Sri Lanka Ports Authority The Democratic Socialist Republic of Sri Lanka

## Ex-post Evaluation Report of Japanese ODA Loan Projects 2008 (Sri Lanka II)

**Main Report** 

November 2009

## JAPAN INTERNATIONAL COOPERATION AGENCY

VALUE FRONTIER CO., LTD

EVD
JR
09-15

No.

Sri Lanka Ports Authority The Democratic Socialist Republic of Sri Lanka

# Ex-post Evaluation Report of Japanese ODA Loan Projects 2008 (Sri Lanka II)

**Main Report** 

November 2009

## JAPAN INTERNATIONAL COOPERATION AGENCY

VALUE FRONTIER CO., LTD

#### Preface

Ex-post evaluation of ODA projects has been in place since 1975 and since then the coverage of evaluation has expanded. Japan's ODA charter revised in 2003 shows Japan's commitment to ODA evaluation, clearly stating under the section "Enhancement of Evaluation" that in order to measure, analyze and objectively evaluate the outcome of ODA, external evaluations conducted by experts shall be enhanced.

This volume shows the results of the ex-post evaluation of Japanese ODA loan projects that were mainly completed in fiscal year 2007. The ex-post evaluation was entrusted to external evaluators to ensure objective analysis of the projects' effects and to draw lessons and recommendations to be utilized in similar projects.

The lessons and recommendations drawn from these evaluations will be shared with JICA's stakeholders in order to improve the quality of ODA projects.

Lastly, deep appreciation is given to those who have cooperated and supported the creation of this volume of evaluations.

November 2009 Atsuo KURODA Vice President Japan International Cooperation Agency (JICA)

## Disclaimer

This volume of evaluations shows the result of objective ex-post evaluations made by external evaluators. The views and recommendations herein do not necessarily reflect the official views and opinions of JICA.

No part of this report may be copied or reprinted without the consent of JICA.

Ex-Post Evaluation of Japanese ODA Loan Project Sri Lanka

Port of Colombo North Pier Development Project (1)(2),

Urgent Upgrading of Colombo Port Project

External Evaluator : Koichiro Ishimori (Value Frontier Co., Ltd) Field Survey : April 2009 to June 2009

## 1. Project Profile and Japanese ODA Loan



Map of the Project Area



North Pier of the Port of Colombo

## 1.1 Background

The Port of Colombo is situated on the western coast of Sri Lanka. The port is blessed with geographical and environmental conditions, and has played a significant role in international maritime transportation. Since 1980, Japan had previously contributed to expanding its capability to handle cargo through funding from ODA loans; however, its decreasing capability to handle cargo has recently become apparent and raised serious concerns due to greater than expected cargo traffic demands.

### 1.2 Project Objective

The objective of these projects is to increase the handling volume of containers and general cargoes, decrease off-shore waiting time, and improve the port's convenience and security by further developing the Unity Container Terminal (UCT) and Queen Elizabeth Quay (QEQ) and dredging the North Channel in the port of Colombo, thereby contributing to the influx of increased amounts of foreign currency.

## 1.3 Borrower / Executing Agency

The Government of the Democratic Socialist Republic of Sri Lanka / Sri Lanka Ports Authority (SLPA)

1.4	Outline	of Loan	Agreement
-----	---------	---------	-----------

Loan Amount/ Disbursed	Port of Colombo North Pier Development Project (1) (SI -P41):
Amount	5 668 Million Yen / 4 878 Million Yen
	Port of Colombo North Pier Development Project (2)
	(SL-P46).
	12.705 Million Yen (Amended to 5.742 Million Yen) /
	2.644 Million Yen
	Urgent Upgrading of Colombo Port Project (SL-P67)
	2,048 Million Yen / 1,571 Million Yen
	SL-P41: June 1994 / July 1994
Exchange of Notes Date/ Loan	SL-P46: July 1995 / August 1995
Agreement Signing Date	SL-P67: July 1999 / August 1999
Terms and Canditions	SL-P41: Interest Rate 2.6%, Repayment Period 30
Terms and Conditions	years (Grace Period 10 years), General Untied.
	SL-P46: Interest Rate 2.6%, Repayment Period 30
	years (Grace Period 10 years), General Untied.
	SL-P67: Interest Rate 1.8 % (Consulting Services
	0.75%), Repayment Period 30 years (Grace Period 10
	years) (Consulting Services Repayment Period 40
	years (Grace Period 10 years)), General Untied
	(Consulting Services Bilateral Tied)
Final Dichurgament Data	SL-P41: October 2003
Final Disbursement Date	SL-P46: July 2005
	SL-P67: December 2006
Main Contractors (Over 1	Wakachiku Construction Co., Ltd (Japan) & Penta
Main Contractors (Over 1	Ocean Construction Co., Ltd (Japan) (JV) / Itochu
billion yen)	Corporation (Japan)
Main Consultants (Over 100	Ianan Port Consultants I td (Ianan) / The Overseas
intern constituints (over 100	Coastal Area Development Institute of Ianan (Ianan)
million yen)	Soustair i lea Development institute of supun (supun)
Feasibility Study (F/S), etc	1996 (Master Plan) : JICA

