**Cameroon**

**Douala Port Container Terminal Modernization Project**

External Evaluator: Hisatsugu Furukawa (Mitsubishi UFJ Research and Consulting Co., Ltd.)

Field Survey: November 2005

## 1. Project Overview and Japan's ODA Loan


Map of project area

Container crane at Douala Port

### 1.1 Background

Douala Port in Cameroon has been used as a trading port for Cameroon and its neighboring landlocked countries since the mid-19th century, and due to increases in cargo volume, various kinds of improvements have been carried out to its port facilities, mainly through assistance from the World Bank. All through the first half of the 1980s Cameroon showed favorable economic development at an annual rate of 7.5%, and the volume of cargo handled at Douala Port reached to 3.92 million tons in 1983. Given this situation and the background in which ports were increasingly moving toward containerization with their significant economic and safety advantages, there was a growing need for Douala Port to upgrade its container facilities, in order to be prepared for increases in cargo volume.

Although the volume of container cargo handled at Douala Port reached 70,857 TEU in 1982, due to the fact that cargo handling operations were carried out with only ship gear and fork-lift trucks, handling capacity was expected to reach its limit (160,000 TEU) by 1999, even when taking into account the effect of the World Bank's Port upgrading project. At the same time, ports such as Apapa (Nigeria), Mombasa (Kenya) and Abidjan (Cote d'Ivoire) were moving forward with the installation of container cranes and so forth. Therefore, in order to keep up with the expected increase in container handling volume, it was considered that

there was an actual need for Douala Port to upgrade its cargo handling system through the installation of container cranes.

### 1.2 Objective

The objective of this project was to improve the handling capacity of containers at Douala Port, the largest trading port in Cameroon, through the installation of cranes, etc., and thereby contribute to the economic development in Cameroon and neighboring landlocked countries.

### 1.3 Borrower/Executing Agency

The Republic of Cameroon/Cameroon Ports Authority (Port Autonome de Douala (PAD))

### 1.4 Loan Agreement Overview

| | |
|---|---|
| Loan Amount/Disbursed Amount | 6,000 million yen/5,999 million yen |
| Exchange of Notes/Loan agreement | July 1986/May 1987 |
| Terms and Conditions<br>- Interest Rate<br>- Repayment Period (Grace Period)<br>- Procurement | <br>4.75%<br>25 years (7 years)<br>LDC untied |
| Final Disbursement Date | May 2001 |
| Main Contractor | Mitsui & Co., Ltd. |
| Consultant | Ocean Consultant, Japan Co., Ltd. |
| Feasibility Study (F/S) etc. | 1984 Japan Consulting Institute |

## 2. Evaluation Result

### 2.1 Relevance

#### 2.1.1 Relevance at the time of appraisal

In accordance with strong economic growth in the 1980s that were accompanied with the late-1970s discovery of petroleum, the Cameroon government intended to use petroleum revenue effectively to upgrade the domestic economic infrastructure. There are four ports in Cameroon that handle domestic cargo and international cargo from landlocked countries such as the Central African Republic and Chad. Since the handling volume was generally on an upward trend with a figure of 3.92

million tons for the volume of cargo handled at all four ports in 1983, an investment of 66.4 billion CFA francs (1.6% of total investment) in the port sector was planed on the Sixth Five-Year Plan (1986-90). Douala Port, a significant port that handles 95% of Cameroon's port cargo, has been focused as a key to Cameroon's entire economy. Therefore, this project had a high priority and the implementation was relevant.

Table 1. Cameroon's Cargo Handling Performance Port by Port (1983)

(Unit: thousand tons)

| Douala Port | Limbe Port | Kribi Port | Garoua Port | Total |
|---|---|---|---|---|
| 3,732 | 13 | 174 | 5 | 3,924 |

2.1.1 Relevance at the current time

Since the Five-Year Plan has been suspended, the Country Strategy Paper and Poverty Reduction Strategy Paper (PRSP), drawn up by the Cameroon government with assistance from international agencies is now used as its economic management guidelines. These guidelines highlight Cameroon to play a central role in international trade with the Central African Economic and Monetary Community (CEMAC), to make efforts for correcting rates within the port sector in order to stimulate exports, and to promote the privatization of port management. In addition to this, the World Bank's Country Assistance Strategy (CAS) states that the cargo of landlocked countries is handled in Cameroon's ports and that the ports play an important role in the trade of those countries.

