.4	0.39	
Return on net fixed assets	5.9%	5.8%	5.5%	5.5%	3.9%	2.7%	2.7%	2.7%	
Actual and estimated (FPCL)									
Total operating revenue		11.6	13.0	14.4	17.3	16.9	20.9	24.4	22.5
Total Expenses		11.4	13.5	15.7	14.3	14.5	15.0	18.2	19.1
Operating profit before interest and tax		0.2	(0.5)	(1.3)	3.0	2.4	5.9	6.3	3.4
Net profit after abnormal items and tax		(0.3)	(1.1)	(1.9)	1.5	1.8	2.4	2.3	0.3
Return on net fixed assets		(0.5%)	(1.9%)	(3.2%)	2.6%	2.2%	2.2%	1.7%	0.3%
Asset valuation		53.0	56.9	60.7	59.0	80.8	106.9	129.6	129.8
Variance									
Total operating revenue		(5.6)	(4.8)	(3.9)	(1.5)	(2.4)	1.0	4.0	
Total expenses		(2.6)	(1.3)	0.3	(1.6)	(2.9)	(2.9)	(0.4)	
Operating profit before interest and tax		(3.0)	(3.5)	(4.2)	0.1	0.5	4.0	4.5	
Net profit after abnormal items and tax		(1.9)	(2.2)	(2.9)	0.6	1.4	2.0	1.9	
Return on net fixed assets		(6.3%)	(7.4%)	(8.7%)	(1.3%)	(0.5%)	(0.5%)	(1.0%)	

() = negative, FIRR = financial internal rate of return, FPCL = Fiji Port Corporation Ltd, MPAF = Maritime and Ports Authority of Fiji, PSC = port service charge, RRP = report and recommendation to the President, TEU = twenty-foot equivalent unit
Sources: Maritime and Ports Authority of Fiji/Fiji Port Corporation Ltd.

Table A5.2: Financial Analysis – FIRR
(\$)

Item	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenue													
Revenue projection (constrained)		22,500	22,950	23,593	24,253	24,932	25,506	25,888	26,147	26,278	26,278	26,278	26,278
Forecast growth % (constrained)		2.00%	2.00%	2.80%	2.80%	2.80%	2.30%	1.50%	1.00%	0.50%	0.00%	0.00%	0.00%
Revenue projection (unconstrained)		22,500	22,950	23,593	24,253	24,932	25,630	26,348	27,086	27,844	28,624	29,425	30,249
Forecast growth % (unconstrained)		2.00%	2.00%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%
Expenses													
CAPEX	(16,800)												
OPEX		19,100	19,539	19,989	20,448	20,919	21,400	21,892	22,396	22,911	23,438	23,977	24,528
Forecast growth %		2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%
Net profit (constrained)		3,400	3,411	3,604	3,805	4,014	4,106	3,996	3,752	3,367	2,840	2,301	1,750
Net profit (unconstrained)	(16,800)	3,400	3,411	3,604	3,805	4,014	4,230	4,456	4,690	4,933	5,186	5,449	5,721
Net effect of project	(16,800)	0	0	0	0	0	125	460	939	1,566	2,346	3,147	3,971
FIRR project										(18.36%)	(11.68%)	(6.62%)	(2.74%)
NPV to 2031 at discount factor => 12%	\$1,835												
NPV to 2021 at discount factor => 12%	(8,424)												

CAPEX = capital expenditure, EIRR = economic internal rate of return, FIRR = financial internal rate of return, NPV = net present value, OPEX = operating expenditure

Notes: Exchange rate \$1 = FJ\$1.76103

(1) Constrained forecast based on 2.8% growth initially, but constrained by increasing congestion to reach 0% after 2015.

(2) Unconstrained forecast assumes that terminals will cope with growth until the end of the loan period. Growth of 2.8% assumed. Both forecasts assume that growth will be constrained to 2.0% in 2007-08 as a result of the slow down in the economy, returning to normal growth thereafter.

Source: Fiji Ports Corporation Ltd.