## 2. Evaluation Result (Rating: C)

2.1 Relevance (Rating: a)

The projects have been highly relevant with national policies and development needs of Sri Lanka at the times of both appraisal and ex-post evaluation.

#### 2.1.1 Consistency with Development Plan and Sector Policy

The Investment Plan (1990-1994 and 1995-1999) at the time of appraisal aimed, on average, at 5.3% and 6.9% of annual Gross Domestic Product (GDP) growth, respectively, and emphasized the importance of developing economic infrastructure to achieve its aim. Regarding port infrastructure, it ranked the Port of Colombo, Sri Lanka's biggest port, as a leading port in the South Asia and aimed to improve the efficiency of port operations as well as expand the port in order to make it internationally competitive.

In light of the Plan, Colombo Port Development Master Plan (1989-1995) and National Ports and Shipping Policy (1997-2002) aimed to make Sri Lanka the largest port hub in South Asia and planned to develop the Port of Colombo and the Port of Galle (i.e., by increasing their handling capacity for containers and general cargoes). They also encouraged the development and operation of ports in Sri Lanka by the private sector, and

stated that public finance of port infrastructure should play a role in supporting private activities in the sector (The Jaya Container Terminal (JCT) was planned to be developed and operated by BOT<sup>1</sup>, though it turned out to be unsuccessful after all).

The 10 year National Development Plan at the time of ex-post evaluation, Mahinda Chintana (2006-2016), aims at growth of GDP over 8% during the plan period, and still places importance on developing economic infrastructure to achieve its aim. Regarding port infrastructure, it identifies the Port of Colombo, the biggest and only international port in the country, as a port hub connecting Asia and Europe, from the perspective of its geographical location and aims to improve the efficiency of port operations and expand the port.

In light of the Plan, Port Development Plan and Policy (2002-2010) and SLPA Corporate Plan (2006-2010) aim at Sri Lanka as the No. 1 port hub in Asia and plan to develop 6 ports in the country. Regarding the Port of Colombo, they aim to improve the efficiency of port operations as well as expand the port in order to increase the handling volume of containers and general cargoes. They also encourage the development and operation of ports in the country by the private sector, and they state that public finance of port infrastructures should play a role in supporting private activities in the sector. In fact, QEQ in the Port of Colombo, which was supposed to be developed under SL-P46, has been cancelled since the government of Sri Lanka has decided to develop and operate it by BOT. This decision was consistent with the sector policy. In addition, it was also consistent with the principles of Official Development Assistance (ODA), since development of economic infrastructures by ODA should be a foundation for attracting future private investment.

### 2.1.2 Consistency with Development Needs

The Port of Colombo at the time of appraisal served important functions as a maritime transportation route connecting Asia and Europe, as well as a feeder port to ports in India, and was experiencing an increase of cargoes at a rate of 8% growth, on average, per annum. The handling capabilities of the port were becoming impeded by high demand, and congestion within the port area was serious. Therefore, the projects which planned to develop the UCT and dredge the North Channel for the purpose of increasing the handling volume of cargoes and easing congestion were meeting the development needs, and the necessity of these projects was judged to be high.

According to research performed by United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), the volume of container cargoes handled at ports in the Indian Ocean is forecasted to reach about 20 million TEU<sup>2</sup> in 2011. Today, however, the biggest container ports in the Indian Ocean, the Port of Colombo and the Port of

<sup>&</sup>lt;sup>1</sup> BOT (Build-Operate-Transfer) is a means of private financing. It is a scheme in which a private entity first builds, operates, and maintains facilities, and then transfers the ownership of those facilities to another entity which is responsible for administering public facilities after completion of a project.

 $<sup>^2</sup>$  TEU (Twenty-Foot Equivalent Unit) is a unit that indicates the volume of container cargoes. One TEU is equal to one 20 foot container box.

Jawaharlal Nehru in India, can only handle about 4 million TEU, respectively. Since the demand of handling cargoes is expected to grow by 6%, on average, per annum, the aforementioned projects that planned to develop the UCT and dredge the North Channel in order to increase handling volume of cargoes and ease congestions are still meeting the development need, and the necessity of the projects is judged to be high.

