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# ASSESSMENT OF IMPEDIMENTS TO URBAN-RURAL CONNECTIVITY IN CDI CITIES

Strengthening Urban Resilience for Growth with  
Equity (SURGE) Project

CONTRACT NO. AID-492-H-15-00001

**JANUARY 27, 2017**

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## Acronyms

ARMM	Autonomous Region in Muslim Mindanao
ASUD	Achieving Sustainable Urban Development
AusAID	Australian Agency for International Development
BAHRR	Bohol Association of Hotels, Resorts, and Restaurants
BASULTA	Basilan, Sulu, Tawi-Tawi
BIMP-EAGA	Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area
BIR	Bureau of Internal Revenue
BUB	Bottom-up budgeting
CAAP	Civil Aviation Authority of the Philippines
CAGR	Compounded annual growth rate
CALABARZON	Cavite, Laguna, Batangas, Rizal, Quezon
CBD	Central business district
CBU	Completely built units
CCTV	Closed-circuit television
CDI	Cities Development Initiative
CIC	Cagayan-Iligan corridor
CIIP	Comprehensive Infrastructure Investment Plan
CLUP	Comprehensive Land Use Plan
CRID	Coordinating Roads for Investment and Development
DA	Department of Agriculture
DBM	Department of Budget and Management
DENR	Department of Environment and Natural Resources
DICT	Department of Information and Communication Technology
DILG	Department of the Interior and Local Government
DND	Department of National Defense
DOT	Department of Tourism
DOTC	Department of Transportation and Communications
DOTr	Department of Transportation
DPWH	Department of Public Works and Highways
DTI	Department of Trade and Industry
ECC	Environmental Clearance Certificate
GIFT	Guimaras-Iloilo Ferry Terminal
IBC	Iloilo Business Club
ICAO	International Civil Aviation Organization
ICC	Investment Coordination Committee
ICMA	International City/County Management Association
INVEST	Investment Enabling Environment
JICA	Japan International Cooperation Agency
KOICA	Korean International Cooperation Agency
LGU	Local government unit
LTFRB	Land Transportation Franchising and Regulatory Board
LTO	Land Transportation Office
MARINA	Maritime Industry Authority
MCT	Mindanao Container Terminal
MICE	Meetings, incentives, conventions, exhibitions/events
MICTSI	Mindanao International Container Terminal Services, Incorporated
MIGEDC	Metro Iloilo-Guimaras Economic Development Council
MIMAROPA	Mindoro (Oriental and Occidental), Marinduque, Romblon, Palawan
MinDA	Mindanao Development Authority

MMT	Multi-Partite Monitoring Team
MTPIP	Medium-Term Public Investment Program
MOA	Memorandum of Agreement
NAIA	Ninoy Aquino International Airport
NDC	National Development Corporation
NEDA	National Economic and Development Authority
NGO	Non-governmental organization
PAL	Philippine Airlines
PCBSI	Prudential Customs Brokerage Services, Incorporated
PCC	Philippine Competition Commission
PCE	Planned City Extension
PCSD	Palawan Council for Sustainable Development
PFG	Partnership for Growth
PIA	PHIVIDEC Industrial Authority
PITEC	Panglao Island-Tagbilaran Executive Council
PMAC	Port Management Advisory Council
PMMAC	Port and Maritime Management Advisory Council
PMO	Port Management Office
PNP	Philippine National Police
PPA	Philippine Ports Authority
PPP	Public-private partnership
PRDP	Philippine Rural Development Program
PUJ	Public utility jeepney
PUV	Public utility vehicle
PWD	Persons with disabilities
RDC	Regional Development Council
Ropax	RoRo ship for cargo and passengers
RoRo	Roll-on-roll-off
SLEX	Southern Luzon Expressway
STAR	Southern Tagalog Arterial Road
SURGE	Strengthening Urban Resilience for Growth with Equity
SUV	Sport utility vehicle
TDRO	Traffic Development and Regulatory Office
TEU	Twenty-Foot Equivalent Unit
TIEZA	Tourism Infrastructure and Enterprise Zone Authority
TRB	Tollway Regulatory Board
TRO	Temporary Restraining Order
USAID	United States Agency for International Development
VMS	Variable message signs
VO	Variation order
ZEA	Zamboanga Ecozone Authority

## I. Executive Summary

Access and connectivity between urban and rural areas are key drivers of economic growth and opportunities. As stated in the SURGE Year 1 work plan, increased connectivity spurs value adding activities in cities that will lead to greater scale. At the rural areas, accessibility of services provided at the urban centers facilitates the exchange of goods and services that can accelerate rural development, reduce income inequality and eventually lower poverty levels.

Connectivity between urban and rural areas could be in terms of transportation infrastructure and services such as roads, airport and seaport and through communications and digital linkages such as telephone, internet, television and radio. The project assessed the logistics infrastructure and services in six USAID/Philippines Cities Development Initiative (CDI) cities of Zamboanga, Iloilo, Cagayan de Oro, Puerto Princesa, Tagbilaran and Batangas from April 13 to July 23.

This report summarizes the findings and recommendations of the analysis conducted by the project in the following areas - air, sea, land and communication and digital services.

### A. Assessment

#### Air Transportation Connectivity

Except for Batangas City, each CDI city is well served by airport facilities and services that are conveniently accessible to the city and to neighboring cities, municipalities and provinces. Key officials and the stakeholders raised the following issues and concerns regarding the airports in these cities.

- *Cagayan de Oro City, Iloilo City and Tagbilaran City:* The airports in these cities are part of five bundled regional airports which the Department of Transportation (DOTr) intends to offer for public-private partnership (PPP) implementation. The city governments and stakeholders in the respective cities lack information on the scope, timing and status of these bundled airport projects, making planning difficult.
- *Puerto Princesa City:* In relation to the airport expansion project which is due for completion during the first quarter of 2017, the following concerns were raised: (1) exclusion of four units or air bridges (passenger tubes); (2) the airport access road should match the elevation and geometric transition with the existing national highway; (3) transparency in the bidding and award of concessionaires at the new passenger terminal.
- *Zamboanga City:* The DOTr has not acted on the proposed new Zamboanga Airport Development Project's new site which has been delayed despite its updated project feasibility study and master plan. Since DOTr has neither staff nor local presence in the city, the city government needs to be advised on DOTr's plans in expediting the execution of activities related to the airport. The plans for a new airport has also fueled speculative increases in land prices, which stakeholders in the city would like the city government to quell.

#### Sea Transportation Connectivity

Seaport facilities and services are conveniently accessible to the city and to neighboring cities, municipalities and provinces. Of the CDI city seaports, Batangas Port has the most number of

direct domestic sea transport linkages largely throughout the Mindoro-Marinduque-Roblon-Palawan (MIMAROPA) region, followed by the Iloilo Port and the Zamboanga Port.

The CDI city seaports, classified as base or hub ports, are owned and managed by the national government through the Philippine Ports Authority (PPA).

Aside from the major government ports, CDI cities are also served by other public port facilities, either owned or operated by the city government, PPA or other government entity, providing additional sea transport connectivity for the individual city's core area with adjacent and remote areas within and/or outside of the city boundary.

Key officials and the stakeholders raised the following issues and concerns regarding the seaports:

- *Batangas City*: (1) potentially complicated relocation of informal settlers from PPA's property for its Phase III development area; and (2) overloaded trucks coming from/to Batangas Port and other ports along Batangas Bay affecting the longevity of the city roads and bridges.
- *Cagayan de Oro City*: (1) inadequate consultation on the PPA and PHIVIDEC Industrial Authority (PIA) on planned port projects; and (2) lack of support from restaurants and other establishments in the coastline of Opol for the proposed Opol Alternate Port Development Project due to perceived negative effects on their businesses.
- *Iloilo City*: (1) inadequate consultation with stakeholders on PPP projects at the seaport, citing the example of the Muelle Loney Project by the Department of Public Works and Highways (DPWH); and (2) opposition of the Guimaras provincial government and other groups to the Guimaras-Iloilo Ferry Terminal Project.
- *Puerto Princesa City*: (1) inadequate equipment of the cargo handling operator at the city fish port and PPA's sea; (2) poor condition of PPA's weighing scale at the port; (3) insufficient consultation on policies being implemented at the port; and (4) unclear liability of small commercial fishing vessels and motorized passenger boats in case of accidents.
- *Tagbilaran City*: (1) inadequate consultation with private business groups on port-related concerns; (2) shortfall in cargo throughput revenues to fully support port operations; (3) reconsider the proposed Albuquerque Seaport Project; and (4) liability of motorized commercial passenger boats in case of accidents.
- *Zamboanga City*: (1) congestion of vehicles and passengers at the entrance/exit gate leading to the Zamboanga Port Passenger Terminal Building caused by vendors and tricycles blocking the roadway; and (2) review of the economic feasibility of the proposed Zamboanga International Terminal Project of the Zamboanga Ecozone Authority.

## **Land Transportation Connectivity**

The report identified national arterial roads which connect the city with the rest of the region as well as secondary connector roads and their conditions assessed in relation to their physical attributes, adequacy and capacity to meet current and future traffic needs.

With the resurgence of trade and commerce, and the emergence of liberal financing for vehicle acquisition, land transportation services in urban areas have never been more active as in the last decade, resulting in serious vehicular traffic problem in the urban core. However, the traffic situation particularly in the central business district (CBD) has worsened. Few CDI cities such as Zamboanga, Cagayan de Oro and Batangas initiate some measures to address transportation issues and traffic congestion in the central business districts. The cities, however, have expressed the need to formulate transportation and traffic management plan to guide them make further action, which all of them, recognized would require strong political will on each of their local chief executives. The specific issues raised per city are summarized as follows:

- *Batangas City*: (1) roads in Poblacion Batangas are narrow and are not designed for modern transport services; (2) while good maritime-road transport connectivity exists, there is a need to construct a flyover at the Balagtas' rotunda to prevent traffic from the port; and (3) traffic congestion at the *poblacion* area.
- *Cagayan de Oro City*: (1) greater attention to address traffic congestion; and (2) road access to Laguindingan airport has been beset with frequent re-blocking arising from construction of the national highway, making the trip to the airport time-consuming.
- *Iloilo City*: (1) inadequate consultation by DPWH on its river slope protection and road shoulder improvement projects along Muelle Loney; (2) need for additional road improvement in vegetable growing areas; and (3) temporary traffic congestion in major city roads during rush hours.
- *Puerto Princesa City*: (1) road improvements have not progressed much due to complicated political dynamics; (2) the five major national roads and the connecting city road network are experiencing traffic congestion throughout the day; (3) traffic congestion in the city's business district is a serious problem; and (4) better coordination between the city government and national government agencies are needed for better road improvement project.
- *Tagbilaran City*: (1) traffic congestion in the *Poblacion* areas due to the large volume of vehicular traffic and lack of discipline among drivers and pedestrian; (2) concern over the traffic from the new airport to the city; and (3) plan for a cargo distribution center to divert container trucks from entering the city center.
- *Zamboanga City*: (1) traffic congestion in central business district partly due to lax implementation of traffic rules and regulations; and (2) improvement in the road network connecting the vegetable growing barangays of La Paz.

## **Telecommunications and Digital Connectivity**

Digital connectivity in the city in the form of telephony and internet service of the two dominant telecommunication companies (telecoms), namely Globe Telecom and PLDT/Smart, was assessed as to availability or adequacy of service, strength and quality of signal and extent of coverage. Primary information and data as to the current situation and planned expansion were gathered from key local officials of each of the two telecoms.

Telecommunication companies, PLDT/Smart and Globe Telecom, have fully reached the *poblacion* of all CDI partner cities with their respective telecommunications network. Each has



connected their network through cable lines originating from either end of the country in Luzon or in Mindanao. However, the two telecoms have raised concern on the long process they have to pass through before they can get permits from the LGUs, both barangay and city, for the construction and installation of their cellular phone site facilities. The process is deemed as bureaucratic which resulted in slow signal to remote areas even though their roll-out for cell site construction have long been programmed with available funding.

## **B. Recommendations**

The SURGE Project has formulated some actions and recommendations to address the issues raised on rural-urban connectivity. The recommendations also revolve around the enhancement of airport and seaport facilities, coordination among stakeholders and upgrading of communication linkages.

### **Air Transportation Connectivity**

- *Cagayan de Oro City*: (1) request the Civil Aviation Authority of the Philippines to expedite the release of the maintenance budget for a unit of the passenger airway bridge at the Laguindingan airport which has not been repaired; (2) request the DOTr to provide updates on the PPP implementation of the Laguindinga airport expansion and incorporate concerns of local stakeholders.
- *Iloilo City*: request the Infrastructure Committee of Regional Development Council (RDC) VI to require the DOTr to provide regular updates on the PPP offering for the Iloilo International Airport.
- *Puerto Princesa City*: request RDC IV B and the Mindanao Development Authority to reinstate the budget for the passenger airway bridges.
- *Tagbilaran City*: (1) follow-up the proposed variation order to construct a passenger terminal; (2) consolidate the parcel of lots within the airport prior to the proposed redevelopment project under PPP; and (3) Tagbilaran City and the municipalities of Panglao and Daus to prepare for the operation of the new airport in 2018.
- *Zamboanga City*: (1) Request the DOTr to consider accelerating the implementation of the feasibility study for the proposed new Zamboanga airport and to include the project in DOTr's Medium-Term Public Investment Program; and (2) creation of a task force to coordinate the DOTr's activities for the project.