Table A5.2: Financial Analysis – FIRR continued
(\\$)

Item	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Revenue													
Revenue projection (constrained)	26,278	26,278	26,278	26,278	26,278	26,278	26,278	26,278	26,278	26,278	26,278	26,278	26,278
Forecast growth % (constrained)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Revenue projection (unconstrained)	31,096	31,967	32,862	33,782	34,728	35,700	36,700	37,728	38,784	39,870	40,986	42,134	43,314
Forecast growth % (unconstrained)	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%
Expenses													
CAPEX													
OPEX	25,092	25,669	26,260	26,864	27,482	28,114	28,760	29,422	30,099	30,791	31,499	32,224	32,965
Forecast growth %	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%
Net profit (constrained)	1,186	608	18	(586)	(1,204)	(1,836)	(2,482)	(3,144)	(3,821)	(4,513)	(5,221)	(5,946)	(6,687)
Net profit (unconstrained)	6,004	6,297	6,602	6,918	7,246	7,587	7,940	8,306	8,685	9,079	9,487	9,910	10,349
Net effect of project	4,818	5,689	6,584	7,504	8,450	9,422	10,422	11,450	12,506	13,592	14,708	15,856	17,036
FIRR project	0.30%	2.72%	4.67%	6.25%	7.56%	8.65%	9.56%	10.33%	10.98%	11.53%	12.00%	12.41%	12.76%
NPV to 2031 at discount factor => 12%													
NPV to 2021 at discount factor => 12%													

CAPEX = capital expenditure, EIRR = economic internal rate of return, FIRR = financial internal rate of return, NPV = net present value, OPEX = operating expenditure

Notes: Exchange rate \$1 = FJ\$1.76103

- (1) Constrained forecast based on 2.8% growth initially, but constrained by increasing congestion to reach 0% after 2015.
- (2) Unconstrained forecast assumes that terminals will cope with growth until the end of the loan period. Growth of 2.8% assumed. Both forecasts assume that growth will be constrained to 2.0% in 2007-08 as a result of the slow down in the economy, returning to normal growth thereafter.

Source: Fiji Ports Corporation Ltd.

Table A5.2: Financial Analysis – EIRR

(\$)

Item	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenue													
Revenue projection (constrained)		22,500	22,950	23,593	24,253	24,932	25,506	25,888	26,147	26,278	26,278	26,278	26,278
Forecast growth % (constrained) ⁽¹⁾		2.00%	2.00%	2.80%	2.80%	2.80%	2.30%	1.50%	1.00%	0.50%	0.00%	0.00%	0.00%
Revenue projection (unconstrained)		22,500	22,950	23,593	24,253	24,932	25,630	26,348	27,086	27,844	28,624	29,425	30,249
Forecast growth % (unconstrained) ⁽²⁾		2.00%	2.00%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%
Expenses													
CAPEX	(16,800)												
OPEX		19,100	19,539	19,989	20,448	20,919	21,400	21,892	22,396	22,911	23,438	23,977	24,528
Forecast growth %		2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%
Net profit (constrained)	0	3,400	3,411	3,604	3,805	4,014	4,106	3,996	3,752	3,367	2,840	2,301	1,750
Net profit (unconstrained)	(16,800)	3,400	3,411	3,604	3,805	4,014	4,230	4,456	4,690	4,933	5,186	5,449	5,721
Economic benefit													
Eliminate PSC (F\$250/TEU) ⁽³⁾		0	0	1,996	4,103	4,251	4,370	4,492	4,618	4,747	4,880	5,017	5,157
Reduced road transport costs ⁽⁴⁾		76	78	80	82	85	87	90	92	95	98	100	103
TEU pa forecast (RRP to 2015)		26,811	27,562	28,113	28,900	29,942	30,780	31,642	32,528	33,439	34,375	35,338	36,327
Net effect of project	(16,800)	76	78	2,075	4,185	4,336	4,582	5,042	5,649	6,408	7,323	8,264	9,232
EIRR project					(23.15%)	(10.06%)	(1.91%)	3.74%	7.88%	11.01%	13.46%	15.36%	16.86%
NPV to 2031 at discount factor =>	12%	\$27,966											
NPV to 2021 at discount factor =>	12%	\$11,711											

() = negative, CAPEX = capital expenditure, EIRR = economic internal rate of return, NPV = net present value, OPEX = operating expenditure, PSC = port service charge, RRP = report and recommendation to the president, TEU = twenty-foot equivalent unit.

