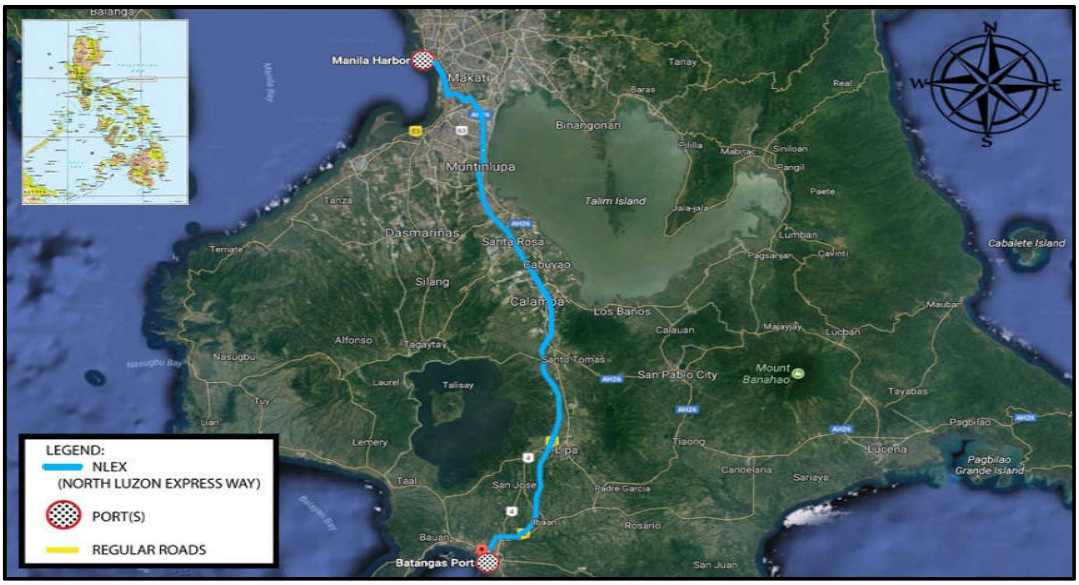
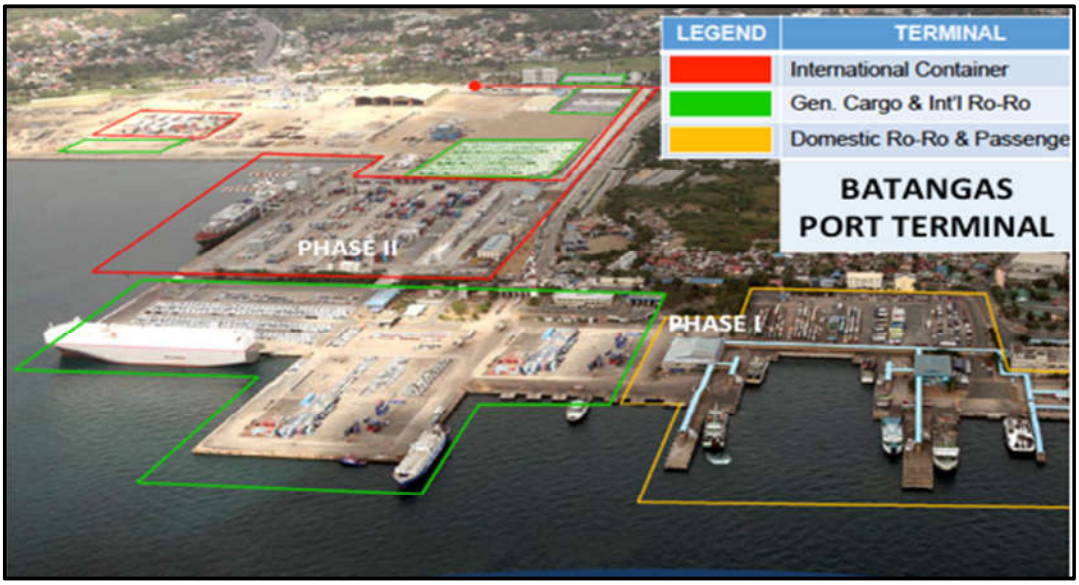
EXECUTIVE SUMMARY

BACKGROUND AND OBJECTIVE OF THE STUDY

The Port of Batangas is one of the major ports in the Calabarzon Region and the country. The port is 110 kilometers south of Metro Manila and located in the northeastern part of Batangas Bay in Barangay Sta. Clara, Batangas City. The port contributes to enhancing logistics movement of which it is a part of the strategic logistics hub of the Subic-Clark-Manila-Batangas corridor. Batangas Port serves as an alternate to the Port of Manila.