### **Sea Transport Connectivity**

- *Batangas City*: (1) relocate informal settlers in its Phase III Development Project site; (2) install a weigh bridge at the Batangas Port.
- *Cagayan de Oro City*: (1) convene a forum to discuss seaport projects; (2) regularly monitoring of PPA's and PIA's ongoing and proposed projects; (3) advocate for the expansion of the PPA port or Phividec's Mindanao Container Terminal (MCT); (4) reconsider the proposed Laguindingan Port Development Project.
- *Iloilo City*: (1) recommend to the Iloilo Business Club to request the PPA to regularly

convene the Port Management Advisory Council (PMAC) and to invite stakeholders to the meetings.

- *Puerto Princesa City:* (1) provide technical support to review the Puerto Princesa Fish Port Complex; (2) strengthen regulations affecting wooden-hull passenger and fishing boats, especially with regards the liability of operators in case of accidents.
- *Tagbilaran City:* (1) encourage the PPA Tagbilaran to invite stakeholders to the quarterly meeting of the PMAC; (2) review the regulations for the registration of motorized wooden hull passenger boats.
- *Zamboanga City:* Advocate for the review the proposed Zamboanga International Container Terminal Project since (1) it will directly compete with and duplicate the functions of the more established PPA-managed Zamboanga Seaport; and (2) there is uncertainty in relation to its ability to generate adequate cargo traffic from local companies at the Zamboanga Economic Zone.

### **Land Transportation Connectivity**

- *Batangas City:* (1) improve traffic management and planning at the city proper; (2) coordinate with DPWH the improvement in national road intersections in the city proper; (3) implement immediate solutions to address traffic congestion; and (4) work for the inclusion of the road projects in DPWH's National Road Improvement Project.
- *Cagayan de Oro City:* (1) improve traffic management and planning in the central business district; (2) continue farm-to-market road improvement in the southern part of the city; and (3) propose regular meeting of the Infrastructure Committee of the RDC to monitor ongoing and pipeline road projects.
- *Iloilo City:* (1) implement traffic management schemes; (2) support road improvement in semi-temperate vegetable growing areas; and (3) inclusion of the regular DPWH updates in meetings of the Infrastructure Committee of the Regional Development Council.
- *Puerto Princesa City:* (1) improve traffic management and planning in the central business district by formulating a traffic management plan for the city proper and adjoining sub-urban districts and organizing a separate department under the city government for traffic management and administration; (2) request DPWH for the improvement of three major national road intersections; (3) prepare project proposals for farm-to-market roads improvement; and (4) organize a community-based project monitoring group.
- *Tagbilaran City:* (1) coordinate with the Regional Development Council for the inclusion of projects that will alleviate traffic congestion; (2) improve traffic management and planning in the city and the municipalities of Panglao and Dauis; and (3) organize a separate department under the city government for traffic management and administration.
- *Zamboanga City:* (1) improve traffic management and planning in the central business district; and (2) implement road improvements in rural areas particularly in Barangay La Paz.

## **Telecommunications and Digital Connectivity**

In all of the CDI partner cities, Globe Telecom and PLDT/Smart telecommunications companies have raised a similar concern on the long process for getting permits from the LGUs, both barangay and city, for the construction and installation of their cellular phone site facilities. The report, therefore, recommends the streamlining of the processes for securing permits in constructing additional cellular sites in the six cities.

## II. Introduction

The Strengthening Urban Resilience for Growth with Equity (SURGE) Project is an award of the Philippines Mission of the United States Agency for International Development (USAID) to the International City/County Management Association (ICMA). The period of performance is five years from July 27, 2015 to July 26, 2020. The SURGE Project is an activity in support of USAID/Philippines' Cities Development Initiative (CDI). The CDI is a crucial component of the broader Partnership for Growth (PFG), a White House initiated "whole-of-government" partnership between the U.S. Government and the Government of the Philippines. The PFG aims to shift the Philippines to a sustained and more inclusive growth trajectory on par with other high-performing emerging economies. The CDI adopts a "whole-of-Mission" approach that engages a strategic array of USAID activities with the primary goal of promoting broad-based and inclusive growth outside of Metro Manila through secondary cities that can serve as agents of economic growth.

The SURGE Project's development hypothesis is that secondary cities serve as agents of growth and contribute to the improved welfare of both urban and rural populations. USAID aims to promote more balanced and resilient urban growth, reduce economic disparities, and improve socio-economic conditions for highly urbanized secondary cities and their surrounding areas. SURGE assists cities and adjacent areas to plan effectively, guarantee basic public services, reduce business transaction costs, promote competitiveness, support sustainable development, and reduce disaster risks while ensuring inclusive and sustainable growth.

A city has to be connected externally so that the local economy would grow through interaction with and integration into larger regional economies. Transportation and telecommunication infrastructure and services are key to achieving external connectivity and, thus, to expanding economic growth. Improved airport and seaport facilities are necessary so that air and sea transport services can move people and products faster and at a reasonable cost. Arterial roads need to also provide seamless connection for products and people to move unimpeded into larger regional markets. High-capacity telecommunication infrastructure and services should also be available so that voice and data can easily be transmitted outside.

Likewise, a city has to be connected with its surrounding region so that it will become a coherent and integrated economic unit such that urban processors and consumers are regularly supplied by rural raw material producers. The urban area as the center of administrative, commercial, financial, and educational activities should also be strengthened so that it can provide the necessary services to the people including those residing in fringes and rural areas.

For cities to become engines of inclusive growth, strengthening urban-rural connectivity will facilitate the spreading of economic gains and opportunities in the urban core to rural areas where producers live and where the residents are relatively poor. Connectivity between the urban core and rural areas, either within or outside the city boundary, could be in terms of physical connection using transportation infrastructure and services (roads, airport, and seaport) and through communications and digital linkages (telephone, internet, television, and radio). As the urban core develops and its facilities and services improve, seamless connectivity between the urban and rural areas provides equity i.e. rural populations are able to access needed services that have become efficient and effective from urban center while urban businesses benefit from raw materials supplied by rural producers at a competitive cost.

The assessment of each city's connectivity in terms of its transportation (i.e., roads, airport and seaport infrastructure and services) and communications/digital linkages, with a focus on those that support or would support increased trade and investment, was conducted on the ground.

This document presents an analysis of the existing situation in terms of adequacy to current and future demand and the planned/programmed activities to meet the demand. This information was used to identify gaps as well as related issues, concerns, and constraints to attain the planned activities. Appropriate recommendations and action are formulated to address the gaps and the unmet demand.

This document is a consolidated report of assessments conducted in six CDI cities and covers two outputs:

- Output 3.2.1.1.1: Assessment of impediments to rural-urban connectivity developed with a focus on constraints to trade and investment acquisition and competitiveness; and,
- Output 3.2.1.1.2: Report on possible actions to address strategic bottlenecks in rural-urban communication linkages (radio, cell phones, internet, and informal networks) identified and presented in each of the target cities.

## II. Methodology

### A. Research Methods

The SURGE team conducted assessments of the transportation, infrastructure, logistics, and communications sectors in six CDI cities – Batangas, Puerto Princesa, Iloilo, Tagbilaran, Cagayan de Oro, and Zamboanga – by reviewing reports and studies earlier completed by various agencies and organizations (including donors) and by personal interviews and discussions with key informants, relevant officials, and stakeholders. Visits to and inspections of logistics facilities were also conducted for a first-hand look of the situation. The team reviewed proposed actions to validate if they addressed the special needs of persons with disabilities (PWD), women, children, and the elderly. The SURGE Project team conducted these assessments between April 13 and July 23 according to the schedule shown in *Table 1*.

**Table 1. Schedule of Assessments Conducted in CDI Cities**

Inclusive Dates	CDI City	Inclusive Dates	CDI City
April 13-22, 2016	Zamboanga City	June 13-24, 2016	Puerto Princesa City
May 16-20, 2016	Iloilo City	June 26 - July 08, 2016	Tagbilaran City
May 24-28, 2016	Cagayan de Oro City	July 12-13, 2016	Batangas City

### B. Diagnostic Tool to Assess Urban-Rural Connectivity

The SURGE team developed a diagnostic tool (*Annex 1*) to provide a uniform procedure to assess each city's connectivity in terms of transportation (i.e., roads, airport and seaport infrastructure, and services) and communications/digital linkages, with a focus on those that support increased trade and investment. The tool has five parts according to the different aspects of connectivity to be assessed, namely: (1) Air Transport Connectivity; (2) Sea Transport Connectivity; (3) Land Transport Connectivity; (4) Communications and Digital Connectivity; and (5) Policy Issues and Regulatory Barriers to Connectivity.

#### 1. Air Transport Connectivity

Island economies, such as those in Luzon, the Visayas, and island-provinces in Mindanao, require airports and air transport services to be connected. As a gateway to and from the city, efficient and well-managed airport facilities benefit not only city dwellers but also residents of adjoining municipalities and remote provinces who avail of these facilities or come to the city for high-end services in finance and banking, higher education, and health care that are only available in the city proper. Rural residents and farm growers who supply food to the city and ship outside also stand to benefit from efficient and well-managed airport facilities.

The SURGE Project team gathered data and information on the assessment from published and unpublished reports and studies as well as from interviews and discussions with key informants from concerned agencies such as:

- Department of Transportation (DOTr): agency responsible for planning/ programming and implementing capital projects in government airports;
- Civil Aviation Authority of the Philippines (CAAP): agency responsible in operating and managing airport facilities, including air traffic control;

- National Economic and Development Authority (NEDA): agency providing macro-economic planning, coordination and oversight of government projects/programs; and
- Department of Trade and Industry (DTI): agency responsible for trade and industry development, regulation, and promotion, including assistance and support to trade/industry groups.

The team also reviewed relevant reports and studies commissioned by donors such as USAID and the Japan International Cooperation Agency (JICA), among others, to gather data/information. These include the following USAID reports:

- Investment Enabling Environment (INVEST) - Public-Private Partnership (PPP) Training Report, May 2013;
- INVEST - Industry Studies for Cagayan de Oro, Iloilo City and Batangas City; and
- Assessment of Prospective Cities for USAID Assistance under the Cities Development Initiative.

The following JICA reports were also reviewed:

- Preparatory Study on Mindanao Logistics Infrastructure Improvement Project in the Republic of the Philippines (January 2010); and
- Survey on Mindanao Logistics Infrastructure Network, Volume 1- Main Report (January 2014).

## **2. Sea Transport Connectivity**

As with air transportation, island economies and provinces require seaports and water transport services as a means to be connected. These provide a less costly alternative mode for passengers and cargo transport relative to air transportation. Of the two transport modes, in general, when both are available, sea transport is used more by people of limited economic means, while air transport is used by those in the upper economic classes who can afford higher fares and who place a higher value on their time.

The SURGE Project team gathered data and information on sea transport connectivity from published and unpublished reports and studies as well as from interviews of and discussions with key informants from concerned agencies:

- Philippine Ports Authority (PPA): agency responsible for planning/programming and implementing capital projects in government seaports, for operating/managing major public seaports, and for regulating private ports;
- Maritime Industry Authority (MARINA): agency tasked to regulate the shipping industry and related services;
- National Economic and Development Authority; and

- Department of Trade and Industry.

The SURGE team also reviewed relevant reports and studies commissioned by donors to gather data, such as, among others:

- LINC-EG Shipping Costs and Competitiveness in Northern Mindanao, USAID (May 2010); and
- Survey on Mindanao Logistics Infrastructure Network, Volume 2- Cagayan de Oro City Ports Catchment Area, JICA (January 2014).

### **3. Land Transport Connectivity**

Land transportation facilities such as highways, roadways, and pathways provide physical connectivity to cities—internally within cities to integrate spatial components and externally to interact with neighboring municipalities and other regional components. For island cities and provinces, roads provide inter-modal transport linkages with airport and seaport facilities.

National arterial roads, which connect the city with the rest of the region, and secondary connector roads were identified and their conditions assessed. The assessment covered their physical attributes, adequacy, and capacity to meet current and future traffic needs, while considering gender-specific and PWD needs. The SURGE Project team gathered data and information from the Department of Public Works and Highways (DPWH). City, barangay, and farm-to-market roads were also identified and assessed as to their physical attributes, adequacy, capacity, and sensitivity to gender and PWD issues to meet current and future traffic needs particularly in support of agricultural activities and human settlements or housing projects.

Data and information were also gathered from the City or Provincial Engineering Office (depending on which one had administrative jurisdiction over the concerned roads), the local office of the Land Transportation Office (LTO), and the Land Transportation Franchising and Regulatory Board (LTFRB) on routes and franchises of public utility vehicles (PUV). The team conducted interviews with key informants in these agencies to verify recorded data and to identify related issues and concerns on current and planned activities for use in the analysis and in submitting recommendations to local or national authorities for action or decision.