## 2.2 Efficiency (Rating: b)

Some outputs of the Port of Colombo North Pier Development Project (1)(2) (SL-P41, SL-P46) were not achieved as planned, but those of Urgent Upgrading of Colombo Port Project (SL-P67) were achieved as planned. The project periods for SL-P41 and SL-P46 were much longer than planned, but that of SL-P67 was shorter than planned. The project costs of SL-P41, SL-P46, and SL-P67 were all lower than planned. Therefore, the evaluation for efficiency is moderate.

#### 2.2.1 Outputs

The map below is the bird's eye view of the Port of Colombo and the table 1 summarizes the outputs developed by the projects.



Bird's Eye View of the Port of Colombo

		*		
Plan (Appraisal)		Actual (Ex-post Evaluation)		Notes
Berth 1 and 2 at Unity Con-	tainer Ter	minal (the UCT)		
(1) Berth improvement (SL-P4	41) 340m	(1) Berth improvement (SL-P41)	340m	Same as planned
(2) Revetment (SL-P41)	480m	(2) Revetment (SL-P41)	440m	Almost same as planned
(3) Yard pavement (SL-P41) 4	5,750 m²	(3) Yard pavement (SL-P41)	70,800 m²	Expanded due to handling of container cargoes
(4) Procurement (SL-P46)		(4) Procurement (SL-P46)		The original purpose of
Multipurpose crane	2units	Container crane	3units	procurement was to enable the
Wharf belt conveyor	1unit	Transfer crane	8units	only. Since the capability of
Warehouse belt conveyor	1unit	Tractor	45units	SLPA to handle container
Packer & Palletizer	9units	Trailer	45units	cargoes was expected to
Tractor	8units	-		the purpose changed mainly to
Folk lift	40units	-		handle containers in addition to general cargoes.
Berth 2 and 3 at Queen Eliz	zabeth Qu	ay (QEQ)		
(1) Berth improvement(SL-P4	6) 420m	(1) Berth improvement(SL-P46)	cancelled	Due to BOT of QEQ, which was
(2) Yard pavement (SL-P46) 35,600 m <sup>2</sup>		(2) Yard pavement (SL-P46) cancelled		supposed to handle container cargoes, the project was appropriately amended so that it
(3) Procurement (SL-P46)		(3) Procurement (SL-P46)		
Container crane 2units		Container crane	cancelled	could mainly handle container
Transfer crane	12units	Transfer crane	cancelled	cargoes at the UCT.
North Channel				
(1) Dredging (SL-P67) 13m		(1) Dredging (SL-P67) 13m		Same as planned
(2) Procurement (SL-P67)		(2) Procurement (SL-P67)		
Beacon	1unit	Beacon	1unit	Same as planned
Buoy	8units	Buoy	8units	
Consulting Services				
(1) SL-P41: 198 M/M		(1) SL-P41: 401 M/M		Increased due to changes of the
(2) SL-P46: 94 M/M		(2) SL-P46: 246 M/M		plan and extensions of the project periods
(3) SL-P67: 49 M/M		(3) SL-P67: 70 M/M		Increased due to a study carried out on improving the efficiency of the UCT

Table 1: Outputs

#### 2.2.2 Project Period

The project period of SL-P41 and SL-P46 planned at the time of appraisal was 53 months, from July 1994 to November 1998; however, the actual project period was much longer than that at 133 months from July 1994 to July 2005 (250% of the planned period). The main reasons for the delay were that the detailed design started 6 months late due to a late contract agreement with consultants, and because of a situation where the government of Sri Lanka was considering making changes to the project's scope (i.e., cancellation of QEQ development under SL-P46), resulting in another 8 months of delay. The period for tenders and contracts took 69 months longer than originally planned since the project scopes of SL-P41 and SL-P46 had to be amended (i.e., development of Berth 1 and 2 at the UCT under SL-P41 was amended to handle mainly container cargoes in addition to general cargoes, and QEQ development under SL-P46 was canceled) based on

forecasts of a decreased capability of the SLPA to handle container cargoes, which resulted from the official decision of the government of Sri Lanka to develop and operate QEQ by BOT. The period for procurement of a computer system which was planed under the amended SL-P46 got delayed 11 months due to a disagreement on the tender evaluation result of the computer system by the Cabinet Appointed Tender Board, which gives final approval on tender evaluations on the Sri Lankan side (the period reached the due date for disbursement, so procurement under SL-P46 did not occur).

The project period of SL-P67 planned at the time of appraisal was 44 months, from August 1999 to March 2003. The actual project period was shorter than that at 43 months, from August 1999 to February 2003 (98% of the planned period).