The Batangas Port has two facilities, the rehabilitated Phase I which caters to passengers and cargo and the Phase II, which caters to international container cargoes. The Batangas Port Development Project Phase II (also as known as BCT) was primarily intended to handle the expected excess container cargoes from the Port of Manila with the following completed facilities: i) container berth; ii) domestic berth; iii) boarding bridge at Phase I; iv) terminal buildings; v) flyover; and vi) other items such as cargo handling machinery and total port security system.



The project also included livelihood projects for the affected residents. The project had a total investment cost of US$266 million. It was funded by the Japan Bank for International Cooperation Agency (JICA) and the Government of the Philippines through the Philippine Ports Authority. The JICA conducted an ex-post evaluation study of the project in 2012 and rated the project as unsatisfactory.

The NEDA Region IV-A engaged the services of TCI to conduct an impact evaluation of the completed Batangas Port Development Phase II Project in order to assess the attainment of development goals of the project, establish whether the effects can be attributed to the concerned intervention, and identify the lessons learned that can be applied in future projects.

As stated in the Terms of Reference (TOR), the purpose of this study is to assess the gains and benefits of the Batangas Port Development Phase II Project in relation to the policy of shifting container cargoes from the Port of Manila. The project impacts to be measured include the following:

- Assess if there was a decrease in port congestion in Manila International Container Port as an effect of the transfer of some containerized cargo in Batangas Port;
- Measure performance of the Batangas Port in handling foreign cargo in terms of capacity and accessibility;
- Measure the growth of heavy industries in the Batangas City-Bauan area and other industries in the Province of Batangas;
- Measure the growth in the local and regional economy; and

- Identify and assess the environmental and social impacts of the project as well as other benefits and gains (both planned and unplanned) and impact (intended and unintended) of the project to the beneficiaries.

Although not explicitly required in the Terms of Reference, the Consultant was also requested to recalculate the Economic Internal Rate of Return (EIRR) of the Batangas Port Phase II Project.

METHODOLOGY

The Consultant formulated the evaluation design framework, approach and methodology, and data analysis in order to attain the study's objectives. The study covers the assessment of statistical data and other relevant details on international container traffic for Batangas Port Phase II and Manila Ports (MICT and MSH); the attributes of Port facilities; the economy of Batangas Port hinterland giving emphasis on the industrial and manufacturing sectors; and the environmental and social impacts of the Port Project.

Four tools were used in the collection of needed data and information, namely: desk review of relevant documents and reports; surveys of relocated households and other stakeholders; focus group discussions (FGDs), and key informant interviews (KIIs).

The household survey was conducted among the families displaced by the construction of Batangas Port Phase II that were relocated to Brgy. Balete in the City of Batangas. The study also used focus group discussion and survey approach to determine the factors that affect the decision of shippers, freight forwarders, logistics services providers, and truckers on their choice of port and the satisfaction ratings of their chosen port.

Interviews were also conducted among government agencies as well as the Asian Terminal Inc. (ATI) that have first-hand knowledge of the planning, implementation and operation of Batangas Port Phase II. The government agencies included the PPA PMO of Batangas and PPA Manila Head Office, the Manila South Port, officials of the Local Government of Batangas City and the Bureau of Custom (BOC). Interviews were also conducted among relevant personnel of the Department of Trade and Industry as well as organizations that use the Batangas Port. To ensure comprehensive coverage of relevant stakeholders, additional interviews were conducted among nearby establishments/industries, custom brokers and truckers in line with the RPMC and SCID recommendations.

In addition to qualitative information and opinion on the Port Project, data and statistics such as traffic volumes, the number of industries located in the region, and other relevant information were obtained from various agencies.

FINDINGS

The Batangas Port has a total land area of 120 hectares including the basins of which 70 hectares have been utilized for port development and 50 hectares are still available for future development. The existing facilities at Batangas Port Phase II consist of 2 berths, container terminal berth/wharf with the length of 450 lineal meters and depth of (-)15 m; container yard with total area of 12 hectares with capacity of 350,000 TEUs per annum; basin area and access channel of 32 hectares with a depth of (-) 13m; access road and 6-lane fly-over; cargo handling equipment; ISPS port security system; navigational aids for navigational safety; and complete utilities and buildings.