Douala Port is an essential port for Cameroon because it handles 95% of Cameroon's port cargo volume. The guidelines mentioned above set forth policies to promote the privatization of Douala Port and to develop the infrastructure in Douala region. Development of the transportation network in the Douala region, including the Port itself, would be a key issue. Furthermore, citing agricultural and industrial export promotion, the guidelines also state the importance of the role played by Douala Port in the export of agricultural and industrial products. Therefore, this project still has a high priority and its implementation remains relevant. Besides this project, French and German aid agencies are giving assistance in areas such as dredging of Douala Port's berths and shipping lanes, repairs to the quayside, and maintenance and repair of port facilities.

2.2 Efficiency

2.2.1 Output

Table 2 shows the planned and actual output in this project. The installation of the cranes, which formed the principal objective of the project, was carried out virtually as planned.

Table 2. Comparison of Planned and Actual Output

| Plan | Actual |
|---|---|
| (1) Procurement of equipment<br>1) 2 gantry cranes for quays<br>2) 4 transfer cranes for container yard<br>3) 8 tractors, 10 trailers<br>4) Computer system | (1) Procurement of equipment<br>Mostly as planned.<br>(Item 1) as planned. Items 2), 3) and 4) cancelled. Additions: gantry crane for quays, 1 small fire engine, 1 mobile workshop, operation and maintenance training) |
| (2) Utilities, civil engineering and construction work, etc. | (2) Utilities, civil engineering and construction work, etc.<br>Mostly as planned.<br>(There were some additional civil engineering and construction.) |
| (3) Engineering services | (3) Engineering services<br>Mostly as planned. |

Note that due to the following reasons, output was cancelled or changed:

- Although the procurement of cranes progressed virtually as planned, some changes were made to crane specifications to allow for the substantial width of container ships
- After the F/S was prepared (1984), it took some time before construction began (1999). As a result, taking into account changes to the circumstances, it was decided that the transfer cranes for the container yard, tractors, trailers, and computer equipment, would be procured separately or previous models would continue to be used. The funds originally allocated to them were re-allocated to the additional procurement of a mobile workshop vehicle for maintenance/repair, a small fire engine, operation and maintenance training, as well as civil engineering and construction work
- A garage for the procurement of the small fire engine, a guard's house and car wash facilities, and renovation of warehouses were added. Priority was placed on upgrading of basic infrastructure, including the construction of a

retaining boundary wall on the site, as well as paving yards and other areas of the site

2.2.2 Project period

The project was completed approximately 10 years later than the date originally planned, due to the following factors: procedural delays on the Cameroon side, occurrences of overdue loans, procedural delays with consultant agreements, revision of project scope owing to decrease in container handling volume arising from the worsening economic climate, repeated coordination with the World Bank (questions regarding demand forecasts, economic effects, and the operating capability of the executing agencies, conflicting views regarding the privatization of the operation and maintenance system, etc.), coordination among existing cargo handling agents, and response to anxiety about job cuts among port workers. The details of these are as shown in the attached document.

While it is true that the time required from selecting consultants to establishing the scope of the project was the main factor for the delays on the project implementation schedule, by taking 22 months as opposed to the 24 months originally planned. The actual construction work itself was completed in a period 2 months shorter than expected period, and the construction and equipment procurement were both carried out efficiently.

2.2.3 Project cost

Efforts were made to reduce the local currency budget significantly, given the background of financial difficulties owing to inflation and fluctuations in the economy, both of which occurred during the substantial delays in the project schedule. Between 1985 and 2001, the exchange rate against the yen fell to approximately one-third of its value, and it is thought that the changes made to project costs were relevant. Total project costs came in at around 90% of those in the original plan.

Table 3. Comparison of Planned and Actual Project Costs

| | Plan | Actual |
|---|---|---|
| Foreign currency | 6,000 million yen | 5,999 million yen |
| Local currency | 1,875 million CFA francs | 481 million CFA francs * |
| Total | 6,994 million yen | 6,079 million yen |
| ODA loan portion | 6,000 million yen | 5,999 million yen |

| | | |
|---|---|---|
| (Note)<br>Conversion rate | 1 CFA franc = 0.53 yen/as of January 1985 | 1 CFA franc = 0.166 yen/2001 average |