#### 2.2.3 Project Cost

Total project cost for SL-P41 and SL-P46 planned at the time of appraisal was 22,650 million yen, out of which 18,373 million yen was an ODA loan. The actual total project cost was much lower than that at 8,783 million yen, out of which 7,522 million yen was an ODA loan (39% of the planned cost). The main reasons for the cost reduction were cost savings created by the cancellation of the QEQ development (7,440 million yen) and devaluation of the local currency.

The total project cost for SL-P67 planned at the time of appraisal was 2,409 million yen, out of which 2,048 million yen was an ODA loan. The actual total project cost was lower than that at 2,047 million yen, out of which 1,571 million yen was an ODA loan (82% of the planned cost). The main reason for the cost reduction was devaluation of the local currency.

#### 2.3 Effectiveness (Rating: a)

The projects have largely achieved its objective, and its effectiveness is high.

#### 2.3.1 Total Gross Tonnage<sup>3</sup>

Since one of the objectives of the projects was to increase the handling volume for containers and general cargoes at the UCT, total gross tonnage at the UCT was examined. As Figure 1 illustrates, total gross tonnage at the UCT in 1999, when the UCT was being developed and partially operated, was 1,268,000 gross tons. In 2005 when the projects were completed, total gross tonnage almost doubled (compared to 1999), i.e. about 2,869,000 gross tons. In 2008 when the ex-post evaluation was conducted, it almost tripled (compared to 1999), i.e. about 3,643,000 gross tons. Thus, total gross tonnage at the UCT exhibits an increasing trend.<sup>4</sup>

<sup>&</sup>lt;sup>3</sup> Total Gross Tonnage is an indicator of measuring the total capacity of all vessels entering into ports per year, and is calculated by the formula of (Gross Ton per vessel) x (number of vessels entering into ports per year). Gross Ton is the capacity of vessels; in other words the unit of ton that illustrates the size of vessels.

<sup>&</sup>lt;sup>4</sup> Though total gross tonnage from 2007 to 2008 slightly decreased, this is almost equivalent to the loss of a single container vessel (Post-Panamax size) entering into the port. Thus, the figures for 2007 and 2008 can be considered as almost equivalent.



Figure 1: Total Gross Tonnage at the UCT

#### 2.3.2 Container Cargo Handling Volume<sup>5</sup>

For the same reasons mentioned above, container cargo handling volume was examined. As Figure 2 illustrates, container cargo handling volume at the UCT in 1999, when the UCT was being developed and partially operated, was 20,105 TEU. In 2005 when the projects were completed, it was still only 32,476 TEU. In 2008 when the ex-post evaluation was conducted, it reached a level ten times higher than that of 1999, i.e. 201,486 TEU. Thus, container cargo handling volume at the UCT exhibits an increasing trend. Considering that the planned target was 230,000 TEU, the volumes of 196,241 TEU in 2007 and 201,486 TEU in 2008 have achieved 85% and 88%, respectively. The target for container cargo handling volume has been achieved almost as planned.



Figure 2 : Container Cargo Handling Volume at the UCT

Source: Sri Lanka Ports Authority (SLPA)

<sup>&</sup>lt;sup>5</sup> An indicator to measure container cargo handling volume, which is expressed in the unit of TEU (Twenty-Foot Equivalent Unit) which is equivalent to one 20 foot box container.

## 2.3.3 General Cargo Handling Volume<sup>6</sup>

Likewise, general cargo handling volume was examined. As Figure 3 illustrates, general cargo handling volume at the UCT in 1999, when the UCT was being developed and partially operated, was about 73,000 tons. In 2005 when the projects were completed, it became about 49,000 tons, and in 2008 when the ex-post evaluation was conducted, it became about 3,000 tons. Thus, general cargo handling volume shows a decreasing trend. Considering that the planned target was 160,000 tons, the 2008 level of 3,000 tons fell short at only 2%; the target for general cargo handling volume has not been achieved as planned. This is because SLPA strategically chooses to handle container cargoes rather than general cargoes at the UCT where container cargoes can be handled, because demand for handling container cargoes is increasing.



Figure 3: General Cargo Handling Volume at the UCT

Source: Sri Lanka Ports Authority (SLPA)

#### 2.3.4 Berth Occupation Ratio<sup>7</sup>

The operational situation of berth 1 and berth 2 at the UCT, which the projects developed, was also examined. As Figure 4 illustrates, the berth occupation ratio in 2005 of berth 1 and berth 2 at the UCT when the projects were completed was at 18%; however, it became 39% in 2006, 56% in 2007, and 55 % in 2008 when the ex-post evaluation was conducted, all of which maintain a level within 10 percentage points of the JICA standard (46%).<sup>8</sup> The target for berth occupation ratio has been achieved almost as planned.