With the resurgence of trade and commerce, and the emergence of liberal financing for vehicle acquisition, land transportation services in urban areas have never been more active as in the last decade, resulting in serious traffic problems in the urban core. The team assessed the traffic situation and the plans and programs developed to ease traffic congestion in the central business district (CBD). For this purpose, the team assessed roadway attributes, including geometric, surface characteristics and attached drainage facilities; traffic flow and route; regulatory, instructional and informational signs; and the behavior of motorists and pedestrians. The team also assessed for their adequacy and appropriateness the various road facilities, including traffic lights, if any; road channelization; islands; intersections; roundabouts' and pedestrian sidewalks and ramps, which are necessary for the safe and convenient passage of PWD, children and the elderly. The team analyzed the data and formulated appropriate next steps toward addressing the traffic congestion problem.

The SURGE Project team also assessed specific road sections that serve and support commodities and products, as well as projects considered priorities or that are emerging as priorities for development by the city, to determine their current condition and planned



improvement, if any. To complete this assessment, the team needed to understand the logistics routes and requirements for each product or project. The SURGE team conducted a parallel value chain study of priority commodities to define the logistic routes and to determine the requirements needed to streamline, if not reduce, the cost of transportation and capture or add value along the route. Based on this, the team formulated appropriate recommendations to address any gaps for improvement for consideration of the concerned authorities.

Public roads are generally classified as national or local. Local roads include provincial, city, municipal and barangay roads. All other public roads are classified as national. All national roads are under the jurisdiction of DPWH, while local roads are under the jurisdiction of the respective local government units (LGUs) where they are located. Accordingly, provincial roads are those that connect a city/municipality to other city/municipality or to any national road. City/municipal roads, on the other hand, are those that link inter-*barangays* or *sitios* or connect to the national road within the city/municipality and are excluded in the national or provincial road jurisdiction. For purposes of determining LGU share in the road users' fund, only those roads under whose LGU jurisdiction have already been identified and definite listing prepared are used in computing the respective LGU's share.

The City Engineering Office is responsible for planning, programming, and implementing all public works in the city, including the improvement and new construction of city roads. This office serves as the local government counterpart of DPWH, although with limited capacity and less means in performing public works activities. This office may also be responsible for traffic management, although in a lot of cities, this particular function is lodged under a separate traffic management office or combined with other city government departments, such as the City Administrator's Office or the General Services office. The SURGE Project team interacted with the City Engineer and/or the chief of traffic management office to gather information on the situation of city roads and current and future projects including traffic administration policies and programs.

#### **4. Communications and Digital Connectivity**

Digital connectivity is needed to expand trade and increase business investments and activities in the city. Business and financial transactions, at any appropriate stage and form, generally use communications and digital platforms to realize deals.

The SURGE Project team assessed digital connectivity in the city in the form of telephony and internet service of the two dominant telecommunication companies (telcos), namely Globe Telecom and PLDT/Smart, as to the availability or adequacy of service, strength and quality of signal and extent of coverage. The team interviewed key local officials of the two dominant telcos to gather primary information and data as to the current situation and planned expansions. Then, using cellular phone units, the availability or quality of signal was checked, for example in the specific road segment leading to the production area of a priority commodity, product, or service (including tourist destinations).

The two telcos have recently acquired the 700 MHz radio band from San Miguel Corporation in order to augment their respective signals and expand coverage. A potential problem in using this band, however, is the pending review and approval of the Philippine Competition Commission (PCC), the government's anti-trust agency, which has questions on the recent transaction. By separate motion of each telco, the Philippine Court of Appeals issued on August 26, 2016 a Temporary Restraining Order (TRO) on PCC's review and approval of the transaction. The court gave weight to the argument of the telcos that PCC's Implementing Rules and Regulations (IRR)

was issued and took effect after the transaction has already been consummated and thus, PCC's review/approval power does not cover the above-mentioned transaction. The TRO now allows the two telcos to proceed with their development activities using this strong and powerful radio band.

## **5. Policy Issues and Regulatory Barriers to Connectivity**

Policies and regulations have to be supportive to attain unencumbered urban-rural connectivity through air, sea, and land transportation facilities and telecommunication services. Normally, policies and regulations of government authorities should promote competition and the provision of alternative or redundant facilities and services since these normally lead to better quality services and competitive fee structures.

In the course of site visits and interviews and discussions with key informants, the SURGE Project team sought to identify possible policy and regulatory constraints. The team also clarified outstanding policy and enforcement issues and discussed these with the concerned agencies/entities to determine whether or not and/or how these hinder or impede urban-rural connectivity.

### III. City Assessments and Recommendations

#### A. Batangas City

##### 1. Air Transport Connectivity

Batangas City does not have any air transportation facilities as it is accessible by land transportation to the Ninoy Aquino International Airport (NAIA) in Metro Manila, about 110 km away or about two hours travel time from Batangas City. The city is well served by NAIA for both domestic and international destinations.

A nearer air transport facility is the Fernando Air Base in Lipa City, about 30 kilometers away, northeast of Batangas City. The air base, however, is a training school of the Philippine Air Force and is not open for non-military air transport services.

##### 2. Sea Transport Connectivity

###### *Assessment*

The Batangas Seaport, considered as a base port by PPA, serves as the hub of sea transportation not only in the city but also in the entire Batangas Province. Strategically situated in the south central tip of Luzon, it serves as the gateway to the island provinces of Mindoro (Oriental and Occidental), Marinduque, Romblon, and Palawan, comprising what is called the MIMAROPA Region (Region IV-B). It also serves as the alternate container port to the Manila Seaport, which has been experiencing access congestion caused by heavy vehicle traffic in Manila. The port also serves as the entry/exit point in Luzon of the western seaboard of the Roll-on-Roll-off (RoRo) Road Transport System, also known as the Western Nautical Highway, which connects the whole country through a land-sea transport system on the western side of the country. Two other nautical highways, namely the Central Nautical Highway and the Eastern Nautical Highway, connect the whole country through the central and eastern seaboard, respectively.

Total domestic cargo throughput (breakbulk, bulk, and containerized) comprised about 39 percent of the total cargo volume at the Batangas Seaport in 2015 (*Table 2*). Inbound domestic cargo included grains, crude minerals, copra, transport equipment parts and accessories, fuel and by-products, and other general cargo (e.g., canned goods and bottled products). Outbound domestic cargo, included crude minerals, fuel and by-products, and other general cargo (e.g., canned goods and bottled products). RoRo cargo, which is a subset of the total domestic cargo, included inbound (fish and fish products and general cargo) and outbound (fruits/vegetables, chemicals, and general cargo) commodities. Total foreign cargo comprised about 61 percent of the total cargo traffic at the seaport in 2015, included inbound (transport equipment parts and accessories, grains, and general cargo) and outbound (a small volume of general cargo). Imported foreign cargo largely include completely built units (CBU) of motor vehicles such as heavy construction equipment, trucks, pick-ups, sport utility vehicles, and sedans

**Table 2. Cargo Throughput at the Batangas Seaport, in metric tons (2015 data)**

Cargo Type	Inbound or Import (percent)	Outbound or Export (percent)	Total (percent)	Share (percent)
Domestic	475,091	399,169	874,260	39.2
Ro-Ro	126,805	268,931	395,736	17.8
Non Ro-Ro	348,286	130,238	478,524	21.4
Foreign	1,114,068	239,647	1,353,715	60.8
Total	1,589,159	638,816	2,227,975	100.0

Source: PPA Batangas Seaport Data Base, 2015

Shipping services in the Batangas Seaport vary widely because of the wide range of shipping destinations, both domestically (i.e., in MIMAROPA Region, in Visayas, and in Mindanao) and internationally. Based on the PPA Port Management Office (PMO) Batangas Port Profile, shipping services include the following (some are daily and others are a few times a week):

- Fastcraft to Calapan in Oriental Mindoro by Philippine Fast Ferry Corporation (Supercat) and Montenegro Shipping Lines;
- RoRo Ships (either purely for cargo or for combination cargo and passengers or what is called as Ropax);
- To Calapan in Oriental Mindoro by Montenegro Shipping Lines, Starlite Ferry Corporation and Besta Shipping Lines;
- To Odiongan in Romblon by Montenegro Shipping and CSGC Shipping Corporation;
- To Abra de Ilog in Puerto Galera, Oriental Mindoro by Montenegro Shipping;
- To Cebu-Cagayan de Oro in Mindanao by Asian Marine Transport (Super Shuttle Ferry);
- To Caticlan in Aklan by Montenegro Shipping and Starlite Shipping; and
- To Masbate by Super Shuttle Ferry.

In addition, outrigger boats (mostly for passengers only) for Puerto Galera where beach resorts and dive spots abound and services are provided by small shipping lines (five companies) and individual operator-owned vessels (11 units).

International Ships (either for purely containerized cargo, bulk, breakbulk, and CBU vehicles) to various origins/destinations all over the world by several international shipping lines, four of whom are full-container ships and regularly call at the port namely, Mercantile Ocean Maritime Company (fully owned by Maersk Line), Shandong International Transportation Corporation, Regional Container Line, and Evergreen Marine Corporation. Mercantile Ocean Maritime Company made 35 calls in January-April 2016, Shandong International Transportation Corporation 33 calls in January-April 2016, Regional Container Line 9 calls in January-February 2016 and Evergreen Marine Corporation which has just started regular use of the port in mid-April 2016 had weekly call since then.

According to the PMO Batangas Manager, during the ordinary season of the year (August-January), about 80 ships a day call at the port. During the peak season (February-July), about

120 to 130 ships per day use the port.

Port facilities and their usage are divided under the phased development areas of the port (i.e., Phase I development area and Phase II development area), which was constructed through a loan from the JICA. The Phase I development area is for the berthing, anchorage, and servicing of: (1) all domestic ships (fastcraft, conventional-type, RoRo type, and outriggers) for both passengers and cargo (containerized, bulk, and breakbulk); and (2) international ships for all non-containerized cargo (bulk, breakbulk, and CBU vehicles). This area has three passenger terminal buildings: (1) the main passenger terminal, which is being leased to the Malampaya Project; (2) the secondary passenger terminal, which has a capacity of 700 persons at any one time; and (3) the fast craft terminal, which can accommodate a maximum of 1,500 passengers at any given time. The Phase I area also has space allocated for an international general cargo transit shed and an open area, which is mostly occupied by CBU vehicles. The average Berth Occupancy Ratio (BOR) for this area is about 85 percent as of June 2016.

The Phase II development area is for the berthing and servicing of pure international container ships as agreed among JICA, NEDA and PPA and features two units of quay-side gantry cranes and four units of rubber tire gantry cranes. This area and the Phase I area are both operated under individual whole-port management contracts with the Asian Terminals, Incorporated. The BOR for Phase II area is estimated at 45 percent as of December 2015. With low BOR, there is still more space to accommodate international container shipping operations in the next few years.

The Phase III development area is already in the project preparation stage by PPA in response to the increasing traffic demand for both domestic shipping operations and international non-containerized shipping (now being handled at the Phase I development area). Negotiation for the relocation of about 100 families of informal settlers will be started, and the engineering study and design will follow thereafter.

Under the Batangas-based PMO, PPA also manages complementary public ports that are located in the Batangas Bay area and in the neighboring islands of the MIMAROPA Region, whose cargo/passenger traffic relate with or has an effect one way or the other on Batangas City. These include, among others, the port in the neighboring Municipality of Bauan, whose loaded/unloaded cargo can also affect the vehicle traffic situation in Batangas City, and the Odiongan Port in Romblon, whose cargo and passengers largely inbound/outbound through the Batangas Port.

Private ports that are also established in the Batangas Bay subscribe to PPA's port structural standard and are assessed yearly franchise fees. Twenty-six private ports, owned and operated by large companies, whose main business require regular transport of large volume of either or both raw materials and finished products for their operations (e.g., power generation, fuel storage, cement, construction/fabrication, petrochemical, and food manufacturing), are operating in the bay in the coastal municipalities, west of Batangas City (Calaca, Mabini, San Pascual, Bauan) and within the city itself. Those in the Municipalities of Mabini, San Pascual, and Bauan (a total of 14 private ports) and the eight private ports in Batangas City affect not only the local economy but also the land transportation condition as a large number of cargo trucks loading/unloading cargo through these ports pass through the city's road network.

Some concerns have been noted in relation to PPA and the operation of other public and private ports in Batangas City and the rest of the province. These include:

**1. Potential complicated relocation of informal settlers from PPA's property for its Phase III development area**

According to PPA PMO Batangas Manager, negotiation is about to start for the relocation of about 100 families that have informally settled on the PPA property allocated for its Phase III development area. According to the Batangas PMO Manager, negotiation with the informal settlers can be protracted and can potentially delay the engineering survey and detailed design for the Phase III project, which is being programmed for implementation using PPA's corporate fund.

As the Phase I Development Area is getting congested, there is urgency to conduct the engineering studies and design of the proposed Phase III development project in the next six months so that project packaging, approval process and solicitation of contractors can be performed in 2017 and the project can be completed in the next three years.

PPA may want to request the assistance of the city government and the concerned barangay officials to assist in the negotiation with the informal settlers so that they can be relocated smoothly and promptly to the LGU-designated relocation site and not create delays for the project.