Notes: Exchange rate \$1 = FJ\$1.76103

⁽¹⁾ Constrained forecast based on 2.8% growth initially, but constrained by increasing congestion to reach 0% after 2015.

⁽²⁾ Unconstrained forecast assumes that terminals will cope with growth until the end of the loan period. Growth of 2.8% assumed. Both forecasts assume that growth will be constrained to 2.0% in 2007-08 as a result of the slow down in the economy, returning to normal growth thereafter.

⁽³⁾ Elimination of PSC - Currently there is a Port Service Charge applied by shipping lines to freight charges, set at FJ\$250 per TEU. It is assumed that the reduction in congestion and costs alleviated by the project may be measured by a phased reduction - to 50% in 2009 and to nil in 2010. This will be a direct gain to the community through savings on imports and additional export receipts.

⁽⁴⁾ Savings road transport - Currently containers are 'land-bridged' between Lautoka and Suva at ~FJ\$100/TEU. Assumed that 10% of containers move, and that improvements will result in half being delivered by direct ship call from 2008.

Source: Fiji Ports Corporation Ltd.

Table A5.2: Financial Analysis – EIRR continued
(\\$)

Item	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Revenue													
Revenue projection (constrained)	26,278	26,278	26,278	26,278	26,278	26,278	26,278	26,278	26,278	26,278	26,278	26,278	26,278
Forecast growth % (constrained) ⁽¹⁾	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Revenue projection (unconstrained)	31,096	31,967	32,862	33,782	34,728	35,700	36,700	37,728	38,784	39,870	40,986	42,134	43,314
Forecast growth % (unconstrained) ⁽²⁾	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%	2.80%
Expenses													
CAPEX													
OPEX	25,092	25,669	26,260	26,864	27,482	28,114	28,760	29,422	30,099	30,791	31,499	32,224	32,965
Forecast growth %	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%	2.30%
Net profit (constrained)	1,186	608	18	(586)	(1,204)	(1,836)	(2,482)	(3,144)	(3,821)	(4,513)	(5,221)	(5,946)	(6,687)
Net profit (unconstrained)	6,004	6,297	6,602	6,918	7,246	7,587	7,940	8,306	8,685	9,079	9,487	9,910	10,349
Economic benefit													
Eliminate PSC (F\$250/TEU) ⁽³⁾	5,302	5,450	5,603	5,759	5,921	6,086	6,257	6,432	6,612	6,797	6,988	7,183	7,384
Reduced road transport costs ⁽⁴⁾	106	109	112	115	118	122	125	129	132	136	140	144	148
TEU pa forecast (RRP to 2015)	37,344	38,390	39,465	40,570	41,706	42,874	44,074	45,308	46,577	47,881	49,222	50,600	52,017
Net effect of project	10,226	11,248	12,299	13,379	14,489	15,631	16,804	18,010	19,250	20,525	21,836	23,183	24,568
EIRR project	18.05%	19.00%	19.77%	20.39%	20.89%	21.30%	21.64%	21.91%	22.14%	22.33%	22.49%	22.62%	22.73%
NPV to 2031 at discount factor => 12%													
NPV to 2021 at discount factor => 12%													

CAPEX = capital expenditure, EIRR = economic internal rate of return, NPV = net present value, OPEX = operating expenditure, PSC = port service charge, RRP = report and recommendation to the president, TEU = twenty-foot equivalent unit.

Notes: Exchange rate \$1 = FJ\$1.76103

⁽¹⁾ Constrained forecast based on 2.8% growth initially, but constrained by increasing congestion to reach 0% after 2015.

⁽²⁾ Unconstrained forecast assumes that terminals will cope with growth until the end of the loan period. Growth of 2.8% assumed. Both forecasts assume that growth will be constrained to 2.0% in 2007-08 as a result of the slow down in the economy, returning to normal growth thereafter.

⁽³⁾ Elimination of PSC - Currently there is a Port Service Charge applied by shipping lines to freight charges, set at FJ\$250 per TEU. It is assumed that the reduction in congestion and costs alleviated by the project may be measured by a phased reduction - to 50% in 2009 and to nil in 2010. This will be a direct gain to the community through savings on imports and additional export receipts.