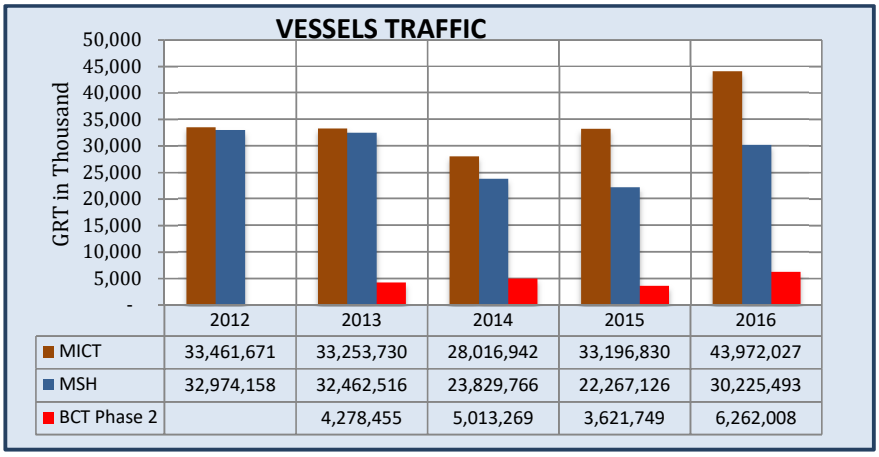
The port operation was awarded to ATI on 25 March 2010 for a period of 25 years. ATI plans to procure additional cargo handling equipment in 2018 in order to improve the port's efficiency and capacity. It aims to increase the annual capacity from 300,000 TEUs to as much as 600,000 TEUs in year 2025. There is an on-going construction of container berth extension to be completed in the 3rd quarter of 2018 in order to accommodate more and bigger vessels; and yard expansion to be completed in the 1st quarter of 2019.

There are also port expansion projects being undertaken by ATI at Batangas Port Phase I such as the Multilevel CBU Storage Facility to accommodate imported cars. Batangas Port is the biggest car carrier port in the Philippines accounting for more than 50% of cars imported by Philippine distributors and manufacturers. Another is the Batangas Passenger Terminal Modernization Project which will increase seating capacity from 2,000 to 5,000 passengers and making it comparable to the fast craft terminal in Hongkong and Macau.

With regard to the performance of the Batangas and Manila ports in relation to the objectives of the current study, the utilization and capacity of the said ports were assessed in terms of ports vessel and cargo traffic, yard utilization, berth occupancy, waiting time and others. Significant changes in port utilization were obtained (both Manila Ports and BCT) especially during the Manila Truck Ban in 2014, which resulted in cargo traffic congestion at the Port of Manila and prompted diversion of cargoes to BCT and Subic Port.

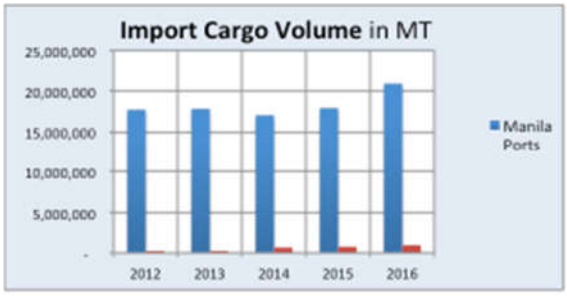
a) Vessels traffic among MICT, MSH and BCT in terms of GRT

   Vessel traffic in Manila Ports (MICT & MSH) slightly decreased in 2013 and further dropped to as much as (-)25% in 2014 while in BCT vessel traffic increased to 17% in the same year.



b) Import/ Export Cargo volume of Manila Port and BCT in terms of metric tons

The import/export volume in Manila Port decreased in year 2014, however, it slowly recovered in the succeeding years. At BCT, cargo volume in 2014 increased to about 700% and steadily increased to an average of 14% from 2015 to 2017.



Year	BCT			Manila Ports		
	Import	Export	Total	Import	Export	Total
2012	47,852	8,491	56,343	17,710,574	6,202,669	23,913,243
2013	80,734	16,378	97,112	17,831,574	6,553,296	24,384,870
2014	654,528	127,662	782,190	17,035,984	6,303,661	23,339,645
2015	749,036	224,618	973,654	17,923,601	5,905,642	23,829,243
2016	949,854	235,656	1,185,510	20,903,758	5,726,815	26,630,573

c) Yard Utilization

In terms of yard utilization, the Manila Ports have already surpassed the ideal level of occupancy from 70% to 80%, while BCT yard utilization is only about 50% of its available area.

Year	MICT		BCT	
	Capacity in TEU	%	Capacity in TEU	%
	2,173,987.50	87	157,318.75	45
2017	2,275,640.25	91	197,534.00	56

d) Berth Occupancy Rate and Average Waiting Time

Based on analysis of data gathered, berthing occupancy rate at MICT is high while the annual average waiting time is 1 day except in 2014 (6 days) when port congestion occurred due to truck ban. On the other hand, BCT berthing occupancy rate is still low. Thus, It can cater to more vessels calling at the port.

Year	Average Waiting Time				Berthing Occ. Rate	
	MICT		BCT		MICT	BCT
	(hrs)	(days)	(hrs)	(days)		
2012	-	-	-	-	112%	-
2013	19.56	1	62.27	3	100%	9.68%
2014	135.13	6	64.49	3	136%	31.16%
2016	19.62	1	92.87	4	132%	39.90%

A. Assessment of port congestion in MICT as effect of cargo transfer to Batangas Port

The MICT is the busiest and most important shipping gateway for international trade in the country. It is located about 110 kilometers from Batangas Port and links Metro Manila to areas in Western Visayas, Mindanao and other countries.