**2. Overloaded trucks coming from/to Batangas Port and other ports along Batangas Bay affect the longevity of city roads and bridges**

Cargo trucks that have grown bigger and heavier in recent years can potentially shorten the useful life of city roads and bridges in the city. Loaded trucks coming from the northern and eastern sides of the city and regularly destined to or coming from the Batangas Port and other public and private ports, particularly those located in the eastern side of the Batangas Bay, normally traverse roads and bridges inside the city proper. These trucks not only congest traffic flow but also unduly strain and put heavy loads on city roads and bridges, particularly the Calumpang Bridge I (also called the Bridge of Promise), shortening their useful life. Worse, when trucks are overloaded, by exceeding the designed carrying capacity of the road pavement and bridge, this may potentially lead to cracks and structural yield that may or may not be readily discernible visually. This situation alarms concern among business groups and some city officials. Hence, it must be addressed before this grows into a serious and potentially costly problem.

*Recommendations*

• **Relocate informal settlers in its Phase III Development project site**

PPA should consider requesting the assistance of the city government and the concerned *barangay* officials in the negotiation with informal settlers at the project site so that they can be relocated smoothly and promptly and not delay the implementation of the Batangas Port Phase III Development Project. This issue can be brought out and discussed in the incoming meetings of the Port Management Advisory Council (PMAC) where relevant city and barangay officials can be invited to attend.

• **Install a weigh bridge at the Batangas Port**

PPA should consider installing a weigh bridge at the port and require all incoming and outgoing loaded trucks to pass through the weighing facility. Trucks that are found to be overloaded beyond the internationally accepted standard weight limit for the particular type and size of truck or container box will be held and a corresponding sanction meted

to it by PPA. The mechanism for implementation and enforcement in and out of the Port will be discussed during the meeting of the PMAC and during the meeting of the proposed Transportation and Traffic Management Task Force that will be created by the city mayor.

### 3. Land Transportation Connectivity

#### a. Assessment

##### National Roads

National roads in Batangas City are under the jurisdiction of the DPWH Batangas Engineering District 2 office, which includes the city and other neighboring municipalities in Batangas Province. As with other local offices of DPWH throughout the country, DPWH-Batangas District 2 is fully staffed with professional engineers who appear to competently manage their responsibilities for planning, programming, managing, and maintaining an aggregate total of 76.5 km national roads in Batangas City. These include a few critical major national roads such as:

- President J. P. Laurel Avenue, which originates at the entrance of the city's urban area at Balagtas Rotunda, stretching southerly through the city proper until its intersection with Governor Antonio Carpio, Jr. Avenue;
- Governor Antonio Carpio, Jr. Avenue which originates from its junction with President J. P. Laurel Avenue and then proceeds southeasterly, traversing Calumpang Bridge 1, and then easterly to Barangay Gulod Labac through the rural areas of the city until Doña Alicia Bridge in Barangay San Jose Sico, the boundary of the city with the Municipality of Taysan;
- P. Herrera Avenue, which has the same origin as Governor Antonio Carpio Jr. Avenue, continues from the end of President J. P. Laurel Avenue further southerly towards the city Proper until its terminus at the Sta. Clara Bridge in the old pier area;
- Batangas-Tabangao-Lobo Road, which originates from its junction with Governor Antonio Carpio Jr. Avenue after the second approach of the Bridge of Promise, then proceeds southerly through the rest of urban *barangays* and then through rural *barangays* (Barangays Tabanao and Pinamucan) along the eastern side of Batangas Bay and along the Verde Island Passage (along Barangays Ilijan, Dela Paz and Talahib Pandayan) until the city boundary with the neighboring Municipality of Lobo;
- P. Burgos Avenue, a section of the Batangas-San Pascual-Bauan Road, starts with the junction with the P. Herrera Avenue Extension and then proceeds northwesterly, passing under the Bolbok Flyover at Barangay Bolbok and through Barangay Sta. Rita until Lagnas Bridge, the city boundary with the neighboring Municipality of San Pascual;
- Batangas Port Diversion Road which originates at the exit of the Southern Tagalog Arterial Road (STAR) Tollway at Balagtas Rotunda and proceeds southwesterly through a mixed-use sparsely built-up area and through the Bolbok Flyover (or, over the P. Burgos Avenue) until its terminus at PPA's Batangas Port. This national road provides direct access for cargo trucks, private vehicles, and public buses using the STAR Tollway and connecting to the Batangas Port where various shipping services for domestic, inter-island and international destinations are available. The road is also the main access to

the Batangas City Public Bus Terminal where all public buses are required to stop, both those terminating in the city and those destined for other destinations by roll-on-roll-off shipping through the Batangas Port;

- Section of the Batangas-Ibaan-Rosario-Padre Garcia-Lipa Road, which starts in Barangay Balagtas at SM Hypermart and proceeds easterly up to Sabang Bridge, the city boundary with the neighboring Municipality of Ibaan. This national road which lies almost parallel with the STAR Tollway is the old route connecting Batangas City with its northeasterly neighbors up to Lipa City; and
- Section of the Batangas-San Jose-Lipa Road, which starts at the Balagtas Rotunda and proceeds northerly through the City's northern rural barangays of Sorosoro Ilaya and Concepcion until the city boundary with the Municipality of San Jose. This national road is also the route that goes to Manila via San Jose-Cuenca-Lipa route until the completion and operation of the STAR Tollway in 2008.

Aside from the major national roads under DPWH's jurisdiction, the STAR Tollway under the management of the Tollway Regulatory Board (TRB) provides a critical connection between Batangas City and the rest of Southern Tagalog Region, or CALABARZON (Cavite, Laguna, Batangas, Rizal, and Quezon), and Metro Manila. It is being operated under a concession contract with the STAR Infrastructure Development Corporation, a private business company whose controlling firm is San Miguel Corporation. The 42-km tollway constructed through Japanese loans links with the Southern Luzon Expressway (SLEX) in Calamba City directly to Batangas City, and then through the Batangas Diversion Road up to the Batangas Port, the alternate container port to the Manila International Container Terminal Port. From 2013 through the middle of 2015, the tollway's Phase I section was refurbished while two more lanes were added on the two-lane Phase II section under an amendment to the concession agreement including an increase in tollway fees by the private toll operator.

DPWH has ongoing minor projects such as road concreting with asphalt overlay, road widening, road shoulder concreting, or drainage works (both lateral and cross-over drainage improvement) in some sections of Governor Antonio Carpio, Jr. Avenue, Batangas-Tabangao-Lobo Road, and P. Burgos Avenue. Major projects being proposed for funding under the 2017 DPWH budget include the following:

- **The construction of the STAR Tollway-Pinamucan Bypass Road (Tabangao Section)**, which originates before the exit of the tollway in the Balagtas Rotunda going southerly through some rural *barangays* of the city and cutting through Governor Antonio Carpio, Jr. Avenue and ends somewhere near Takad Bridge along the Batangas-Tabangao-Lobo Road in Barangay Tabangao. This 10.22 km-long Tabangao Section of the bypass road is estimated to cost about Php587 million for a multi-year implementation starting 2017 through 2019, including right-of-way acquisition, road opening, slope protection, construction of four bridges, and full road concreting.

According to DPWH Region IV-A Office, Php200 million has been included in the proposed 2017 DPWH budget for this project, which is anticipated to relieve heavy traffic volume in the city proper. Trucks from the Pilipinas Shell Plant and from large industries, such as JG Summit Petrochemical and Naphtha Cracker Plant, on the eastern side of the Batangas Bay will be able to travel outside of the city proper and directly to the STAR Tollway. The feasibility study and parcellary survey of the roadway strip were completed by a consultant funded by Pilipinas Shell and JG Summit, while the detailed design is



being prepared by DPWH IV-A Regional Office in anticipation of the bidding for the construction soon after the approval of the 2017 national government budget. One consideration is that the acquisition of right-of-way can become complicated when affected lot owners become intransigents and unreasonable in pricing their properties. If this happens, project implementation will suffer undue delay. DPWH needs to coordinate closely with the city government and concerned barangays to facilitate this acquisition.

- **The construction of the New Batangas City-San Pascual-Bauan-Mabini Road**, which originates in the vicinity of the Balagtas Rotunda going westerly through some northern rural barangays of the City, San Pascual and Bauan, and then connects to the Batangas-San Pascual-Bauan-Mabini Coastal Road after the San Roque Bridge located outside of Bauan town proper. This 9.68-km road will effectively serve as a bypass to the central business districts of the Municipalities of San Pascual and Bauan. These municipalities are currently linked with each other and with Batangas City by the Batangas-San Pascual-Bauan-Mabini Coastal Road traversing highly built-up areas of residential, commercial, and industrial establishments and experiences traffic congestion throughout the day.

The proposed bypass road is anticipated to relieve heavy traffic volume from the western side of the City as trucks from industries on this side particularly from the Chevron and Petron plants will travel outside the central business districts and directly to the Balagtas Rotunda. The feasibility study and road design are slated to be prepared before the end of 2016. The project scope is anticipated to include right-of-way acquisition, road opening, slope protection, construction of eight bridges, and full road concreting under a multi-year implementation starting 2017 through 2019. According to DPWH Region IV-A Office, Php100 million has been included in the proposed 2017 DPWH budget for this project which is anticipated to undergo bidding soon after the approval of the 2017 national budget. As with the previous project, the acquisition of right-of-way can become complicated when affected lot owners become intransigents and unreasonable in pricing their properties. This would then delay the implementation of the project and prolong traffic congestion.

Private business groups and the city government proposed other major national roads intersection improvement projects, and are worthy to be considered by DPWH:

- **Improvement of Balagtas Rotunda:** Balagtas Rotunda is the critical point of connection to the Batangas City Proper and to the Diversion Road that leads to the Batangas Port for vehicles coming from Metro-Manila and the rest of CALABARZON. It is the intersection of five major road links, namely the STAR Tollway, President J. P. Laurel Avenue -- which leads to the city proper, Batangas Port Diversion Road, Balagtas-San Jose-Lipa National Road, and Balagtas-Alitagtag-Taal-Lemery Provincial Road and has become a choke point for the large volume of traffic coming in and out of Batangas City. Improvement of the rotunda either by grade separation (or flyover) or by channelization is very necessary to alleviate traffic congestion now being experienced due to the large volume of trucks going in/out of the Batangas Port and to/from large industries lying on the coast of Batangas Bay. This is exacerbated by the numerous public and private vehicles daily transporting people to work, study, and avail of various services in the city. The proposed construction of a flyover on the rotunda has been approved by the Regional Development Council (RDC) IV-A and was endorsed to the DPWH Central Office. DPWH has yet to respond to the RDC endorsement.

- Other critical national road intersections in the city proper also need improvement to better handle the large volume of traffic passing through them daily. These intersections include the following:
  - Intersection of Governor Antonio Carpio, Jr. Avenue and Batangas-Tabangao-Lobo Road;
  - Intersection of P. Herrera Avenue and President J. P. Laurel Avenue Extension (National Road Hilltop); and
  - Intersection of P. Herrera Avenue and Governor Antonio Carpio, Jr. Avenue.

### Local Roads and Traffic Management

Based on published reports from the Local Economic and Investment Promotions Office, Batangas City has a total of 396.5 km of city roads, consisting of 23 km urban roads which are 100 percent paved (or with permanent concrete surfacing such as asphalt or Portland cement) and 373.5 km rural roads, 78 percent of which are paved. According to the City Engineer, there is ongoing concreting of roads and roadside drainage improvements in some *barangays*.

The city government is also currently engaged in the construction of several big ticket public works projects that are being financed by a loan from Land Bank. The projects include the construction of the following: Third Bridge across Calumpang River and a 100-meter approach road concreting on each side of the bridge along Ferry Road; Public Market 3 building in Barangay Cuta; full improvement of Ferry Road; new City Engineering Office building; and concreting of other few barangay roads from any savings.

These projects and the application for and signing of the loan contract with the Land Bank have all undergone the required public consultation and deliberations and approval of the City Council. The Public Market 3 and the City Engineering Office buildings are in the early stages of construction and are both stalled, while the Third Bridge has yet to start. The release of loan proceeds was delayed by the lack of confirmatory certification from the City Treasurer who is the official LGU authorized payee of the monies from the Land Bank. The City Treasurer withheld issuing the confirmatory certification, which resulted to the stand-off release of loan proceeds to pay for the contractor's progress billing.

Roads in Poblacion Batangas, an old settlement consisting of 22 *barangays*, are narrow and are not designed for modern transport services. Therein lies the central business district (CBD) where various establishments, such as the City Hall, commercial stores and shops, banks, schools, hospitals, and public markets are concentrated and are accessed by transport vehicles and people. To manage traffic in the CBD, the city government adopted one-way traffic flow in most streets. Due to parked vehicles, however, the CBD has been experiencing traffic congestion especially during rush hours in the morning and in the afternoon. The problem of parked vehicles along streets in the CBD is caused by inadequate or non-existent parking spaces in many establishments. According to the head of the Traffic Development and Regulatory Office (TDRO), traffic enforcers are trying hard to implement the City Traffic Code, especially within "no parking" zones. Their efforts, however, are limited to the extent that their well-being is protected from unruly or belligerent offenders.