⁽⁴⁾ Savings road transport - Currently containers are 'land-bridged' between Lautoka and Suva at ~FJ\$100/TEU. Assumed that 10% of containers move, and that improvements will result in half being delivered by direct ship call from 2008.

Source: Fiji Ports Corporation Ltd.

TRADE AND TRAFFIC VOLUMES

A. Notes on Trade and Traffic Volumes and Forecasts

1. Trade and traffic through the port of Suva in 2000 totaled 1.2 million tons of cargo, 940 ship calls, and 32,706 twenty-foot equivalent unites (TEUs) of containers. The expectation was for a doubling of non-container cargo volumes by 2025 and for container trade to grow to 50,000 TEU by 2011.¹ There had been some decline in growth, which had averaged 8% during 1992–1997, as a result of political uncertainty. However, growth was returning and the economy was growing at about 4% per annum. A rate of increase of 2.8% was assumed in project formulation.² The volume, measured in revenue tons, had grown to 1.7 million tons by 2006. Container growth has equaled the forecast, with 54,463 total container movements handled in 2006. That equates to 46,657 full containers (TEUs).

2. To compare growth forecasts with assumptions made in the original report and recommendation of the President (footnote 1), it is necessary to establish a common measurement. It is normal practice to measure throughput in full containers. In 2000, Suva port handled a total of 46,940 TEUs, including empty containers, or approximately 35,200 full TEUs. In 2006, the comparable figure was 46,657 full TEUs. Future trade has been forecast using two scenarios—a growth rate of 6.27% per annum as achieved in 2002–2006, and a more conservative scenario of nil growth in 2008 and 2009 and 2.8% growth thereafter. By 2011, the lower, conservative estimate suggests that the total handled will be 50,687 TEUs, while the high-case forecast is 63,250 TEUs. Lautoka handled less than 10,000 TEUs in 2002, but this had grown to 16,767 TEUs in 2006, a compound annual growth rate of over 20% per annum. In the forecast, however, growth at Lautoka is assumed at nil for 2008–2009, resuming at 2.8% in line with Suva thereafter.

¹ Asian Development Bank (ADB). 2002. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Maritime and Ports Authority of Fiji for the Fiji Ports Development Project in the Republic of the Fiji Islands*. Manila (Section 3. Suva Port: para. 32, p. 7).

² Note 1, para. 33, p. 7–8.

Table A6.1: Trade and Traffic Statistics—Suva Port

Item	2002	2003	2004	2005	2006
Tonnage					
Conventional	29,195	29,195	21,603	12,253	28,841
Palletised	864	864	580	1,958	82
Bagged Cargo	61	61	34	2	1
Container-LCL	5	5	0	0	0
Transshipment	0	0	0	0	0
Labour Intensive Cargo	30,125	30,125	22,217	14,213	28,924
Motor Vehicle	67,852	67,852	69,039	55,742	41,916
Sawn Timber	3,331	3,331	3,528	4,871	3,247
Container-FCL 20'	769,850	769,850	834,805	892,650	888,725
Container-FCL 40'	0	233,650	278,950	277,700	277,850
Unitised Cargo	841,033	1,074,683	1,186,322	1,230,963	1,211,738
Total Gen. Cargo Stev	871,158	1,104,808	1,208,539	1,245,176	1,240,662
Dry Bulk					
Coal	0	16,498	0	6,000	0
Gypsum	16,498	18,700	26,397	0	68,545
Grain	18,700	145,659	122,361	126,483	121,677
Clinker	145,659	15,400	21,500	175,718	84,580
Fertilizer	15,400	0	0	0	0
Others	0	0	0	0	0
Total Dry Bulk Tons	196,257	196,257	170,258	308,201	274,802
Total Stevedored Ton.	1,067,415	1,301,065	1,378,797	1,553,377	1,515,464
Sugar	1,301,065	0	0	0	0
Woodchip	0	0	0	0	0
Frozen Fish	0	0	0	0	0
Liquid Bulk					
Molasses	0	0	0	0	0
Mineral Oil	0	0	0	226,417	180,537
Soya Bean Oil	0	0	0	2,444	2,660
Tallow/Caustic Soda	0	0	0	0	0
Others	0	0	0	4,030	11,928
Total Liquid Bulk	0	0	0	232,891	195,125
Total Foreign Tons	2,368,480	1,301,065	1,378,797	1,786,268	1,710,589
Number of Containers					
FCL 20'	39,501	30,199	33,391	35,706	35,549
FCL 40'	0	5,271	5,579	5,554	5,554
LCL	172	1	0	0	0
EMPTY 20'	11,515	9,021	8,614	8,786	9,974
EMPTY 40'	0	2,762	2,581	3,037	3,386
Transshipment	261	0	0	0	0
Total Containers	51,449	47,254	50,165	53,083	54,463
Total TEU	51,449	55,287	58,325	61,674	63,403
Total TEU (full)	39,934	40,742	44,549	46,814	46,657