The truck ban imposed by the City of Manila on 4 Feb 2014 limited the operating hours of container trucks plying the city streets. Manila Mayor Joseph Estrada subsequently lifted this ban on 13 Sep 2014. Then on 16 Sep 2014, President Benigno Aquino issued EO 172 declaring the ports of Batangas and Subic as extensions of Manila ports during times when there are port congestion and other emergency cases to be determined by the PPA.

The Manila Truck Ban in 2014 resulted in cargo traffic congestion at the Port of Manila. The cargo traffic decreased to 4.37% and correspondingly the vessel traffic declined to 25% in 2014. The assessment of collected data showed that: (a) the average ship's waiting time at MICT increased from only one day in 2012 and 2013 to 6 days in 2014; and (b) the average ship's waiting time returned to the usual one day in 2015 and 2016 after the Manila Truck Ban was lifted. While there was a decrease in cargo and vessel traffic at the MICT, at the BCT the cargo volume jumped 705% and vessel traffic by 17%.

In terms of yard utilization, the generally accepted ideal level ranges from 70% to 80%. This level has already been achieved, in fact already exceeded at MICT, with yard utilization of 87% in 2016 and 91% in 2017. This implies a need to expand the cargo handling facilities or operate them at higher efficiencies.

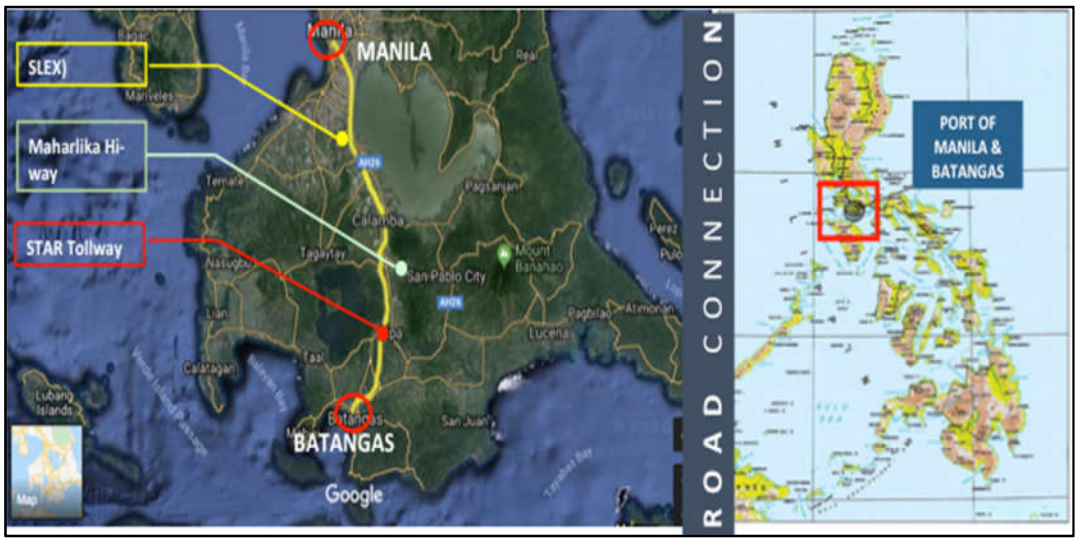
Year	BCT		MANILA PORTS	
	Volume	%	Volume	%
2012	56,343		23,913,243.00	
2013	97,112	72%	24,384,870.00	1.97%
2014	782,190	705%	23,339,645.00	-4.37%
2015	973,654	24%	23,829,242.54	2.01%
2016	1,185,510	22%	26,630,573.17	12.00%

Based on interviews with PPA and ATI, there is limited scope for shifting cargoes to the Batangas Port. The 2014 traffic congestion was addressed not only by shifting some cargoes to the Batangas Port but also by implementing the Truck Appointment and Booking System (TABS) and imposing high storage fees at the port. Congestion is expected to further decrease with the Manila Ports continuing to improve its cargo handling facilities. Accordingly, the average yard utilization of the two international ports, namely, MICT and MSH, has eased despite the temporary shutdown of the BOC's Green Lane operations and subjecting majority of imported cargoes to inspection.

B. Performance of Batangas Port in handling foreign cargo in terms of Capacity and Accessibility

The Batangas Port is connected to Manila and the rest of Calabarzon with good and well-paved roads of 4 to 6 lanes, including the South Luzon Expressway (SLEX) and the Southern Arterial Road (STAR Tollway).

The distance from Batangas to Manila is about 110 kilometers. Travel time is normally 1.5 to 2 hours but may even take up to 3.5 hours if there is traffic congestion in Metro Manila. The use of the STAR tollway is the fastest way to the Batangas Port. In the future, access to/from the Batangas Port will further improve once the proposed SLEX (TR-4) that will extend the South Luzon Expressway from Sto. Tomas, Batangas to Lucena City/Tayabas City in Quezon is fully completed.