Traffic congestion extends to the roads going into and out of the Poblacion area due to the large volume of passing vehicles, including cargo trucks from heavy industries that are using common arterial roads (i.e., President J. P. Laurel Avenue, Governor Antonio Carpio, Jr. Avenue and the

Batangas-Tabangao-Lobo Road on the eastern side and the P. Burgos Avenue on the western side of the city) with the rest of other motorists. Truck bans on major roads during rush hours in the morning (7:00 a.m. - 9:00 a.m.) and in the afternoon (4:00 p.m. -7:00 p.m.), except for fuel truck haulers, have not done much to alleviate road congestion during rush hours.

The city government recognized the seriousness of the traffic congestion problem and the head of TDRO is looking at the following measures to address the problem:

- Strict enforcement of the City Traffic Code, especially the “no parking” zones in major roads, through no contact apprehension using the extensive modern road network closed-circuit television (CCTV) system of the city.
- Amendment of the Traffic Code Ordinance of 2000 to respond to the current situation by including the following proposed changes:
  - Expansion of traffic regulation coverage over the Batangas Port Diversion Road, which was constructed and became fully operational after the passage of the current traffic code; and,
  - Use of no contact apprehension using the road network CCTV system of the city.
- Apprehension of *colorum* (illegal public land transport) tricycles plying the city roads.
- Submission of proposed adjustments and improvements of a few road corners for better transition of vehicle passage on national road intersections, including the relocation of utility posts. The proposed works will be submitted to DPWH for consideration in their budget as these will entail the acquisition of additional right-of-way on private lots located on road intersections. The issue of delayed relocation and/or inaction of utility companies (i.e., MERALCO, PLDT, and Globe-Telecom) to relocate their obstructing posts will be discussed with the Transportation and Traffic Management Task Force, which is being proposed to be created by the city mayor.

### Intermodal Transportation Linkage

#### **Road Transport Vis-à-vis Sea Transport**

The Port of Batangas is well-connected to road transport as one bus terminal is located right outside the port complex. Passengers coming from or going to the domestic ships have to walk about 150 meters only to or from the bus terminal. The buses have routes to Metro Manila (Alabang, Buendia, Cubao, and Lawton) and other points in CALABARZON. From the bus terminal at the port, there is easy access to the STAR Tollway. There is also a jeepney route that connects the city proper and the main Batangas City Public Bus Terminal with the port. From the city proper, there are other jeepney routes that connect to other parts of the city.

For cargo movement, trucks make use of the multi-lane Batangas Port Diversion Road that connects to the STAR Tollway and onward to their destinations. However, these have to pass through the Balagtas Rotunda, which is already congested due to local traffic. There is a compelling need to consider constructing a flyover over the rotunda so that trucks and buses to/from the port will not add congestion at the rotunda. There are also private container yards and container freight stations located near the port zone, so much so that movement of containers is very easy.

Presently, there is good maritime– road transport connectivity. However, to further improve this connectivity, a flyover must be constructed at the Balagtas Rotunda so that the port traffic will not add to the local traffic at that intersection.

### **Road Transport Inter-Connectivity**

Aside from traffic management measures implemented to address the narrow city roads and increasing motor vehicles, the city also regulates tricycle operations using a color coding scheme to identify their area of operations. There are tricycles operating within the Poblacion and others operating within a barangay only.

Moreover, the city road network was designed to connect the barangays to the Poblacion, which is the heart of the city. However, the development of the city, especially the establishment of the industrial zones in the southeast and southwest along the Batangas Bay coupled with the resulting high volume of traffic (especially heavy truck traffic), requires that the said traffic be diverted away from the Poblacion area. The construction of a bypass road from the eastern side of the city straight to STAR Tollway (STAR Tollway-Pinamucan Bypass Road), as proposed by the DPWH beginning the 2017 national budget, will address this concern.

The city streets have already started to experience floods, thereby underscoring the need to plan for proper road drainage to prevent an aggravation of the problem. This should be done in the *poblacion* and throughout the city in order to address flooding issue and to lengthen the economic life of the pavement.

To further open up areas for development, the city is also planning to develop a new government center complex, where all government offices are being planned to be relocated.

### **Road Transport Services**

Land transportation services in the city are readily available through private vehicles, public utility buses, jeepneys, vans, and tricycles. For trips going to Metro Manila and neighboring provinces, commuters can avail of the public utility bus services from 12 bus companies, such as Batangas Star Express, RRCG Transit, Supreme Transport Liner, Ceres Transport, ALPS Barney, JAM Transit, DLTB Co., N. Dela Rosa Liner Inc., Inter Batangas Bus Co. (Batman), KL CNG Bus Transport, SJ Park Ventures Inc., and Gold Star Transit Corporation. These buses are required to terminate at the Batangas City Public Bus Terminal, about 2 km from Balagtas Rotunda. Those that are destined further using RoRo ships at the Batangas Port are still required to stop at the same bus terminal to unload/load passengers only. The Batangas City Public Bus Terminal is located along the Batangas Port Diversion Road, about 5 km from the Port, and is being operated by a private company under a concession agreement with the city government.

In 2008, the opening of the STAR Tollway, a component of the Philippine Nautical Highway with a length of 42 km from Sto. Tomas, Batangas to the Batangas Port shortened the travel time from Metro Manila to Batangas City by about 30 to 45 minutes.

With the implementation of the City's Traffic Ordinance, public utility jeepney (PUJ) routes through color and number coding schemes have been enforced. Parking areas and PUJ terminals have been designated for the different routes. With the devolution of power to grant franchises for tricycle operation from the LTFRB to the Batangas City Government, tricycle operators can now apply for their franchise from the TDRO under the Office of the City Mayor. Like public utility jeepneys, tricycles plying in the Poblacion also operate through a color coding

system.

In an effort to have smoother traffic flow in the *poblacion*, the city government installed traffic signal lights on seven major intersections and 123 traffic signs in various locations in 1998. The city's traffic signal lights were upgraded in 2010 by replacing them with LED traffic lights and electronic timers. Also, in 2001, the City Government installed a CCTV Camera along P. Burgos St. and Rizal Avenue and two overhead Variable Message Signs (VMS) along the National Highway in Kumintang Ibaba and P. Burgos St. in front of the City Hall (a LED electronic VMS was installed later to replace the old VMS) as components of the city transportation/traffic management program. Additional CCTV cameras were installed in 2011 and 2012 along strategic locations/intersections including the Calumpang I Bridge and the City Public Bus Terminal at Diversion Road.

There has been a notable increase in the number of registered vehicles in Batangas Province as can be seen in the table from the Batangas LTO Regional Office. Since Batangas is also near Metro Manila, many Metro Manila registered vehicles also go to Batangas for leisure or business, which is one major cause of traffic in the city.

**Table 3. Motor Vehicle Registration in the Batangas Land Transportation Office Regional Office, 2007 -2012**

	Cars	Utility Vehicle	Sport Utility Vehicle	Buses	Trucks	MC/TC*	Trailers	Total
2007	8,387	23,796	1,318	155	2,015	26,534	114	62,319
2008	7,843	22,154	1,406	146	1,795	29,119	120	62,583
2009	8,750	22,703	1,680	107	1,972	25,419	139	60,770
2010	8,234	22,238	1,908	146	1,857	23,938	125	58,446
2011	8,792	20,039	2,114	78	2,300	28,802	130	62,255
2012	9,416	19,996	2,667	37	1,857	34,970	147	69,090

\*MC/TC – motorcycle/tricycle

Source: Department of Transportation and Communications, Information Systems Division

### Recommendations

- **Improve traffic management and planning in the city proper**

The city mayor may wish to create a Transportation and Traffic Management Task Force through an Executive Order to provide a mechanism for tasking, problem-solving, and monitoring all actions to address traffic congestion. The Task Force may be composed of the City Mayor (Chair), City Council Committee Chair on Transportation (Vice-Chair) and TDRO, CEO, City Planning and Development Office, DPWH, PPA, Philippine National Police (PNP), Association of Tricycle Operators, Association of Jeepney Operators, utility companies (MERALCO, PLDT/Smart, Globe, and Batangas City Water District), and private business groups (Metro Batangas Business Club and Philippine Chamber of Commerce and Industry – Batangas City). ***SURGE Project may provide technical assistance to create, convene, and operationalize the task force.***

The city government may consider implementing the following measures to improve traffic flow in the next 6 to 12 months:

- Apprehend all *colorum* (illegal public land transportation) tricycles to get them off the roads. If necessary, the side car of the tricycle should be impounded permanently to prevent the driver from going back to the street again.
- Strictly enforce relevant traffic rules and regulations such as the “no parking” on major thoroughfares, loading/unloading on designated places only, anti-jaywalking, and limiting slow-moving vehicles to use the outer lane only.
- Review or revise the Batangas City Traffic Code of 2000 to include the following: no contact apprehension; stricter penalty for *colorum* vehicles and tricycles; pay parking on few secondary roads in coordination with the respective barangay officials; inclusion of the Batangas Port Diversion Road in the coverage of the traffic code; and a regulation to prevent and check truck overloading. ***SURGE Project may provide technical assistance in reviewing and possibly revising the Traffic Code.***

- **Coordinate with DPWH the improvement in national road intersections in the city proper**

Aside from the construction of bypass roads to divert passage of a large volume of truck traffic away from the CBD, national road intersections have to be improved to further make the flow of traffic smoother. DPWH's attention is needed to plan, design, and program the improvement of critical intersections, including the Balagtas Rotunda; intersection of President J.P. Laurel Avenue Extension (National Road Hilltop) and P. Herrera Avenue; the intersection of P. Herrera Avenue and Governor Antonio Carpio, Jr. Avenue; and the intersection of Governor Antonio Carpio, Jr. Avenue and Batangas-Tabangao-Lobo Road. DPWH-Central has taken no known action yet on the Regional Development Council (RDC) IV-A resolution endorsing the proposed flyover over the Balagtas Rotunda. The DPWH has not also outlined any definite plans to improve the other three intersection choke points mentioned above.

- **Implement immediate solutions to address traffic congestion**

The executive and legislative branches of the city government, in coordination with various sectors, should collaborate to address the traffic problem in the city. As the traffic problem persists and worsens over time because of the growing number of vehicles, economic loss in terms of increased vehicle operating costs, unproductive time, and generated illness are expected to grow, along with environmental ill-effects.

- **Work for the inclusion of the road projects in DPWH's National Road Improvement Project**

The city mayor (with the assistance of the Congressman of Batangas City) needs to ensure inclusion of the proposed STAR Tollway-Pinamucan Bypass Road and the new Batangas/Balagtas-San Pascual-Bauan-Mabini Road in the hearing and approval process of DPWH's 2017 budget in Congress.

The City Mayor (through RDC IV-A) should request DPWH for the improvement of critical national road intersections such as: Balagtas Rotunda, Junction Governor A. Carpio Street and Batangas-Tabangao-Lobo Road and Junction National Road Hilltop and P. Herrera Street. ***SURGE can assist and encourage CPDO and Engineering's Office to prepare project profiles including indicative cost estimates for use in submitting the projects for RDC IV-A endorsement to DPWH.***

## 4. Telecommunications and Digital Connectivity

### *Assessment*

Globe Telecom and PLDT/Smart telecommunication companies have fully reached Batangas City with their respective telecommunications network or backbone. Each telecommunications company has connected its network with respective cable lines in Luzon. Their distribution lines are made of high capacity fiber optic wires, which are less expensive and more durable, or copper wires, which are slowly being phased out and replaced by the former. The lines are also extensive in the city proper and in the western half of the city (or the west side of Calumpang River), which is more built-up than other areas. The lines then become sparse going to the eastern side and towards the rural *barangays*. This pattern follows the availability of their services for landline telephony and internet connections.

Using microwave signal through their respective network of cellular sites, both companies have also covered the city proper and many *barangays*, except for a few in the suburban and rural areas in the southeast side of the city, such as sections in the *barangays* of Pinamucan, Simlong, Ilijan, Dela Paz, Talahib Pandayan, Bilogo, and San Jose Sico. In the covered areas, both cellular telephony and internet services are available for subscription. The two companies are confident that they will have a wider and stronger signal now that they have acquired the 700 MHz radio band from San Miguel Corporation.

These two telecommunication companies have raised a similar concern on the long process for getting permits from the LGUs, both *barangay* and city, for the construction and installation of their cellular phone site facilities. The process is bureaucratic, cumbersome and costly to cover informal fees/charges. It takes about six months or longer to completely get the necessary permits. This is the reason why these telecommunication companies appear to be slow in providing signal to remote areas even though their roll-out for cell site construction have long been programmed and has available funding.