FCL = full container load, gen = general, ' = inch, LCL = less than container load, stev = stevedored,

TEU = twenty-foot equivalent unit, ton = tonnage.

Source: Ports Terminal Ltd update email on 29 November 2007.

Table A6.2: Trade and Traffic Statistics—Lautoka Port

Item	2002	2003	2004	2005	2006
Tonnage					
Conventional	21,286	18,675	15,969	17,189	13,418
Palletised	1,347	1,167	3,404	1,701	2,081
Bagged Cargo	75	75	207	135	547
Container-LCL	0	0	0	0	0
Transshipment	0	0	0	0	0
Labor-Intensive Cargo	22,708	19,917	19,580	19,025	16,046
Motor Vehicle	54,395	41,855	38,785	28,983	32,594
Sawn Timber	3,863	3,503	2,911	1,880	1,007
Container-FCL 20'	212,908	181,809	291,245	270,677	337,870
Container-FCL 40'	0	31,499	55,781	46,930	47,680
Unitised Cargo	271,166	258,666	388,722	348,470	419,151
Total Gen. Cargo Stev	293,874	278,583	408,302	367,495	435,197
Dry Bulk					
Coal	0	0	0	0	0
Gypsum	0	0	0	0	0
Grain	0	0	0	0	0
Clinker	0	0	0	0	0
Fertilizer	37,939	23,341	44,417	21,500	35,969
Others	0	0	0	0	0
Total Dry Bulk Tons	37,939	23,341	44,417	21,500	35,969
Total Stevedored Ton.	331,813	301,924	452,719	388,995	471,166
Sugar	0	0	0	230,247	166,498
Woodchip	0	0	0	198,257	211,260
Frozen Fish		0	0	0	0
Liquid Bulk				0	0
Molasses	0	0	0	58,514	105,416
Mineral Oil	0	0	0	457,835	466,981
Soya Bean Oil	0	0	0	4,424	3,854
Tallow/Caustic Soda	0	0	0	1,750	950
Others	0	0	0	10,257	10,283
Total Liquid Bulk	0	0	0	532,780	587,484
Total Foreign Tons	331,813	301,924	452,719	1,350,279	1,436,408
Number of Containers					
FCL 20'	7,155	7,948	10,255	11,084	14,451
FCL 40'	0	805	1,180	1,135	1,158
LCL	2,632	0	0	0	0
EMPTY 20'	0	4,058	4,089	3,508	4,340
EMPTY 40'	0	358	974	857	525
Transshipment	0	0	0	0	0
Total Containers	9,787	13,169	16,498	16,584	20,474
Total TEU	9,787	14,332	18,652	18,576	22,157
Total TEU (full)	9,787	9,558	12,615	13,354	16,767

FCL = full container load, gen = general, ' = inch, LCL = less than container load, stev = stevedored, TEU = twenty-foot equivalent unit, ton = tonnage.

Source: Ports Terminal Ltd update email 29 November 2007.