<sup>&</sup>lt;sup>6</sup> An indicator to measure general cargo handling volume, which is expressed in tons.

 $<sup>^{7}</sup>$  Berth occupation ratio is calculated by the formula of (occupied hours of berth) / (operational hours of berth).

<sup>&</sup>lt;sup>8</sup> According to "References of Operation and Effect Indicators" prepared by JICA, different berth occupation ratios (standards) are set depending on the number of berths constructed. In case of 2 berths as the projects constructed, 46% is set as appropriate berth occupation ratio (standard).



Figure 4: Berth Occupation Ratio of Berth 1 and Berth 2 at the UCT

#### 2.3.5 Average Off-Shore Waiting Time

The objective of reducing the average off-shore waiting time at the Port of Colombo as a whole was also examined. As figure 5 illustrates, it became 7 hours in 2003 when the North Channel opened, and was further reduced to 4 hours in 2004, and then to 2 hours in 2005 and 2006; however, the Liberation Tigers of Tamil Eelam (LTTE; a separatist group that claims independence from Sri Lanka) entered into the port with a boat via the North Channel at the end of 2006 and caused it to close at the beginning of 2007, resulting in a recent increasing trend of average off-shore waiting time. Meanwhile, on May 19, 2009 when the ex-post evaluation work was being conducted, the President of Sri Lanka declared that the long war against LTTE had come to an end. The North Channel that was closed to prevent terrorism by LTTE is expected to open again in the near future, which presumably will lead to a reduction of average off-shore waiting time.



Figure 5: Average Off-shore Waiting Time at the Port of Colombo

Source: Sri Lanka Ports Authority (SLPA)

#### 2.3.6 Number of Marine Accidents at the Port of Colombo

Another objective of the projects was to assure the security of marine transportation at the Port of Colombo, for instance preventing vessels from colliding each other, and therefore, the number of marine accidents at the Port of Colombo until 2008, when the ex-post evaluation was conducted, was examined. According to the available data, which only represent the period after 2005, there was only one marine accident at the Port of Colombo in 2007. The accident was a minor collision of a vessel's stern against a quay due to the ship's engine trouble, which has nothing to do with the projects. Since the North Channel was closed at the beginning of 2007, the lack of accidents in 2008 may not be explained by effects from the projects; however, zero accident both in 2005 and 2006 can be considered as indirect effects by them.

#### 2.3.7 Convenience of the Port of Colombo

The other objective of the projects was to improve the convenience of the Port of Colombo. Therefore, hearings with SLPA and shipping companies using the UCT were held. According to SLPA, the convenience of the Port of Colombo as a whole has improved since container cargoes, whose demand is increasing, can be handled at the UCT now. According to shipping companies, now that new port facilities have been introduced into the UCT, the processes of loading and charging is much more efficient and it is much easier to produce a time schedule for land transportation; thus, the Port of Colombo has become much more convenient for many who are involved in shipping.

## 2.3.8 Financial Internal Rate of Return

While financial internal rate of return (FIRR) of SL-P41 at the time of appraisal was 11.6%, FIRR at the time of the ex-post evaluation was 10.2%,<sup>9</sup> which is almost as planned. FIRR of SL-P46 at the time of appraisal, 8.3%, has improved to 18.2% due to reductions in construction costs. FIRR of SL-P67 at the time of appraisal, 16.9%, has improved to 32.3% due to reductions in construction costs and greater port income than expected.<sup>10</sup>

## 2.3.9 Economic Internal Rate of Return

Since Economic Internal Rate of Return (EIRR) was not calculated at the time of appraisal and there is no benchmark to make a comparison, EIRR was not calculated at the time of the ex-post evaluation.

#### 2.4 Impact

2.4.1 Economic Impact

<sup>&</sup>lt;sup>9</sup> In calculation of FIRR, same as appraisal, construction costs and operation & maintenance costs were included in costs, and port income was included in benefits. The project life was 20 years.

<sup>&</sup>lt;sup>10</sup> Port income was higher than expected, probably because of greater than expected increases of container cargoes at the Port of Colombo during the recent years.

2.4.1.1 Foreign Currency Obtained by Sri Lanka Ports Authority

Since the projects were expected to increase the foreign currency obtained by SLPA, it was examined and an increasing trend<sup>11</sup> was found. Although the percentage of total gross tonnage at the UCT out of the whole Port of Colombo is only 3%, the projects are judged to have contributed, more or less, to the trend.