### *Recommendations*

#### **Simplify the permitting process for the construction and installation of cellular sites**

The city should revisit for possible amendment of LGU regulations and approval process in the issuance of permit to construct and install cellular sites. ***SURGE Project may provide technical assistance to the City Government to explore simplifying the permitting and approval process.***

## **B. Puerto Princesa City**

### **1. Air Transport Connectivity**

#### *Assessment*

Puerto Princesa International Airport, as the primary gateway to the city and the rest of Palawan Province, is critical to the economic growth of the area as tourism activities have geared up in recent years. The declaration of the Puerto Princesa Subterranean River as one of the New Seven Wonders of Nature and the city as a “Biospheric Reserve,” together with the development

of world-class beach resorts in and outside of Puerto Princesa, have led to a dramatic increase of both international and domestic visitors.

More tourist sites, both inland and on the coast, are being developed. Varied destination packages are also being packaged to attract more international visitors, comprising about 21 percent of total visitor arrivals in 2015, as targeted by the City Tourism Office. Total tourist arrivals in 2015 reached 960,000 and has been increasing by more than 10 percent annually based on 2014-2015 data. The City Tourism Office is confident that the target of two million visitors by 2020 will be met.

The airport is able to accommodate passenger traffic with its current facilities. Congestion, however, is experienced at the passenger terminal when two flights are too close in arrival or departure. Total annual passenger traffic reached 1.56 million while total cargo traffic was at 16.26 tons in 2015 (*Table 4*).

**Table 4. Air Transport Traffic Volume at the Puerto Princesa Airport**

Year	Aircraft Movement		Passengers				Cargo	
	Volume	Growth Rate (percent)	Domestic		International		Volume (metric tons)	Growth Rate (percent)
			Volume	Growth Rate (percent)	Volume	Growth Rate (percent)		
2010	8,180	33.5	783,193	34.3	-	-	11,667	107.9
2011	8,376	2.4	992,322	26.7	-	-	9,294	-20.3
2012	12,049	43.8	1,306,524	31.7	931	-	11,191	20.4
2013	13,187	9.4	1,334,850	2.2	975	4.7	12,700	13.5
2014	13,451	2.0	1,347,373	0.9	6,470	563.6	15,098	18.9
2015	14,751	9.7	1,538,181	14.2	26,190	304.8	16,262	7.7
Average		16.8		18.3		291.0		24.7

Source: CAAP Puerto Princesa

Four domestic airlines, namely Cebu Pacific, Philippine Airlines (PAL), Air Asia, and Air Juan use Puerto Princesa Airport. The first three serves the Manila-Puerto Princesa route daily with 13 flights combined. Cebu Pacific serves the Cebu-Puerto Princesa route with three flights daily and the Iloilo-Puerto Princesa route four days in a week. PAL also offers an international flight to Taipei two days in a week (one flight transits via Manila and the other direct from Taipei). PAL also applied for additional landing slots as it plans to serve two-day weekly flights for the Puerto Princesa-Busan (Korea) route starting July 2017. Cebu Pacific has also expressed its plan to fly to Korea, offering a Puerto Princesa-Incheon route in 2017.

Intra-provincial flights also evolved to meet air transportation demand due to the size of Palawan Province, the largest in the country in terms of land area, and the remoteness of the island's municipalities where exotic tourist destinations are located. At present, Air Juan serves Busuanga/Coron about 361 km away and Cuyo about 306 km from Puerto Princesa with two and three flights per week, respectively. These two island groups in the north and northeast side of Palawan are best known for unspoiled world-class diving sites and island-hopping activities.

Encouraged by the great potential for growth of its municipalities and as a way to physically integrate the island, the Palawan Provincial Government has embarked on the construction of airfields in several locations outside the city, such as in the municipalities of San Vicente (166 km northeast of Puerto Princesa), El Nido (273 km north of Puerto Princesa), and Rizal (207 km



southeast of Puerto Princesa). Construction of airfield facilities is reportedly in progress in all places with funding from the province and partly from DOTr. They also plan to use small commercial air services to transport visitors from the city to these destinations.

With the continued increase in both passenger and air cargo traffic, an airport expansion project started implementation in August 2014 and is due for completion in January 2017. The expansion project will construct a larger passenger terminal, a new apron, two parallel taxiways, an administrative building, a back-up power house, and an air traffic control tower. It will also install complementary air navigational equipment.

The expansion project, partly funded by the Korean International Cooperation Agency (KOICA), is at about 64 percent accomplishment level as of mid-June 2016, which means it is on schedule. Construction has temporarily been affected by the inadequate supply of good quality aggregate materials which are being sourced from Antique Province as there is no approved quarry source of materials in Bohol. The contractor encountered a problem in the delivery of materials, but was being addressed with the assistance of LGU officials. Once the issue is resolved, the airport contractor is confident that they can complete the expansion project on time.

Notwithstanding the issue on construction materials, the airport facility expansion, which will cost about \$102 million, is expected to be completed in January 2017 and be commissioned a few weeks later. Based on the project information sign that is available to the public (located at the City Hall and displayed along the highway), the design target year is 2020 with passenger and cargo traffic capacity of two million passengers and 14 metric tons cargo load, respectively. The new terminal facilities are planned to be used by three airlines, namely: PAL, Air Asia, and Air Juan. Cebu Pacific has applied to CAAP to retain its service for both passengers and air cargo using the old passenger terminal since it services the most number of flights (both domestic and soon-to-start international routes). Under this arrangement, facilities will possibly be adequate to serve the demand even in the next ten years, although additional expansion needs to be initiated a few years before then so that the ever growing demand will be met accordingly.

Key officials and stakeholders raised the following concerns regarding the new airport facilities:

- **Exclusion of the air bridge in the airport expansion project**

Based on the published scope of work of the project currently being implemented by the contractor, four units of air bridges or passenger tubes were excluded from the construction work to reduce the project cost. This decision was also confirmed by the Puerto Princesa Chamber of Commerce and Industry (PPCCI) after verification with concerned authorities. Without any air bridge, the airport would not conform with international standards and will inconvenience passengers when embarking/disembarking the aircraft. Persons with disability, the elderly, children, and pregnant women would be more vulnerable to exhaustion without the use of air bridges.

- **Proper transition and connection of airport's access road with the existing national highway**

DOTr needs to closely coordinate with DPWH Palawan Engineering District 3 to ensure that the airport's access road will properly match in elevation and in geometric transition with the existing national highway. DPWH's staff has expressed concern that without proper coordination the geometric transition of the airport's access road with the existing national highway would become an additional choke point for traffic along the national road if not properly constructed. The proposed regular status reporting of DOTr's project engineer with the community leaders can be the avenue for coordination between the two agencies.

- **Transparency in the bidding and award of concessionaires at the new passenger terminal**

The Puerto Princesa Chamber of Commerce and Industry expressed concern about the transparency of CAAP in the bidding and awarding of concessionaires at the new Passenger Terminal as some of their members are interested in selling their products there. They are also interested in suggesting to CAAP the terminal services, including government agency services, which need to be provided at the airport. This concern should have been brought up to the airport manager when he spoke before the Chamber members in June 2016. The proposed regular status reporting of DOTC's project engineer can also be the avenue for CAAP to report the status of bidding and awarding of concessionaires at the new passenger terminal.

#### *Recommendation*

- **Work for the re-instatement of the original budget for passenger airway bridges for the New Puerto Princesa Airport Improvement**

The Puerto Princesa City mayor, through the Regional Development Council (RDC) IV-B, may wish to request the DOTr to re-instate the budget for the passenger airway bridges, which were in the original design. Assistance of the Mindanao Development Authority (MinDA), the Philippines' secretariat to the Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA) cooperation, which covers Mindanao and Palawan Province, can also be requested to assist.

## **2. Sea Transport Connectivity**

#### *Assessment*

The Puerto Princesa Seaport, considered as a base port by PPA, serves as the hub of sea transportation not only for the city but also for the entire Palawan Province.

According to the port manager, inbound cargo, which comprises about 70 percent of the total cargo traffic at present, includes cement (coming from domestic sources and from abroad), steel construction materials, fertilizer, bottled cargo, rice, assorted vegetables from Manila, consumer products, and brand new vehicles. There is a strong demand for cement due to the construction of large public works such as DOTr's airport expansion project, PPA's seaport expansion works, and DPWH's road widening projects. The demand for brand new vehicles has also dramatically increased in tandem with the recent boom of tourism in the city and the province.

Outbound cargo, comprising about 30 percent of total cargo throughput at present, includes empty bottles, scrap metals, coconut products, fishery products, containerized crude nickel, and other mining products. Fishery products are placed in large styro wood-supported boxes with ice for domestic transport and in reefer vans for abroad. Nickel and other mining products all passed through dedicated private ports, which are also located on the same bay.

Six domestic shipping lines use the port, namely: 2Go, Milagrosa, Montenegro, Oceanic, Moreta, and Meridian. 2Go Shipping uses a Ropax ship for the Manila-Puerto Princesa-Coron-Manila route twice a week. Milagrosa and Montenegro use combined cargo-passenger conventional vessels for the Cebu-Puerto Princesa route thrice a week. Oceanic, Moreta, and Meridian use purely cargo ships for their Manila-Puerto Princesa route twice a week. International inbound cargo that comes in bulk, like cement and fertilizers, are normally loaded using chartered vessels.

The current berth occupancy ratio is estimated at 70 percent factoring in the newly completed 40-m wharf extension on the north side, which is fairly adequate to accommodate vessel traffic. Other port facilities have also been expanded to meet the growing traffic, increasing by about 5-6 percent per year, particularly of foreign cargo using large vessels and of similarly larger cruise ships that have already booked their arrival for the whole of 2017.

Ongoing projects include a 60-m wharf extension on the south side which is slated for completion by the end of 2016; one additional RoRo ramp to supplement the existing one; bulkhead cum back-up area recently completed and has yet to be used as berthing area as well; and the expansion of the existing Passenger Terminal to increase its capacity from 300 to 500 passengers at any one time. These projects, coupled with PPA's recent directive to shipping lines disallowing any storage or prolonged parking of both empty and loaded containers inside the port, are expected to provide adequate available space for both handling of cargo (both containerized and bulk) and berthing of vessels, even larger vessels, for several years to come.

Container handling efficiency is considered normal at about six containers moved per hour from the ship's deck using an on-board crane onto the quay. Some vessels have two or three on-board cranes facilitating unloading/loading of container cargo. As a matter of PPA policy, pure cargo vessels have 24-hour free berthing (from docking) to unload and load cargo. Ropax ships have a maximum of three-hour free berthing to unload/load passengers and cargo. Beyond the free berthing time, additional charges are levied on ships for every additional hour of docking.

As a matter of practice, PPA initiates a preparatory meeting of all concerned parties when new vessels including cruise ships are arriving or regular customer vessels carry out-of-the-ordinary cargo that will be unloaded at the port. The vessel's local agent, the cargo handling operator, and the cargo consignee or cargo forwarder together with its hired trucker are called to a meeting at least a week prior to the ship's arrival to discuss and agree on the time and cargo handling procedure in and out of the port. The meeting normally generates each party's commitment in terms of time and its share in efficiently moving the cargo and provides an opportunity to thresh out any issues/concerns that any party may have with each other.

For international cruise ship arrivals, additional parties are called to join the meeting, including the City Tourism Office, the association of local hotels and restaurants, the local city police, the association of car rental shops, the association of tricycle drivers/owners, the association of souvenirs shops and boutiques, and the officials of the Poblacion area *barangays* to make sure that all parties are properly briefed of their expected roles and responsibilities during the stay and movement of cruise ship's visitors. Cruise ships visited Puerto Princesa six times between February and mid-May 2016 for about 6-8 hours stays of about 1,000 foreign visitors.

Residents of remote coastal *barangays* in the city and some island municipalities in Palawan come to Puerto Princesa using wooden-hull vessels and small motorized boats to sell fishery products, buy household supplies, and avail of services in the city. Many residents of Iwahig and Mangingisda, two coastal *barangays* located northwest and southeast, respectively, across the bay, use commercial motorized boats to reach the Poblacion, paying Php30 and Php35 fares per person for a boat travel of about 30 minutes. They spend about 1.5-2.0 hours and pay almost double in transport fare should they use public land transportation through the round-about route in the bay. Fishermen and residents of the island Municipality of Araceli (200 km east of the city) and of Cagayancillo (329 km north of the city) also come to the city by sea for the same reasons. The boat landing point is the city's fish port (with a marginal wharf and a connecting concrete

bulkhead), which has separate areas for boats carrying fish and those transporting people and dry cargo.

A small market hall located further inland at the port serves as the dealing area of fish suppliers with traders who also maintain individual stalls-cum-makeshift-offices in and around the market. Higher grade fish are sorted and repacked with ice in styro wood-supported boxes and brought to the airport for transport to a Manila consignee. Similarly, other ordinary-grade fish catch are sorted and repacked the same way but in larger styro wood-supported boxes but brought instead to the PPA seaport for shipment to a consignee in Manila as well. Of note is a trader and stall renter who buys octopuses of a specific size and processes them for export to Taiwan through the PPA seaport using reefer vans every two weeks, particular between July and December when octopuses are abundant.

The fish port is a revenue generating enterprise of the city government. It generated a net income of Php1.7 million in 2015 mainly from rentals, boat docking, vehicle parking, and user fees. The main fish port maintains satellite ports in four coastal *barangays*. These satellite ports, which provide a similar service and collect similar fees, are also connected to the main fish port through a two-way radio communication system as the four *barangays* have poor cellular phone signal. Comprising of non-permanent buildings, except for the market hall, the main fish port as a whole is fairly well-managed and offers appropriate services to the sector.