Table A6.3: Trade and Traffic Statistics—Fiji Ports

Item	2002	2003	2004	2005	2006
Tonnage					
Conventional	50,481	47,870	37,572	29,442	42,259
Palletised	2,211	2,031	3,984	3,659	2,163
Bagged Cargo	136	136	241	137	548
Container-LCL	5	5	0	0	0
Transshipment	0	0	0	0	0
Labor-Intensive Cargo	52,833	50,042	41,797	33,238	44,970
Motor Vehicle	122,247	109,707	107,824	84,725	74,510
Sawn Timber	7,194	6,834	6,439	6,751	4,254
Container-FCL 20'	982,758	951,659	1,126,050	1,163,327	1,226,595
Container-FCL 40'	0	265,149	334,731	324,630	325,530
Unitised Cargo	1,112,199	1,333,349	1,575,044	1,579,433	1,630,889
Total Gen. Cargo Stev	1,165,032	1,383,391	1,616,841	1,612,671	1,675,859
Dry Bulk					
Coal	0	16,498	0	6,000	0
Gypsum	16,498	18,700	26,397	0	68,545
Grain	18,700	145,659	122,361	126,483	121,677
Clinker	145,659	15,400	21,500	175,718	84,580
Fertilizer	53,339	23,341	44,417	21,500	35,969
Others	0	0	0	0	0
Total Dry Bulk Tons	234,196	219,598	214,675	329,701	310,771
Total Stevedored Ton.	1,399,228	1,602,989	1,831,516	1,942,372	1,986,630
Sugar		0	0	230,247	166,498
Woodchip	0	0	0	198,257	211,260
Frozen Fish	0	0	0	0	0
Liquid Bulk					
Molasses	0	0	0	58,514	105,416
Mineral Oil	0	0	0	684,252	647,518
Soya Bean Oil	0	0	0	6,868	6,514
Tallow/Caustic Soda	0	0	0	1,750	950
Others	0	0	0	14,287	22,211
Total Liquid Bulk	0	0	0	765,671	782,609
Total Foreign Tons	1,399,228	1,602,989	1,831,516	3,136,547	3,146,997
Number of Containers					
FCL 20'	46,656	38,147	43,646	46,790	50,000
FCL 40'	0	6,076	6,759	6,689	6,712
LCL	2,804	1	0	0	0
EMPTY 20'	11,515	13,079	12,703	12,294	14,314
EMPTY 40'	0	3,120	3,555	3,894	3,911
Transshipment	261	0	0	0	0
Total Containers	61,236	60,423	66,663	69,667	74,937
Total TEU	61,236	69,619	76,977	80,250	85,560
Total TEU (full)	49,721	50,300	57,164	60,168	63,424

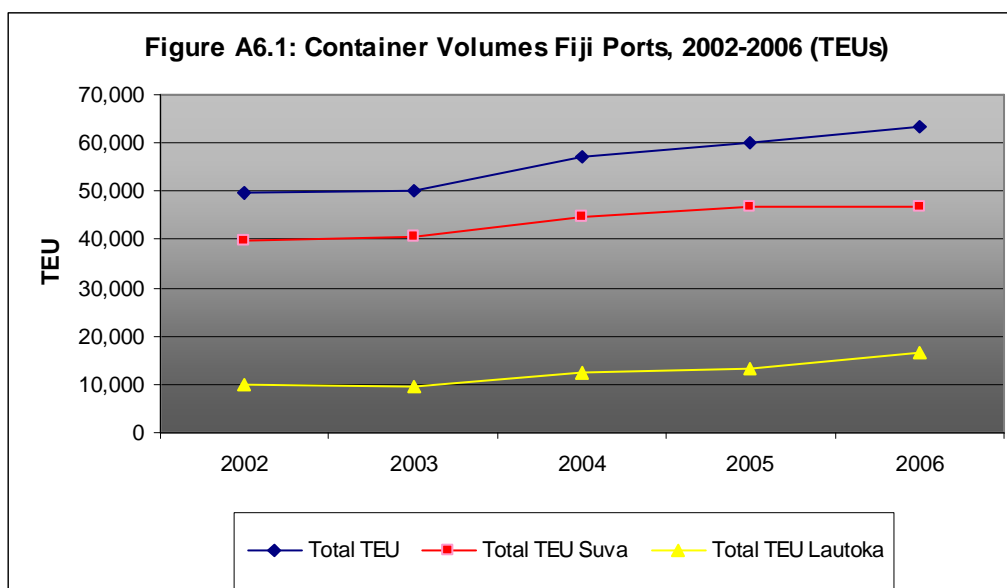
FCL = full container load, gen = general, ' = inch, LCL = less than container load, stev = stevedored, TEU = twenty-foot equivalent unit, ton = tonnage.