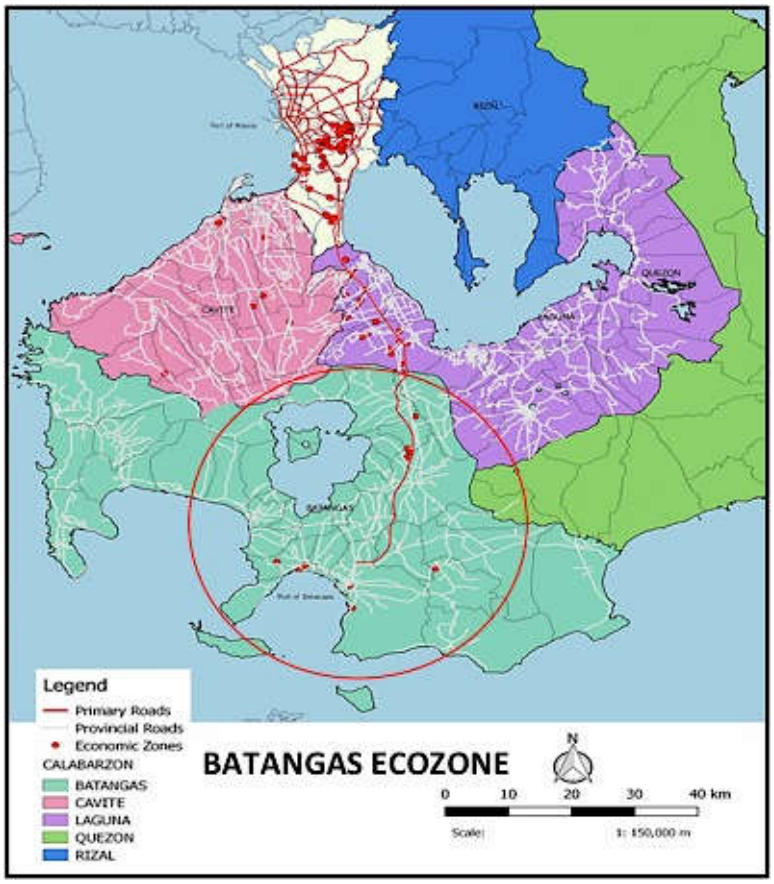


With regard to distances and travel time to business parks and eco-zones from the Manila Port and the Batangas Port, the locators in the towns of Malvar and Sto. Tomas have shorter distance and travel time to the Batangas Port. Business and industrial locators in these areas prefer to use the Batangas Port because they experience much less delays in their shipments as a result of, among others, less traffic congestion going to/from the Batangas Port as compared to the Manila Port. Similarly, a number of locators in business parks in Laguna, though of longer distance from the Batangas Port, experience shorter travel times compared to Manila Port due to traffic congestion in Metro Manila.

Distance and Travel Time to/from BCT and Manila

Location of Business Parks	Distance From/To Manila	Distance From/To BCT	Difference	Travel Time	
				From Mla	From BCT
				(min)	(min)
Cabuyao	45	63	(18)	160	80
Calamba	53	56	(3)	180	70
Canlubang	49	59	(10)	165	70
Malvar	71	37	34	200	45
Silangan	47	61	(14)	160	70
Sto Tomas	61	47	14	190	60
Sta. Rosa	40	68	(28)	150	90

Accessibility of the Batangas Port to economic zones is presented in the figure below**.** Among the biggest economic zone in Batangas is the LIMA Technology Center in Malvar, Batangas with a total area of almost 430 hectares.



There are about 25 major clients of BCT in the ecozone, including: Nestle Philippines Inc., Yamaha Motor Philippines Inc., Toyota Motor Philippines, Epson Precision Phils, Inc., Honda Philippines Inc., JG Summit Petrochemical Corp. Coca Cola Femsa Philippines Inc., Emperador Distillers Inc., Suzuki Philippines Incorporated, Canon Business Machine Phils. Inc., Alaska Milk Corporation, The Purefoods Hormel Company Inc., Honda Cars Philippines Inc., Stepan Philippines Quarternaries Inc., Eaton Industries Philippines Ltd, Canon Business Machines Philippines, All Asian Countertrade Inc., Golden Arches Development Corp, Arvin International Marketing Inc., Monde Nissin Corporation; San Miguel Foods Inc., and Mariwasa Siam Ceramics Inc.

Capacity and Utilization of Batangas Container Port

In selecting the port of entry, the port users generally consider several factors such as the quality of port facilities and equipment; navigational conditions; quality of administration and labor; availability of EDI; terminal security; and operational production. The BCT is well-equipped with these factors.