Based on the city mayor's plan, the current fish port will be replaced by a larger fish port complex, which will be constructed and developed at the same site, reportedly as a joint-venture of the city government, National Development Corporation (NDC) and a private investor. Because of the high risk involved and the uncertain supply of caught fishery products, the city government was advised to move slowly and cautiously before deciding to proceed with the project.

The leaders, particularly private business groups, have raised the following concerns on PPA's Seaport and the City Fish Port:

- **Inadequate equipment of the cargo handling operator at the port**

Prudential Customs Brokerage Services, Inc. (PCBSI) was awarded a 10-year contract in 2007 to provide cargo handling services at the port. The contract gives the operator the exclusive right to provide stevedore services for certain fees (approved by PPA) to all cargo of ships that call on the port. The contract also requires the operator to provide appropriate cargo handling equipment necessary for efficient handling of both containerized and general cargo at the port. PCBSI, however, has inadequate cargo handling equipment and, when available, is of low capacity or is in disrepair according to local managers of major shipping companies and members of the Palawan Chamber of Commerce and Industry. Some shipping companies are forced to provide their own equipment to properly handle their cargo and to complete the tasks within the allowable time period at the port. While shipping companies have requested for reimbursements from PPA, the latter appears to be slow in acting on it and in instructing the cargo handling operator to pay.

This issue with the cargo handling operator has been known to PPA but it has not taken any action to address it to date. This issue, if left unresolved, would disadvantage shippers who could have had more efficient handling of their cargo and could have asked for a better discount from shipping companies had cargo handling been more efficient.

- Disrepair of PPA’s weighing scale at the port**  
 Due to the poor condition of PPA’s weighing scale, shipping lines must rely on the weight load indicator of their crane to determine the actual weight of cargo inside each container. This weighing method, though sufficient for the purpose of knowing container loads and appropriately placing loads to attain proper weight and balance on the ship’s hull, is not compliant with international standard practice. PPA needs to repair the weighing scale immediately to conveniently weigh cargo as they come into the port area before they are lifted and properly placed inside the ship.
- Inadequate consultation on policies being implemented at the port**  
 PPA has recently issued an order disallowing the storage of empty containers inside the port premises. Although supportive of PPA’s efforts to decongest the port, shipping lines that have stored empty containers at the port complained of the short lead time given to comply with the order and to identify and develop suitable yards where they can transfer their empty containers. The LGU officials also wished they were consulted and informed way ahead of PPA’s order so that they could guide shipping lines with suitable general locations for establishing their storage yards so that movement of their trucks would create minimal contribution to traffic congestion.

To prevent a similar situation in the future, PPA should initiate convening the PMAC more often (i.e., every quarter, rather than every six months). Regularizing the meetings, even in the absence of any serious or urgent issues, would give community leaders the opportunity to interact with and give feedback on matters of port operation including the status of PPA’s projects and programs.

- Unclear liability of small commercial fishing vessels and motorized passenger boats in case of accidents**  
 There is also a concern about the wooden-hull commercial boats providing sea transport services to passengers and cargo at the city’s fish port. Made of wooden hulls, these boats cannot be registered with Maritime Industry Authority (MARINA), which requires ships to be of steel hull. Without MARINA registration, insurance companies refuse coverage, thus making the boat operators not legally liable to their customers in case of accidents. These boats, however, are registered with either the city or the municipalities where they originate. The registration paper of these commercial boats need to be reviewed to make sure that there is stipulation therein on the legal liability of the boat owner/operator in case of accidents, particularly its obligation to compensate affected parties.

### *Recommendations*

- Provide technical support to review the Puerto Princesa Fish Port Complex**  
 The city may wish to review the feasibility study for the Puerto Princesa Fish Port Complex project. If requested, SURGE can assist in reviewing the study so that the city can decide thereafter.
- Strengthen regulations on shipping operations**  
 The city has to review the regulations in the registration of wooden-hull passenger and fishing boats, especially as regards the liability of operators in case of accidents.

### 3. Land Transport Connectivity

#### *Assessment*

#### National Roads

National roads in Puerto Princesa City are under the jurisdiction of DPWH Palawan Engineering District 3, which covers the city and the neighboring Municipality of Aborlan. DPWH-Palawan District 3 is fully staffed with professional engineers who appear to competently manage their responsibilities for the total of 232 km (substantially paved) national road links in the city including the following critical national roads in the city proper:

- Rizal Avenue and Rizal Avenue Extension, which stretches a combined length of 4.72 km on an east-west direction. It conveniently divides the city proper into north and south components and connects the airport and the seaport on each end. The Rizal Avenue leg (1.72 km) serves as the primary artery of the city's business and commercial activities;
- Malvar Street, which is a 2.45-km road stretch from the seaport towards northeast direction until the junction with the North National Highway and serves as an alternate route to Rizal Avenue in going from the north directly to the seaport;
- North National Road, which originates from the junction with Rizal Avenue (Km Station 0.0 which is also called Junction 1) and stretches northward, passing through the junction with Malvar Street (Km Station 1.5 which is also known as Junction Caltex) and with the South National Highway (Km Station 2.8 and also known as Junction 2), and proceeds to the rest of the city's rural barangays; and
- South National Road, which starts at Junction 2 and proceeds northwesterly towards the city government center where the City Hall and several government agencies, the main campuses of the Western Philippine University and the Palawan State University, a new township in the adjoining Barangay San Jose where the main City Bus Terminal, and an alternate city public market are located.

Ongoing projects consist of road concreting with asphalt overlay, road widening, road shoulder concreting, or drainage works (both lateral and cross-over drainage improvement) in several sections of Rizal Avenue (almost completed), Malvar Street (in advanced construction stage), North National Highway, and South National Highway. These four roads, together with the Rizal Avenue Extension, serve as the main arterial road links where all the city's road network in the main Poblacion and its suburban area is connected.

#### Local Roads and Traffic Management

Based on the City Engineer's inventory, Puerto Princesa City has a total of 209.2 km of urban roads, consisting of 683 road links ranging in length from as short as 50 m to as long as 3 km with an average of 306 m in length. Less than half of these are paved with Portland Cement Concrete and asphalt with a 96.60-km combined length in good condition and 11.38 km in bad condition. Total unpaved/gravel road length is 94.85 km in good condition and 7.4 km in bad condition. Rural roads or farm-to-market roads identified and prioritized for improvement by the City Agriculturist have an aggregate total length of 360 km, consisting of 117 road links ranging in length from 0.5 km to 18 km with an average of 3 km in length.

Road improvement has not progressed much to date even after a new city administration took over in 2013. The incumbent city mayor who was re-elected in the May 2016 elections was constrained in proceeding with development projects because of an uncooperative City Council, the majority of whose members were not allied with him. The re-elected city administration is now more confident that the new city council, whose members are all his allies, will be more supportive and cooperative in pursuing development projects for the city.

Complicated political dynamics in the last three years affected key personnel appointments in the city government, particularly in the City Engineering and City Planning offices and their productivity and work environment. This is evidenced in the non-application and, therefore, non-renewal of the City Government's ISO 9001 certification. Project delays were also encountered.

Under strict orders from the city mayor to reform, the city engineer stated that they are now preparing the programs of work for farm-to-market road concreting projects and the improvement of roads to provide access to tourist destinations. This plan is consistent with the mayor's priorities which will be included in the city's Annual Investment Program for 2017. The city road concreting projects that need detailed designs and cost estimates that could be submitted for funding under the bottom-up budgeting (BUB) program and/or the Kalsada Program of DILG and the Philippine Rural Development Program (PRDP) of the Department of Agriculture (DA) are important.

Under the latter, the city Agriculturist was able to access funding for two farm-to-market road projects in Barangay Langogan, where an 8-km road concreting is already about 30 percent complete, and in Barangay Simpocan, where a 3-km road concreting has yet to be started by the winning project contractor. Another project submitted for funding consideration is the proposed Maruyugon-Lugbuan-Buenavista Road project, a 14.05-km road improvement project that will benefit 5,670 residents and farmers including indigenous people's groups and those growing lowland rice, banana, vegetables, coconuts, mango, cashew, rambutan, and lanzones in four rural barangays.

The city's counterpart funding of Php29.9 million (10 percent of the total project cost of Php299.05 million) has already been budgeted even while the project is now under review by the PRDP project management office.

The five major national roads and the connecting city road network are experiencing traffic congestion throughout the day almost every day because of the large number of passing vehicles (mostly tricycles) and the lack of discipline among both motorists and pedestrians, even in the presence of traffic enforcers. Despite road widening works to have three- to four-lane highways on the five national road links, which all cut across fully inhabited and commercialized districts, traffic congestion has not improved because motorists use the additional concreted lane or shoulder as vehicular parking space.

The city government has tried some measures to ease up traffic congestion during work days by implementing truck bans in all city roads during rush hours. The truck ban periods are being enforced and accordingly observed by truckers and cargo forwarders of shipping lines, although grudgingly because they are forced to work overtime in loading/unloading cargo and pay necessary overtime premium to their workers.

In another strategy, under a city ordinance, the 4,000 city registered tricycles were divided into two groups of 2,000 each. One group would have white-colored tricycle bodies and the other with blue-colored bodies, such that one color will ply the streets Monday-Wednesday-Friday and

the other color Tuesday-Thursday-Saturday, with Sunday being a free-for-all day. At the initial stage of implementation, tricycle groups observed the color-coding scheme as they experienced an increase in income, which could conveniently compensate for their non-working days. For a time, the scheme was successful and it eased traffic congestion. Unfortunately, the scheme was not sustained because non-registered or *colorum* (illegal public land transportation) tricycles proliferated without being apprehended, which competed for passengers and income of legitimate tricycle drivers. At present, tricycles of various colors – blue, white, green, and red, – are seen freely plying the streets competing against each other and against other motorists for space within the congested main thoroughfares.

The city government has recognized the seriousness of the traffic congestion problem and solving it is the paramount priority of the current administration. Hence, the city government requested for the assistance of the SURGE Project to address the issue.

### Intermodal Transportation Linkage

#### **Road Transport Vis-à-vis Air Transport**

The development of Puerto Princesa City airport would surely encourage more tourists to visit Palawan, which would mean new concerns for the road network. The location of the new access road to the airport is located along Puerto Princesa's North Road, and not Rizal Avenue, which means that passengers bound for north or south of the city center can go straight to the North Road or South Road without passing through the congested city center. Nonetheless, coordination is needed between and among the Regional Office of the DPWH, the city government, and the Airport Project Management Office for the proper planning and execution of road widening, road geometric design, right-of-way acquisition, and traffic management at the intersection between the airport access road and the national highway.

#### **Road Transport Vis-à-vis Sea Transport**

The PPA and the city government need to collaborate to address the problem of worsening traffic situation and changing transport modes. For instance, PPA has programmed developmental projects for the port to address the issue. The city government, on the other hand, must also plan for a Cargo Distribution Center and encourage private business groups to invest on it to eliminate the need for container trucks to enter the city center to transport goods. City roads are relatively old and may not be able to handle the heavy axle loads of the container trucks for long. Moreover, the geometric design of the city streets makes it particularly hard for long container trucks to maneuver, thereby also causing traffic snags and congestion. It will also be good if a diversion road (along the coastline) can be constructed so that cargo trucks do not have to pass through the busy streets of Rizal Avenue and Malvar Street.

#### **Road Transport Inter-Connectivity**

The existing Integrated Bus Terminal and Integrated City Market are concrete actions to promote trade and inter-connectivity. The roads going thereto, however, must also be carefully planned such as their alignments and designs, not only the pavement but also the shoulders, embankments, and drainage systems, which are almost non-existent in the roads outside the city center.



## Road Transport Services

There are wide-ranging road transport services in Puerto Princesa City, from for-hire motorcycles to provincial buses. There are a number of spots in the city where tourists can rent a motorcycle for a day so that more adventurous tourists can visit scenic spots at their leisure.

Riding tricycles usually serve as the main means of transportation going around the city. Their areas of operation, however, are disorganized unlike in Metro Manila where tricycles are organized into associations within their own specific areas of operation (usually a *barangay*). Currently, the city has authorized the operation of 4,000 tricycles, which is the cap for the number of tricycles in the city.

There is also the UV Express service (formerly called GT Express), which connects the city with nearby municipalities. These vehicles are sometimes hired by groups of tourists for more comfort in going around the province to visit various tourist spots.

For longer trips to far-flung municipalities, regular bus services emanate from Puerto Princesa City. The city has constructed their Integrated Bus Terminal so that buses do not have to go to the city center and add to the traffic congestion.

Constructed beside the bus terminal is the New City Market. The site is located along the North Road, some five kilometers from the city center. Although the market complex was constructed by the city government, its operation and maintenance have been privatized. The maintenance of the complex, however, is not on par with other bus terminal/market complexes. The roads are potted and dusty, and the pavement is scoured in many places.

The strategic location of the bus terminal and market complex can further be maximized by developing a commercial complex like a mall, which can cater to the travelers and traders who come to the city. There is still a vacant lot in front of the market complex, which is right along the national highway. Such development can be best left to the private sector to invest in.