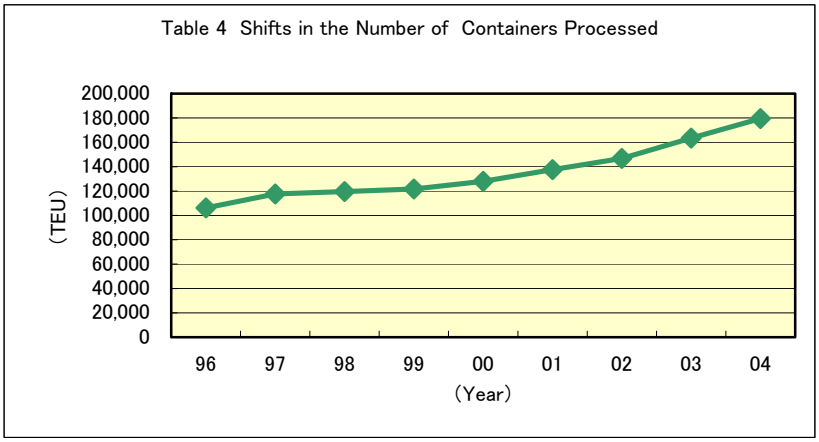
* Estimated figures have been used due to the executing agency not providing data

2.3 Effectiveness

2.3.1 Increases in container handling volume

As a result of this project, the capacity of container handling volume in Douala Port has risen from 160,000 TEU, prior to project implementation, to 262,000 TEU, while the number of containers processed per hour has been boosted from *7-8 TEU*, prior to project implementation, to a figure of *24.4 TEU*. However, the actual number of containers handled per year has not increased beyond 180,000 TEU following project implementation (2004), from 106,000 TEU prior to implementation (for reference, the number of foreign trade containers at Hokkaido's Tomakomai Port in 2004 was 180,000 TEU). Moreover, the actual rate of contenarization was only 27.6% whereas 61.7% was originally planned. Given these figures, it would be difficult to claim that the container handling capacity, boosted through this project, is being completely provided. In terms of factors behind this, the followings could be noted: the stagnation of Cameroon's economic activity; the fact that flaws in Douala Port's operational system act as factors restricting container handling capacity (for example, reduced cargo handling efficiency as a result of competitive conditions not being secured, which in turn is due to the fact that cargo handling operations are carried out by specific cargo handling agents); and the fact that delays occur on the way to carry away the cargo because roads to the port are too unpaved. In addition, due to the restrictions on large ships entering the port, stemming from the fact that Douala is a river port with shallow waters, there are cases in which cargo is transferred from large container carriers to smaller ships at neighboring ports and then transported to Douala Port. Such an environment might be one of the factors to hinder containerization in Douala Port. However, the dredging of Douala Port, which was concerned during project implementation, has been outsourced to a private contractor and is now carried out on a regular basis.

Table 4 Shifts in the Number of Containers Processed




2.3.2 Financial Internal Rate of Return (FIRR)

The FIRR at the time of appraisal was 10.2%. A re-calculation of the FIRR for the ex-post evaluation, based on the same pre-conditions as those at the time of appraisal, gave a figure of 7.7%. (Estimated figures were used for some of the calculations, due to the executing agency not providing data).

2.3.3 Economic Internal Rate of Return (EIRR)

The EIRR at the time of appraisal was 14.3%. A re-calculation for the ex-post evaluation, based on the same pre-conditions as those at the time of appraisal, a figure of 10.5% was achieved due to the savings made on reducing demurrage costs and cargo handling costs as a result of this project although container handling volume fell below the level planned. (Estimated figures were used for some of the calculations, due to the executing agency not providing data).

2.4 Impact

2.4.1 Impact on Cameroon's economic development

As for the Cameroon's real economic growth rate, although the country saw negative growth from the end of the 1980s to the first half of the 1990s, it turned to be positive from 1995, and the upgraded functions of Douala Port must have played its role as an infrastructure that sustained such economic development.

In order to simplify procedures for customs clearance and cargo handling operations at Douala Port, the Cameroon government and PAD are working on a "One-Stop Service" (note: a service designed to complete necessary operations in one procedure) to further improve the efficiency of services at the port. A report by

the International Monetary Fund (IMF) recognizes the success of the port reform on reductions in costs and cargo handling times, in addition to a significant streamlining of operations.

While the services at Douala Port are improving constantly, when it comes to transport efficiency, the surrounding roads are in need to be paved in order to achieve the desired effect..