Source: Ports Terminal Ltd update email on 29 November 2007.

Table A6.4: Container Trade Growth

Item	2002	2003	2004	2005	2006
Total TEU	49,721	50,300	57,164	60,168	63,424
Total TEU Suva	39,934	40,742	44,549	46,814	46,657
Total TEU Lautoka	9,787	9,558	12,615	13,354	16,767
CAGR	Suva				3.97%
	Lautoka				14.41%
	Total				6.27%

CAGR = container annual growth rate, TEU = twenty-foot equivalent unit.
Source: Ports Terminal Ltd.



CAGR = container annual growth rate, TEU = twenty-foot equivalent unit.
Source: Ports Terminal Ltd.

3. Ship call numbers have been volatile, as shown in the tables below, but this volatility is mainly due to changes in the number of fishing vessels. Container vessel calls (shown as Lo-lo and Lo-lo/Ro-ro) show a steadier, upward trend.

Table A6.5: Traffic Growth—Ship Calls at Suva

Item	2002	2003	2004	2005	2006
Cruise	10	16	8	17	18
Dry Bulk	16	20	16	17	19
Tankers	73	88	74	66	60
Lo-lo	166	246	234	277	296
Lo-lo / Ro-ro	45	44	39	32	29
Car Carrier	9	9	10	11	9
Fishing	358	585	399	229	176
Naval	3	14	14	16	7
Others	52	65	61	37	43
Total	732	1,087	855	702	657

Lo-lo = lift on/lift off, Ro-ro = roll on/roll off.

Source: Ports Terminal Ltd.

Table A6.6: Traffic growth—Ship Calls at Lautoka

Item	2002	2003	2004	2005	2006
Cruise	5	14	13	4	12
Dry Bulk	5	4	5	4	5
Tankers	96	126	115	118	118
Lo-lo	80	143	121	141	171
Lo-lo / Ro-ro	22	25	46	44	23
Car Carrier	0	1	0	0	0
Fishing	0	5	2	2	0
Naval	1	0	5	0	2
Other	20	22	20	20	17
Total	229	340	327	333	348

Lo-lo = lift on/lift off, Ro-ro = roll on/roll off.

Source: Ports Terminal Ltd.

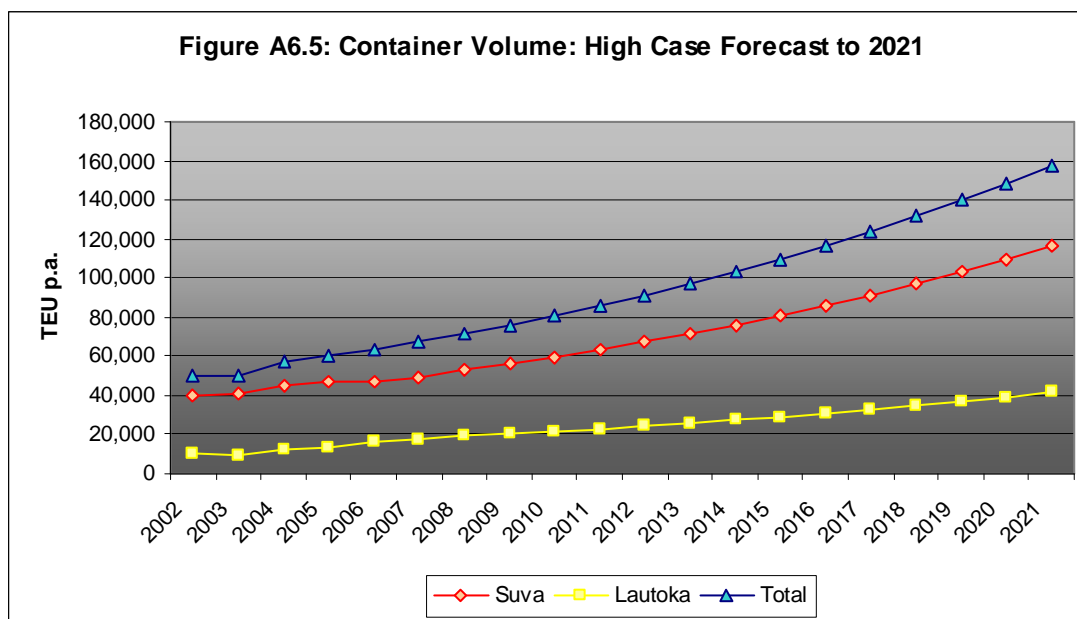
Table A6.7: Traffic Growth Ship Calls at Suva and Lautoka