The cargo volume abruptly increased to 783% in 2014 during the imposition of truck ban Manila and steadily increased to 18-35% in 2015-2017 driven by strong preference for BCT's services from the CALABARZON market. The service efficiency in moving of containers from ship to shore ranges from 25- 31 GMPH in 2015-2017 (ave. GMPH at Manila ports = +25 GMP). From only one call during its startup in 2010, the BCT now has seven (7) regular vessel calls a week, directly connecting CALABARZON customers to major global hubs.

The berth occupancy of BCT in 2013 was a mere 9.68%. This increased abruptly to 31% in 2014 and continued to increase reaching a level of almost 37-38%. While these are significant increases, these are, however, is still below UNCTAD's desired optimum berthing rates of 50% to 70%.

Yard utilization is the ratio of the number of storage slots (number of containers on hand) to the number of available slots (terminal capacity). The maximum storage capacity for BCT is about 300,000 TEUs per annum. Based on the statistics provided by PPA Batangas, the average yard utilization is 44% in 2015 and 37% in 2016.

Based on the locators' views on BCT's handling of foreign cargo and its accessibility, 70% to 80% of respondents stated that their cargoes pass through BCT and 20% through the Manila Port. The respondents preferred to use BCT because of fewer delays in cargoes shipments, shorter truck turnaround time, less waiting time with regard to berthing and yard space, lower usage costs, and efficient BOC processes and procedures for shipment. The respondents also cited some disadvantages such as less frequent ship calls, longer travel time of vessel due to many calls in other ports, and higher freight rates imposed due to minimal backload.

Planned and Unplanned Benefits and Impact of the BCT to the Beneficiaries

The implementation of the Phase II Development of Batangas Port was expected to result in:

- reduction in vessels' waiting time due to the increase in port capacity,
- net savings in land transport cost;
- net employment generation during construction and operation,
- potential increase in cargo handling productivity, and
- potential increase in industrial activity at the hinterland of Batangas Port

However, only the first of the above benefits was quantified by the Feasibility Study.

The re-evaluation also recognized the above as benefits generated by the operation of the BCT. But in addition, this study considered and quantified the reduction in CO_2 emissions from trucks due to shorter trips as one of the benefits generated by the operation of BCT.

The BCT was also utilized for handling non-containerized cargoes during the early years of its operation. In 2012-2013 when the volume of containerized cargoes was still low, the BCT was utilized for completely-built-car units (CBUs). But as the volume of container cargoes increased, these CBUs were transferred to Phase I.

Another group that benefited from the implementation of the project were the families then residing within the vicinity of the project site. These families were relocated to Barangay Balete and were planned to eventually be awarded the titles to the lots assigned to them. Basic utilities such as power and electricity and water supply are made available as well as basic services such as health and education for children. However, the results of surveys conducted among these families indicate that there are still existing issues with respect to accessibility to work places and opportunities on sources of livelihood.

D. BCT Contribution to the Growth in the Local and Regional Economy

In the Regional Development Plan (RDP) for period 1993 – 1998, it was envisioned that the CALABARZON would be transformed into a major industrial area of the country. As shown in the table below, the annual GRDP of the Region (in 1985 prices) for the period 2002 – 2008 increased by an annual rate of 3.7 %, which was much lower than the growth of the country's GDP at 5.4 %.

Particular	Annual Growth of GDP	Contribution to GDP	Particular	Annual Growth of GDP	Contribution to GDP
Phiilippines			Calabarzon		
2002-2008	5.40%		2002-2008	3.70%	12.40%
2009-2016	6.30%		2009-2016	6.10%	16.80%

During the period 2009 – 2016, the economy of the Region performed better (than the previous period) growing at an annual rate of 6.1% at almost equal pace with the economy of the country as a whole with GDP an annual rate 6.3%. The Region contributed about 17% to country's GDP during this same period.

The industry sector became the biggest contributor to the Region's GRDP during the period contributing more than 60%, compared to its contribution the period before (2002 and 2005), contributing 42% to the GRDP. The manufacturing industry contributed more than 85% to the output of the industry sector. (The other sub-sectors were mining and quarrying, construction, electricity, gas and water supply).

This period 2009 – 2016 then shows the start of industrialization for CALABARZON as envisioned by the RDP 1993 – 1998. For the Province of Batangas, including Batangas City, as of year 2017, there were ten (10) manufacturing economic zones and 8 industrial parks.

During this start of the industrialization process and onwards, the operation of BCT provided an alternative port to industries located within the Province of Batangas and Laguna offering port services which are more accessible in terms of distance and travel times (than the Manila Ports). Further, in order to encourage industries to use BCT, the Bureau of Customs, District Office and the ATI partnered to enhance the efficiency of their services by reducing the length of service times thereby assuring the prompt delivery of goods to their destinations. Based on discussions with BOC, the assessment of imports/exports is completed within a period of one day from entry. On the part of ATI, service efficiency in moving of containers from ship to shore ranges from 25- 31 GMPH in 2015-2017 (compared to the average GMPH at the Manila Ports which is +25 GMP).