In terms of employment creation, new jobs are being created on port maintenance work including that of neighboring ports, the preparation of cargo handling documents, and customs clearance-related duties. There are approximately 4,600 workers employed in connection with the Douala International Terminal (DIT), which operates and manages Douala Port. In spite of the fact, 150 workers, primarily stevedores, were laid off when the DIT was launched. Moreover, there have been moves to newly restructure maritime transport companies recently. (which are expected to double the number of lay-offs to 300).

Table 5. Changes in Work Efficiency etc.

| | 1996 | 2004 |
|---|---|---|
| Economic growth rate (annual) | 1986-1996:<br>-1.9% | 1996-2004:<br>4.4% |
| Average time spent berthed | 4.04 days (1995) | 3.2 days |
| Berth occupancy rate | 55.8% (1995) | 62.0% |
| Container yard average retention time | 24.1 days (1995) | 22 days (2002) |

Source: Japan Port Consultants Ltd. data, executing agency data, and Port & Cooperation in Africa, Special No.2-Nov.2002

2.4.2 Impact on neighboring landlocked countries

Douala Port is now used as a distribution stopover point for goods bound for Chad and the Central African Republic, and its upgraded facilities are contributing to the trade of these neighboring countries proceeding more smoothly.

Table 6. International Cargo Handling Volume
between landlocked countries and Douala Port（2004）

（unit:ton）

| Country | Export / Import | Conternarized cargo | total | Rate of Contenarized Cargo |
|---|---|---|---|---|
| Chad | Export | 58,959,688 | 60,182,861 | 98.0% |
| | Import | 93,347,162 | 184,260,653 | 50.7% |
| Central African Republic | Export | 53,483,417 | 174,075,955 | 30.7% |
| | Import | 42,551,622 | 78,894,644 | 53.9% |

Source: Syndicat des Acconiers - Douala

2.4.3 Social impact

In terms of regional employment, approximately 150 port workers were laid off due to changes in the cargo handling operational structure brought by the installation of the container cranes. On the other hand, new jobs mainly on clerical duties were subsequently created as a result of the development of upgraded port, and increases in the preparation of cargo handling documents and the amount of customs clearance-related duties. Although there remains dissatisfaction among port workers over the severance pay they were given, the layoff of port workers caused by the introduction of the cranes at the port has not become a particularly social problem.

2.4.4 Environmental impact

Regarding the environmental aspect of the project, although there is a need to ensure shipping lanes for vessels entering and leaving the port by dredging the constant influx of sand resulting from Douala being a river port, there have not been any environmental problems indicated in particular and that includes related operations.

2.5 Sustainability

2.5.1 Executing agency

2.5.1.1 Technical capacity

Although there do not seem to be any particular problems to speak of, because of the executing agency not cooperating with the evaluation, it was not possible to obtain details of the maintenance and repair structure, including the situation regarding training of technical staff or manuals and so forth. This in turn meant that it was not possible to check details of the technical aspects of the operation and maintenance structure. According to a project plan drawn up by the DIT, to

which the executing agency has commissioned operation and maintenance of the port, the company has a total staff of 211, of which 100 make up on-the-ground workers, and based around a core of 10 management personnel. The plan sets out that maintenance and repair of the cranes is to be carried out under a continuous two-shift system.

In addition to giving six months of crane operation training to eight PAD employees, both locally and in Japan in August 2004. DIT, which was originally responsible for port operations, has also sent employees for training at the port of Durban in South Africa.

#### 2.5.1.2 Structure

Operation and management of the port are carried out by DIT under a commitment agreement given by PAD. Although interviews with users of Douala Port did not reveal any particular problems with operational capacity on-site, there are however problems in terms of organizational operations, such as PAD not responding to JBIC's requests for various kinds of data in the course of its evaluation duties. Furthermore, in addition to a trial which took place between DIT and port users over port usage charges (still pending as of May 2006),[1] there were reports in the media that in February 2006, the former Director General of PAD had been arrested on suspicion of corruption, and that a number of PAD executives were being investigated. Concerns still remain regarding the matter of structure if improvements in these areas are not seen in the future.

In the recommendations regarding operation and maintenance made by the consultants hired through the ODA loan, it states that operations need to be carried out by a number of companies in order to improve the services at Douala Port, which only has one container terminal. However, services are not adequately provided due to the fact that operations have been entrusted to one single company.