Indicator (Unit)	2005	2006	2007	2008		
Foreign Currency Obtained (Million Rs.)	19,788	22,318	25,295	24,561		

Table 2: Foreign Currency Obtained by SLPA

Source: Sri Lanka Ports Authority (SLPA)

2.4.1.2 Gross Regional Domestic Product of Western Province including Colombo The Gross Regional Domestic Product (GRDP) was also examined, and turned out to show an increasing trend after 2005. Factors such as increases in operational revenues at shipping companies (see beneficiary survey below) are judged to have contributed to the growth of regional economy.

Table 3: Gros	s Regional	Domestic	Product
---------------	------------	----------	---------

Indicator (Unit)	2005	2006	2007	2008
GRDP (Billion Rs.)	1,065	1,472	1,733	N/A

Source: Sri Lanka Ports Authority (SLPA)

## 2.4.1.3 Operational Revenues at Shipping Companies

A beneficiary survey towards 50 shipping companies<sup>12</sup> was carried out (100% response rate). Question 1 was, "Have the projects contributed through increasing a capability to handle cargoes to trade increases at your company?" All 50 companies answered "Yes" to question 1. Question 2 was, "Have the trade increases contributed to increasing the number of staff members at your company?" All of them again answered "Yes" to question 2. The total number of staff members at the 50 shipping companies before the projects was 784, and it became 1,944 in 2008, which is a 2.5 fold increase. This implies that new employment opportunities for about 23 staff members at the shipping companies might have been affected by other factors than the projects, the projects are still believed to have made major impacts on the employment since the survey identified that the main reason for the increase of staff members had been caused by an insufficient number of workers resulting from the rise in trade levels. Question 3 was, "Have the trade increases contributed to increasing operational revenues?" 49 companies out of 50 answered "Yes."

<sup>&</sup>lt;sup>11</sup> A reason for the slight decrease from 2007 to 2008 is that the volume of general cargoes handled at the Port of Colombo as a whole decreased, and incomes from such sources as loading/discharging, transportation, and storage decreased.

<sup>&</sup>lt;sup>12</sup> The sampling method of 50 shipping companies is as follows. The survey team approached 11 trading companies that use the UCT and asked them to introduce 4 or 5 companies that had been established before 1999, when the UCT became operational, and now mainly use the UCT for trading after 1999, so that the total number reached 50.

Since all of the companies hesitated to publicize their actual amount of operational revenues, the degree to which the operational revenues were increased in 2008 in comparison to those before the projects was asked instead. It turned out that the 49 companies experienced operational revenue increases that ranged from 125% to 250% (adjusted for inflation), and on overage they increased about 180%. Although the increases of operational revenues might have been affected by other factors than the projects, the projects are still believed to have made major impacts on the revenues because the survey identified that the main reason for the increase had been caused by increased trade levels, which the development of the UCT enabled. In addition, it turned out that the salaries of staff members at the 49 companies increased 150% to 200% (adjusted for inflation), and on average increased about 195%.

#### 2.4.2 Environmental and Social Impact

Environmental monitoring has been performed on a regular basis, and so far no environmental problems associated with the projects have been identified. The projects were implemented at the Port of Colombo and in ocean, so there was no resettlement.

## 2.5 Sustainability (Rating: c)

There have been no organizational or technical problems with SLPA, which operates and maintains the port facilities and equipment that were developed by the projects. However, some problems have been observed in terms of the financial situation of SLPA and revetment at the UCT, and thus sustainability of the projects is low.

### 2.5.1 Executing Agency

#### 2.5.1.1 Organizational Aspect of Operation and Maintenance

SLPA is administered by the Ministry of Ports and Aviation, and plans for privatization are not scheduled. The operational division and the technical division of SLPA are in charge of operating and maintaining the port facilities and equipment developed by the projects. The operational division consists of 3 sections (container cargo section, general cargo section, and marketing & business development section), and all of the sections are in charge of operating the port facilities and equipment developed by the projects. The container cargo and general cargo sections have 2 working shifts (3 groups) that cover 24 hours of operation, and the marketing & business development section has 1 working shift (1 group) that covers 12 hours of operation. The technical division consists of 8 sections, out of which 3 sections (mechanical & plant section, electrical section, and civil work section) are in charge of maintaining the port facilities and equipment developed by the projects. The mechanical & plant section and the electrical section have 2 working shifts (2 groups) that cover 24 hours of maintenance, and the civil work section has 1 working shift (1 group) that covers 12 hours of maintenance. In light of the above information, SLPA was judged to have no problems with the organizational aspect of operation and maintenance.