While it is difficult to describe in quantifiable or statistical terms the contribution of BCT to the industrialization of the Region, it is evident that the operation of BCT has been made available to provide support to the needs of the growing industrial sector of the Region particularly of the Provinces of Batangas and Laguna by providing efficient port services.

E. Environmental and Social Impacts of BCT

Environmental Impact

An Environmental Compliance Certificate (ECC) No. 9102-050-215C by the Environmental Management Bureau of the Department of Environment and Natural Resources (EMB-DENR) has been issued for Batangas Port in accordance with the Revised Procedural Manual for DENR Administrative Order No. 30 Series of 2003 (DAO 03-30). Accordingly, ATI Batangas, Inc. and the Philippine Ports Authority regularly submit a semi-annual ECC Compliance Monitoring Report (ECC-CMR). The regular monitoring imposed by the ECC adequately addresses the land, air and water impacts of the operation of the Batangas Port.

Based on the monitoring report of Batangas Port, it shows that for the period January to June 2017, all conditions in the ECC and the Environmental Management Program (EMP) are complied. The adverse environmental impacts of port operations are minimal, and the Batangas Container Port continues to comply with its ECC and EMP conditions and requirements.

Social Impact

With regard to social impacts of the Project, majority of the respondents said that with the project, the relocation site offers better facilities for water and electricity. About 50% of respondents said that access and distance to workplaces have become nearer to their area of residence, 33% said their monthly incomes have increased, 33% said same as before and 19% said their incomes have decreased. This prompted some of the families to go back to near the port area due to the lack of suitable livelihood activities at the relocation site.

On the over-all impact perceptions of relocated families at Brgy Balete, majority said that the road or traffic conditions are better than before, but water and air qualities have deteriorated, and security of the area has worsened; and about 43% felt that the socio-economic conditions have worsened, and another 43% considered the situation to have not changed, and that there were little or no livelihood opportunities.

The affected families raised various issues and concerns such as: delays in the issuance of Certificate of Award for lots; lack of livelihood opportunities; distance of relocation site from places of work; only a few families able to avail of trainings to enhance skills for employment; promises to hire workers by the port operator not realized; and lack of seed capital to engage in retail businesses.

On the other hand, the port operator claims that it conducts regular outreach activities such as medical missions and feeding programs to families in the relocation site; gives donations of small appliances to residents; and provides training to new hires to provide them the required skills to perform their assigned duties and responsibilities.

ECONOMIC AND FINANCIAL

The economic re-evaluation was undertaken given that the project is already operational. The re-evaluation considers the actual cost of implementation of the project and the period of implementation; and projected port traffic. Forecasting the operating and maintenance cost are based on actual annual costs while forecasting the future traffic volumes of BCT based on historical traffic.

Benefits generated by the project are reduction in vessel waiting time due to increase in port capacity (quantified by the Feasibility Study, the cost of waiting is USD 1000); reduction in trucking costs: reduction in distance and travel time and average fuel consumption of 2.5 liters per km.; reduction In CO_2 emissions due to shorter trip lengths of trucks: fully-loaded trucks emit about 0.033 metric tons CO_2 per 20 km travelled and value of CO_2 emissions = USD 220 per metric ton.

The re-calculated EIRR is 9.2%, which is much lower than the 22% predicted by the Feasibility Study.

CONCLUSIONS

Based on the findings of this study, the Batangas Port Phase II Project has been rated "satisfactory" using the criteria of relevance, effectiveness (impact), efficiency and sustainability of the project. It is concluded that BCT was and is still fully able to support the industrialization of the Region.

The other conclusions are summarized as follows:

- There are expansion plans by ATI to bring the capacity of BCT to over 450,000 or even up to 600,000 TEUs.

- Manila Ports remain attractive and a preferred destination for international container cargoes due to: availability of service providers, forwarders and shipping lines; reliable shipping schedule and acceptable cargo acceptance/release; less cost and cheaper rates; and closer location of port to consignees, importers and warehouses.

- Cargo volumes picked up in 2014 during the truck ban in Manila, thus, there was a shift in cargoes from the Manila Ports to the BCT as a result of the cargo traffic congestion at the Manila Ports. It is projected that there would be more cargo shifting from Manila to BCT in the near future.

- There is increasing usage of BCT by industries in Batangas and Laguna. However, its use by heavy industries in the area is not very significant since most of these heavy industries have their own ports and majority of their shipments are made in bulk rather than in containers.

- There is prevailing dissatisfaction from the affected and relocated families resulting primarily from the absence of work opportunities.

- The recalculated EIRR is 9.3%, which is below the EIRR of 22.9 % as estimated during the planning stage but is higher than the EIRR of (-) 8.1% as estimated by the JICA Impact Assessment Report.