#### 2.5.1.3 Financial status

Due to the non-cooperation of the executing agency, it was not possible to obtain official data regarding the current status of management, including financial data. According to data obtained unofficially, the PAD receives annual revenue of approximately 3.8 billion CFA francs from the DIT, including leasing fees for container-related facilities, and uses part of these funds to cover the operational

[1] According to DIT, the company has filed a lawsuit against port users for non-payment of usage charges, and they claim the case is still pending. The users, on the other hand, claim that DIT's charges system is unclear, and are withholding payment of usage charges.

costs of its supervising agency, the National Port Authority (APN).

According to the DIT's charter and project plan, the company expects to post a surplus for FY2005 onwards, the year they began operations[2]. (This includes tax, leasing fees for port facilities and other usage charges paid to the PAD).

2.5.2 Operation and maintenance

Out of the total workforce of 24 on-the-ground workers, six were assigned to cover maintenance and repairs (doubling-up of duties), and a two-shift system was in place to respond to deal with day-to-day operation and maintenance. Although some rust was seen on the crane paintwork, maintenance and repair is done using the mobile workshop during on-site inspection too, and no particular problems were observed. However, when the time comes for crane parts to be replaced, since parts have to be ordered from manufacturers overseas, it takes about three months before they arrive. It means that there is a possibility that operations would have to be shut down because of its inability to respond quickly to the situation.

Regarding the dredging of shipping lanes, it has been outsourced to a private contractor and is carried out on a regular basis, and in addition to that, French and German aid agencies provide assistance with upgrading of shipping lanes, as well as maintenance and repair of quays and so forth, there were no problems in particular.

## 3. Feedback

### *3.1 Lessons learned*

Although JBIC was aware of the importance of Douala Port's operation and maintenance system and prepared recommendations through its consultancy services of this project, it is thought that the decline in the project's sustainability has been brought about by JBIC's insufficiency to exert its influence on the establishment of an operation and maintenance system following completion of the project. The low organizational management capacity (such as sub-contracting cargo handling to specific cargo handling agents, etc.) of DIT, the private company consigned by PAD, is adversely affecting cargo handling efficiency, thereby diminishing revenue. It is thought that more consideration is needed regarding how far JBIC should set conditions to the operation and maintenance system set up

[2] According to a statement from feedback seminar on September 2006, DIT made 8.574 billion CFA francs investment for various port equipments such as forklifts, tracks, trailers, office supplies, and computers.

after projects are completed and have a say to borrowers and executing agencies, and also regarding the way of ex-post monitoring.

### *3.2 Recommendations*

For the Cameroon government and executing agency

It is extremely regrettable that in this evaluation, it was not possible to have the cooperation from the executing agency with data provision and so forth. The executing agency ought to raise its awareness for importance of evaluation process.

It should be noted that due to the poor state of the roads surrounding Douala Port's container yard, traffic jams frequently occur, and cargo transport before and after handling does not proceed smoothly. Therefore, the roads upgrade should be promoted with the cooperation from the regional government.

Comparison of Planned and Actual Scope

| Item | Plan | Actual |
|---|---|---|
| Output | (1) Procurement of equipment<br>1) 2 gantry cranes for quays<br>2) 4 transfer cranes for container yard<br>3) 8 tractors, 10 trailers<br>4) Computer system<br><br>(2) Utilities, civil engineering and construction work, etc.<br><br>(3) Engineering services | (1) Procurement of equipment<br>Mostly as planned.<br>(Item 1) as planned. Items 2), 3) and 4) cancelled. Additions: gantry crane for quays, 1 small fire engine, 1 mobile workshop, operation and maintenance training)<br><br>(2) Utilities, civil engineering and construction work, etc.<br>Mostly as planned.<br>(There were some additional civil engineering and construction.)<br><br>(3) Engineering services<br>Mostly as planned. |
| Project Period | May 1987 – December 1990<br>(44 months) | July 1990 – July 2001<br>( 133 months) |
| Project Costs<br>-Foreign currency<br>-Local currency<br>-Total<br>-ODA loan portion<br>-Conversion rate | <br>6,000 million yen<br>1,875 million CFA francs<br>6,994 million yen<br>6,000 million yen<br>1 CFA franc = 0.53 yen/<br>as of January 1985 | <br>5,999 million yen<br>481 million CFA francs *<br>6,079 million yen<br>5,999 million yen<br>1 CFA franc = 0.166 yen/<br>2001 average |

* Estimated figures have been used, due to the executing agency not providing data

Additional materials: Timeline of plan progress