Figure 6: Organizational Diagram of SLPA

#### 2.5.1.2 Technical Aspect of Operation and Maintenance

Staff members in the operational division that are in charge of operation generally have a bachelor's degree in either engineering or commerce, and staff members in the technical division that are in charge of maintenance generally have a bachelor's degree in engineering, so there seem to be no problems with basic knowledge and skills that are required for operation and maintenance. They carry out monthly and yearly operation and maintenance activities based on manuals, and make efforts to improve knowledge and skills for operation and maintenance by regularly receiving training from Mahapola Training Institute of SLPA. In light of the above information, SLPA was judged to have no problems with the technical aspect of operation and maintenance.

#### 2.5.1.3 Financial Aspect of Operation and Maintenance

The financial situation of SLPA is highlighted in Tables 4 and 5. Table 4 shows a balance sheet that indicates that SLPA maintains a high equity ratio, though the ratio has decreased from 66.7% in 2006 to 46.4% in 2008. Therefore, the soundness of management is considered as high. It also indicates that SLPA maintains a high current ratio, though the ratio has decreased from 169.5% in 2006 to 153.9% in 2008. Therefore, its ability to pay back short term liabilities is considered as high.

Table 5 shows a profit and loss sheet that indicates that the ratio of operating profits to total revenue has decreased from 25.7% in 2006 to 11.8% in 2008: the operational profitability of SLPA has decreased. The main reason lies in the increasing human cost in operation, maintenance, and administration. The annual average salary per person has increased by 64%, from 597,657 Rs. in 2006 to 980,231Rs. in 2008. It also indicates that the ratio of net profit after tax to total revenue has decreased from 1.1% in 2006 to -42.1% in 2008: the total profitability of SLPA decreased. The main reason lies in the foreign exchange loss accruing from repayment of ODA loans, in addition to the previously mentioned increasing human cost. SLPA has worked a long time to improve its financial situation through 1) reducing the human cost, 2) increasing revenues by tariff

increases, and 3) easing relending conditions of ODA loans to SLPA<sup>13</sup> based on its Management Improvement Action Plan. However, while it was observed at the time of ex-post evaluation in 2008 that revenues increased and financial burdens were lessened due to successes of 2) and 3) above, financial situation did not improve due to a failure of 1) above, in addition to foreign exchange loss.

	2006	2007	2008
Non Current Assets	129,913	127,132	129,206
Loan Accounts	20	15	23
Current Assets	18,172	18,570	19,021
Total Assets	148,105	145,717	148,250
Capital Employed	7,591	7,591	7,591
Reserves & Provisions	91,247	70,496	61,165
Non Current Liabilities	38,544	56,357	67,134
Current Liabilities	10,723	11,273	12,360
Total Liabilities	148,105	145,717	148,250

Table 4: Balance Sheet (Million Rs.)

Table 5: Profit and Loss Sheet (Million Rs.)

	2006	2007	2008
Total Revenues	23,002	25,913	25,144
Operational Expenses	9,117	11,750	12,057
Maintenance Expenses	2,729	3,817	3,865
Administrative Expenses	5,254	6,848	6,265
Total Expenses	17,100	22,415	22,187
Operating Profit	5,902	3,498	2,957
Interest	1,115	1,147	1,211
Foreign Exchange loss <sup>14</sup>	1,168	3,938	11,791
Tax	3,368	1,178	547
Profit After Tax	251	-2.765	-10.592

Source: Sri Lanka Ports Authority (SLPA)

Source: Sri Lanka Ports Authority (SLPA)

## 2.5.2 Operation and Maintenance Situation

According to SLPA, cracks at the UCT began to be observed in 2008 (the exact time of the first observation is unclear). As far as the past container cargo handling volume which occupies the majority of handling volume at the UCT is concerned, the cracks have not yet become a significant obstacle to operations at the UCT. However, it was observed at the time of the ex-post evaluation that the cracks have been deteriorating day by day and berth 2 of the UCT cannot be fully utilized due to these cracks. Therefore, there is a possibility that the cracks may become a hindrance to future operations of the UCT and the Port of Colombo as a whole, where increasing demands are expected. Based on this situation, SLPA has implemented a study to examine the causes of the cracks, and to explore any possible technical solutions. Japan International Cooperation Agency (JICA) is now considering implementation of a study to verify the technical feasibility of the study.

The North Channel has been closed since the beginning of 2007 in order to prevent instances of terrorism by LTTE as previously mentioned. In June 2009, SLPA requested that the Sri Lankan Government open the channel because the war against LTTE ended on May 19, 2009. According to SLPA, the North Channel is expected to open again soon.

There are no problems with other port facilities and equipment.