- It will take some time for industries to shift from the Manila Ports to BCT, hence the delayed realization of throughput at the BCT. Based on consultations with ATI, industries have existing contracts with shipping lines and forwarders and thus they

cannot not shift immediately from Manila Ports to BCT. However, it is noted that transfer to BCT has started and more are expected in the future.

- BCT was also utilized for handling non-containerized cargoes (particularly the CBUs) during the time when the volume of containerized cargoes was still low. However, as the volume of container cargoes increased, the handling of CBUs was transferred to Phase I.

- The economy of CALABARZON has grown in terms of economic output (GRDP) particularly from the period 2002 - 2008 to the period 2009 – 2016. The manufacturing sector has been the main contributor to this output. The region has grown as a major industrial zone but this growth has been largely limited to industries catering for the domestic market. The growth of the export industry has been sluggish compared to those catering for the domestic market. Nevertheless, the BCT is ready to support further industrialization of the Region.

- The adverse environmental impacts of port operations are minimal and the Batangas Container Port continues to comply with its ECC and EMP conditions and requirements.

LESSONS LEARNED

- In the social aspect, an important lesson learned is the need to properly plan and implement the relocation of families affected by the project giving due importance and priority to maintaining their sources of livelihood, if possible, or providing them acceptable alternative sources of livelihood. It is evident from the findings of this study that providing the affected families with decent housing and amenities such as running water and electricity is not sufficient. Even more important is providing them acceptable sources of livelihood through, among others, keeping them close to their usual places of work (e.g., close to the sea if fishing is their source of livelihood) or providing them with appropriate training to enable them to find alternative employment or sources of income.

- In planning for major port projects and selecting their location, an important lesson learned is to have a parallel or simultaneous plan to develop the port's hinterland to ensure that there will be sufficient demand for the services of the proposed port. Relying on the possibility of cargoes being shifted from other existing ports to the proposed new port may not be a sufficient or appropriate strategy to make the proposed port project economically or financially feasible. Developing its own hinterland (e.g., establishment of industrial parks and location of manufacturing

facilities, commercial establishments, and/or agro-industrial industries), which will use the port facilities for import and export of parts, goods and products, should accompany the development of new major ports.

- In preparing the Terms of Reference of particular studies, it would be useful to carefully consider the number of manpower and the duration needed to effectively undertake the Study taking into consideration the response time, preparation and coordination with relevant agencies.

RECOMMENDATIONS

- Expansion/improvement of BCT's port and cargo handling facilities should be implemented in the future to meet the increasing usage demand of BCT by industries in Batangas and Laguna.

- Likewise, road and bridges, and other related infrastructures/facilities should also be improved/expanded to address the worsening congestion in the area.

- Encourage the port operator (ATI and PPA) to implement a continuing program to provide appropriate employment or source of income to the affected families.

- Extend further assistance to relocated families. There should be continuous monitoring of capacities of affected families to engage in income generating activities. If qualified, members of affected families should be given priority to jobs within the port; and continuing assistance such as training for skills most suitable or needed by the port as well as the commercial and industrial establishments in the area should be provided. This could form part of the port operator's corporate social responsibility program.

- Conduct a study to determine appropriate measures to further enhance the volume of cargoes handled by the BCT, in particular, to increase the volume of exports from its hinterland in order to reduce the number of container return empties. While the BCT's share of total imports increased from 3.70% in 2014 to 4.35% in 2016, the exports increased only from 1.99% in 2014 to 3.95% in 2016. One area that may be looked into, among many others, is the possibility of increasing exports of fresh, semi-processed and/or processed agricultural products from the area.

- Accelerate the implementation of PNR's plan to develop a freight train system that will improve the accessibility of the Batangas Port as well as the Port of Manila to the Southern Tagalog and Bicol regions.

- PPA and ATI should intensify the promotion of the BCT through appropriate IEC activities and providing transparency in and easy access to relevant port data and services including, among others, 24-hour web-based integrated truck dispatching, appointment, and booking system to improve the logistics chain.

- Enhance the attractiveness and competitiveness of the Batangas Container Terminal by implementing various appropriate measures including, but not limited to, increasing available well-trained personnel, expanding cargo handling, equipment, berth, and container yard capacity, improving logistics-, port-, and customs-related services and processes, and facilitating the growth of freight forwarders, consolidators, brokers, truckers, and other logistics services providers in the area.

- Finally, discontinue the policy of shifting cargoes from the Port of Manila to the Batangas Container Port (if indeed there was a formal policy) and promote instead a policy of open competition among the concerned port operators on the basis of efficiency, cost-effectiveness and reliability of service alongside a policy to enhance the volume of imports/exports from within the hinterland of the Batangas Container Terminal through, among others, promoting growth and relocation of industries and commercial establishments in the area.