Item	2002	2003	2004	2005	2006
Cruise	15	30	21	21	30
Dry bulk	21	24	21	21	24
Liquid bulk	169	214	189	184	178
Lo-lo	246	389	355	418	467
Lo-lo/Ro-ro	67	69	85	76	52
Car carrier	9	10	10	11	9
Fishing	358	590	401	231	176
Naval	4	14	19	16	9
Other	72	87	81	57	60
Total	961	1,427	1,182	1,035	1,005

Lo-lo = lift on/lift off, Ro ro = roll on/roll off.

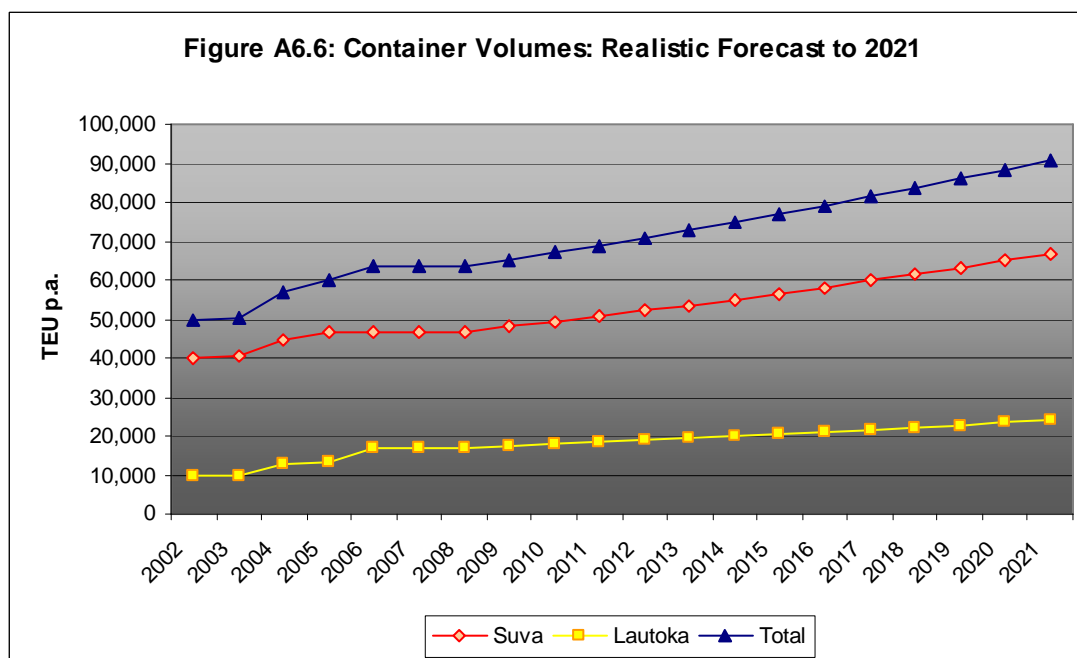
Source: Ports Terminal Ltd.

4. The following graphs show growth expected under two scenarios: high and realistic case. The high case is based on the assumption that compound annual growth rates since 2002 (6.27%) will be maintained. The lower or conservative case assumes that there will be a period of little growth during 2008–2009 and subsequent growth will be at the 2.8% assumed in the report and recommendation to the President (footnote 1) and considered reasonable.



p.a. = per annum, TEU = twenty-foot equivalent unit.

Source: Ports Terminal Ltd.



p.a. = per annum, TEU = twenty-foot equivalent unit.

Source: Ports Terminal Ltd.

5. It should be noted that both scenarios are “unconstrained.” The high-case forecast may be impacted by capacity thresholds in Suva during 2012–2015, with expected diversion to Lautoka if major port development at Suva does not take place.