<sup>&</sup>lt;sup>13</sup> Relending conditions of ODA loans from Sri Lankan Government to SLPA (interest: 8-14%, repayment period: 15 years) were changed to the same relending conditions from the Japanese Government to the Sri Lankan Government (interest: 2.5-3.25%, repayment period: 20 years), this way the repayment conditions were eased.

<sup>&</sup>lt;sup>14</sup> SLPA repays ODA loans in Rs. to the Sri Lankan Government. However, appreciation of Yen has mounted the amount in Rs. that is equivalent to the amount in Yen repaid from the Sri Lankan Government to the Japanese Government, and SLPA has been bearing this accrued foreign exchange loss.

#### 3. Conclusion, Lesson Learned, and Recommendation

#### 3.1 Conclusion

The evaluation results for relevance, efficiency, effectiveness, and impacts of the projects are generally satisfactory, while the results for sustainability are not. In light of the above, the overall rating of the projects is C and thus, the projects are evaluated to be fairly satisfactory.

#### 3.2 Lesson Learned

QEQ, which was supposed to be developed by SL-P46, was developed and operated by BOT due to a policy change by the Sri Lankan Government after the start of the project. Based on the policy change, JICA reviewed the project scope and came to the conclusion that development of QEQ should be excluded from the projects. The reasons for this decision were that even though QEQ was developed and operated by BOT, there would be no negative impacts on realizations of project effects, and the utilization of private funds would lead to efficiently improving operations of the Port of Colombo as a whole. It is important to note that even after the signing of the loan agreement, JICA closely shares information with the recipient government and executing agency and is flexible in taking appropriate actions.

#### 3.3 Recommendation to SLPA and JICA

Based on a suitable method obtained through a review of the SLPA study, even considering alternative methods, for rectification work of the UCT, SLPA and JICA are expected to have prompt and constructive discussions for rapid commencement of rectification work, including a discussion on a source of funding.

## Comparison of Original and Actual Scope

Item	Original Actual	
1. Output	(a) Berth 1 & 2 at the UCT (a) Berth 1 & 2 at the UCT	
	Berth improvement (SL-P41): 340 m Berth improvement (SL-P41):	340 m
	Revetment (SL-P41) : 480 m Revetment (SL-P41) :	440 m
	Yard pavement (SL-P41) : 45,750 m <sup>2</sup> Yard pavement (SL-P41) :70	0,800 m²
	Procurement (SL-P46) Procurement (SL-P46)	
	Multi-purpose crane : 2units Container crane :	3units
	Wharf belt conveyor : 1unit Transfer crane :	8units
	Warehouse belt conveyor: 1 unit Tractor :	45units
	Packer & Palletizer : 9units Trailer :	45units
	Tractor : 8units	
	Folk lift : 40units	
	(b) Berth 2 & 3 at QEQ (b) Berth 2 & 3 at QEQ	
	Berth improvement (SL-P46) : 420 m Berth improvement (SL-P46) : c	ancelled
	Yard pavement (SL-P46): 35,600 m²Yard pavement (SL-P46): c	ancelled
	Procurement (SL-P46) Procurement (SL-P46)	
	Container crane : 2units Container crane : ca	ancelled
	Transfer crane : 12units Transfer crane : ca	ancelled
	(c) North Channel (c) North Channel	
	Dredging (SL-P67) : 13 m Dredging (SL-P67) :	13 m
	Procurement (SL-P67) Procurement (SL-P67)	
	Beacon light : 1unit Beacon light :	1unit
	Buoy : 8units Buoy :	8units
	(d) Consulting Services (d) Consulting Services	
	SL-P41: 198 M/M SL-P41: 401 M/M	
	SL-P46: 94 M/M SL-P46: 246 M/M	
	SL-P67: 49 M/M SL-P67: 70 M/M	
2. Project Period	[SL-P41&SL-P46] [SL-P41&SL-P46]	
	July 1994 – November 1998 (53 months) July 1994 – July 2005 (133 months)	
		.1
	August 1999 – March 2003 (44 months) August 1999 – February 2003 (45 mon	ths)
3. Project Cost	SL-P41&SL-P40 SL-P0/ SL-P41&SL-P40 SL-P0	/
Foreign Currency	14,540 Million Yen 1,882 Million Yen 7,113 Million Yen 1,372 Mil	lion Yen
Local Currency	8,110 Million Yen 527 Million Yen 1,670 Million Yen 675 Mil	llion yen
Total	22,650 Million Yen 2,409 Million Yen 8,783 Million Yen 2,047 Mil	lion Yen
ODA Loan Portion	18,373 Million Yen 2,048 Million Yen 7,522 Million yen 1,571 Mil	lion Yen