As in almost all urban centers in the country, there has been a surge in vehicle ownership in Puerto Princesa. From a total of 27,796 vehicles registered in 2007, the number of vehicles increased to 39,900 in 2012 (*Table 5*). Motorcycles and tricycles make up more than 75 percent of the vehicle population.

**Table 5. Motor Vehicle Registration, Puerto Princesa LTO District Office, 2007 -2012**

	CARS	UV	SUV	BUSES	TRUCKS	MC/TC	TRAILERS	TOTAL
2007	615	4,602	350	101	1,029	21,076	23	27,796
2008	727	5,304	521	114	1,402	25,726	20	33,814
2009	644	5,295	548	150	1,798	24,559	16	33,010
2010	693	5,290	623	153	1,367	23,523	18	31,667
2011	731	5,504	670	158	1,391	27,417	23	35,894
2012	900	5,785	674	228	1,467	30,827	19	39,900

\*MC/TC – motorcycle/tricycle

Source: Department of Transportation and Communications, Information Systems Division

## Recommendations

- **Improve traffic management and planning in the Central Business District (Immediate-term measures to address traffic congestion)**

The city should implement the following: strictly enforce regulations on "no parking," loading and unloading zones; apprehension of *colorum* tricycles; and, two-color scheme for tricycles. The city government should prepare a traffic management master plan, which may consider the following: revising the traffic ordinance to disallow tricycles on major roads at certain periods of the day; amending the tricycle franchise ordinance to include confining tricycle movement within a particular route or group of barangays; and organizing and capacitating a separate department in the City Government for effective administration of traffic. ***SURGE Project may provide assistance to the city in developing the traffic management plan and formulating strategies for effective enforcement of traffic ordinances.***

The city mayor should consider creating a City Transportation and Traffic Management Task Force through an Executive Order to provide a mechanism for tasking, problem-solving, and monitoring all actions to address traffic congestion. The Task Force may be composed of city officials, jeepney and tricycle operator's/ drivers groups, DPWH, PPA, CAAP, Philippine National Police, utility companies, and private business groups. ***SURGE Project may provide assistance to create, convene, and operationalize the task force.***

- **Provide technical support for national road improvements (Medium-term measure to address traffic congestion).**

The city mayor (through RDC IV-B) may request the DPWH for the improvement of three major national road intersections: Rizal Avenue and North Highway junction; Malvar Avenue/Wescom Road and North Highway junction; and South Highway and North Highway junction. ***SURGE Project may assist the city to prepare project profiles including indicative cost estimates for use in submitting the projects for RDC IV-B endorsement to DPWH and then, to follow-up appropriate DPWH offices.***

- **Prepare project proposals for farm-to-market roads improvement**

The city government may advocate to DA for the approval of the proposed Maruyugon-Lucbuan-Buenavista Farm-to-Market Road project (14 km) under the WB-PRDP and should continue improving other farm-to-market roads. ***SURGE Project may provide technical assistance to the City Government and PRDP in the prioritization of other proposed roads, identify funding streams, and package projects.***

- **Organize and capacitate community-based project monitoring group**

The City Agriculturist, City Tourism Office, or City Economic Enterprise Department, for instance, should organize the beneficiary communities to help them monitor project construction. A group from among the community leaders can be created and trained on basic monitoring skills so that they can regularly "check" on construction activities. This monitoring group should be constituted by and under the authority of the *Barangay* through a council resolution, a copy of which should be furnished to the agency's project engineer supervising the project. A simple reporting system in the form of a text message, using the *barangay*-owned cellular phone, or by a radio call, using the *barangay*'s two-way radio equipment, can be sent on a regular basis to the end-user department's to inform the latter about the progress of the work and related concern/issue in the field, if

any. The end-user department's personnel should also visit the project site to check for themselves the actual progress of the work.

- **Formulate a traffic management plan for the city proper and adjoining sub-urban districts**

Nobody in the City Traffic Management group or the City Engineering Department or Office of the City Mayor has any blueprint or plan that can be followed in executing measures to attain smooth traffic flow in the city proper. There is no Traffic Management Plan that is detailed enough which they can refer to in addressing traffic congestion in major thoroughfares.

There was supposed to be a Traffic Management Plan for Puerto Princesa City prepared by consultants from the University of the Philippines in 2014 under the auspices of the League of Cities of the Philippines and funded by the World Bank. According to officials who are knowledgeable of the plan, however, the plan is too general and does not contain much in terms of addressing traffic congestion.

- **Organize and capacitate a separate department under the city government organization for traffic management and administration**

The task for traffic management and administration is lodged in the traffic management group, which is a special program under the Office of the City Mayor. It is staffed by one traffic group's head (regular employment) and two assistants (contractual employment), and supported by 12 administrative staff and 76 field traffic enforcers who are all "casual" (paid daily) workers of the city government. However, nobody from among the 91 workers has had formal training in traffic planning and management. The head and the two assistants have attended seminars for a few days but these were not extensive enough to provide them with competencies in traffic planning and administration.

According to the traffic group's head and the Program Director for Public Order and Safety Program, which has jurisdiction over the traffic management group and directly reports to the city mayor, they need more resources to effectively discharge their duties and help address the traffic problem. They need additional manpower and equipment, such as two-way radios, motorcycles, and a CCTV system for remote monitoring of traffic situation on all road intersections.

There is a need to convert the Traffic Management Group as a separate unit/ regular office either as a department or division under a larger office, such as the Department of Public Order and Safety, rather than under the Office of the City Mayor. This proposed office should have its own budget and regular plantilla positions so that it can be handled by dedicated workers who can effectively function and perform their duties and responsibilities.

#### **4. Telecommunications and Digital Connectivity**

##### *Assessment*

Telecommunication companies, PLDT/Smart and Globe Telecom, have reached the Palawan Island, including Puerto Princesa City, with their respective telecommunications network or backbone. Each has connected its Palawan network through submarine cable that connects to their individual lines either or both in Antique/Capiz and Mindoro Occidental. Their lines are made of high capacity fiber optic wires, which is less expensive and more durable, or copper wires,

which are slowly being phased out and replaced by the former. Their distribution lines are extensive in the city proper and becomes sparse going to the sub-urban districts toward the coast and the rural *barangays*. This pattern follows the availability of their services for landline telephony and internet connections.

Using microwave signal through their respective network of cellular sites, both telcos have also covered the city proper and majority of barangays, except for a few coastal areas in the southwest, northwest, and northeastern sides (for Globe only) of the city. In the covered areas, both cellular telephony and internet services are available for subscription. The two telcos are confident that they will have a wider and stronger signal now that they have acquired the 700 MHz radio band from San Miguel Corporation.

Of particular interest are the barangays on the southwestern coastal areas covering *Barangays* Napsan, Bagong Bayan, and Simpacan, where residents have been clamoring for cellular phone and internet signal from each telco. Residents have been speculating the development of their for tourism because of a recent acquisition of about 10,000 hectares of raw coastal land by the SM Group who is reportedly planning to develop a new tourist township in the area. Smart has already applied to the city government for a permit to construct a cellular site at Mount Salacot, the highest peak in the area, to cover the three unserved barangays. For more environment-friendly activities, Smart was advised by the concerned authorities of the city to design a tower of moderate height to avoid constructing a deeper concrete foundation, in as much as the place is already of high elevation. Smart is targeting to complete its cellular site facilities within 2016 so that it can fire up signal beginning in 2017. Globe, on the other hand, will establish its cell sites conditional on the development of SM's properties in the area.

Cellular phone signal is also weak, very weak, or intermittent in rural production areas where farm-to-market road improvement projects are being implemented or proposed by the City Agriculturist. Some of these areas are those in Barangay Langogan, Barangay Sipacan, and in Barangays Maruyugon, Lucbuan, and Buenavista, which were also mentioned in the Land Transport Connectivity section of this report. The means of communication in these barangays is mainly through the two-way radio system of the city government, which connects all 66 barangay offices and officials with the base station located at the city hall.

The city-wide two-way radio system serves as an alternative means of communication in barangays where cellular phone signal is available and as the primary means of communication to all other barangays unserved or underserved by the telecommunication companies such as those in the priority production areas being assisted by the City Agriculturist and the satellite fish landing villages of the City Fish Port as mentioned earlier.

The radio system connected to the police stations and detachments and the Command Center of the City Disaster Risk Reduction and Management Office is being used as the primary means of communication for information transmission on matters of security, safety, and emergency especially to remote rural barangays. Also, a commercial AM radio signal is available in remote barangays, through which people can receive messages and informational services from concerned groups and agencies.

Like all the other cities, the local managers of the two telcos have raised a similar concern on the long process for securing permits from the LGUs, both barangay and city, for the construction and installation of their cellular phone site facilities. The process is very bureaucratic and cumbersome, not to mention costly to cover informal fees/charges, to completely get the necessary permits.

## *Recommendation*

- **Simplify the permitting process for constructing and installing cellular sites**

The city government may wish to address the concern of telecommunication companies to streamline the regulations and approval process for the issuance of permits to construct and install cellular sites. ***SURGE Project may provide technical assistance to the city government to explore simplifying the permitting and approval process.***

## **C. Iloilo City**

### **1. Air Transport Connectivity**

#### *Assessment*

The Iloilo International Airport, as the primary gateway to the city and province, is critical to the economic growth of the area as tourism activities have geared up in recent years. The aggressive promotion made for Iloilo by the provincial and city governments as a major tourist destination with more variety and exotic offerings, together with the development of first-class infrastructure, more heritage sites, and world-class beach resorts in the northeastern side of the province, largely contributed to the increase in arrivals of both international and domestic visitors.

Total tourist arrivals in 2015 stood at 957,090, a 41 percent increase from 2014 total arrivals (676,287). Of the 2015 arrivals, the number of foreign tourists reached 42,677, which dramatically increased from 8,192 in 2014. Most of the foreign tourists are Koreans (26,807 visitors) and residents of Hong Kong (6,803). This surge can be attributed to the operation of low-cost direct flights from Iloilo to both Singapore and Hong Kong by Cebu Pacific since 2012.

More tourist sites and circuits are still being developed in order to attract more visitors as being targeted by the City Tourism Office and the Province. Aside from the entertainment, leisure and services offerings of Iloilo City, the tourism office is promoting Meetings, Incentives, Conventions, Exhibitions/Events (MICE) tourism in pursuing more visitors.

The existing international airport, an instrument landing airfield, is located in the Municipality of Cabatuan, about 20 km north of the city. It is connected to the city proper through an 8-lane highway known as the Iloilo Diversion Road (now officially called Senator Benigno S. Aquino, Jr. Avenue), which afforded unencumbered and faster passenger transfer (20-minutes average travel time) to the airport. It used to be a small domestic airport located in the heart of the city in Mandurriao district until it was relocated, developed, and fully completed using national government funding in June 2007.

Total passenger traffic in 2013 stood at 1.87 million passengers and cargo traffic at 12.6 MT, which already exceeded the projected traffic for 2015 – 1.67 million passengers and 11.4 MT of cargo based on a JICA study. In fact, in 2010, three years after the new airport was commissioned, the passenger traffic of 1.58 million passengers already exceeded the projected traffic for that year based on the same study.

To prevent congestion resulting in the increasing large volume of passengers and cargo traffic, CAAP has stretched the operation of the airport to 18 hours daily, from 5:00 AM through 11:00 PM to allow more time slots for aircraft landing. Further extension of operating hours is an open option, according to CAAP, to accommodate more aircraft landings as demand continues to

increase. A potential demand for direct flights from Incheon, South Korea is also growing as more Korean visitors are coming to Iloilo for leisure and for study of English.

Based on information from the Iloilo Province Tourism Office and from the local CAAP office, two domestic airlines, namely Cebu Pacific Airways and PAL, serve Iloilo City for six domestic destinations and two international destinations. PAL provides a total of 40 flights per week to three domestic destinations and no international destination. This includes five flights daily to Manila; three flights a week to Cebu; and two flights a week to General Santos City. On the other hand, Cebu Pacific provides a total of 92 flights a week to six domestic destinations and six flights a week to two international destinations, consisting of the following: six flights daily to Manila; four flights daily to Cebu; two flights daily to Davao City; two flights in a week to Cagayan de Oro; three flights per week to General Santos City; three flights per week to Puerto Princesa; three flights per week to Singapore; and three flights per week to Hong Kong.

The airport is one of five regional airports that are being bundled for public-private partnership (PPP) offering by DOTr. Most recent information from DOTr indicates that the five airports will be offered in three bundle packages consisting of the following: Bacolod Airport and Iloilo Airport as one bundle package; New Bohol (Panglao Airport) and Laguindingan (Cagayan de Oro) Airport as another bundle package; and, Davao Airport as a standalone package. Plans for expansion of airport facilities were put on hold so as not to complicate the PPP offering.

Some of the key officials and stakeholders have raised the following concerns regarding the new airport facilities:

- **Lack of awareness among stakeholders on the scope of the airport project**  
Based on the project brief gathered from the PPP Center website, the investment requirements for the development, operations, and maintenance of the Iloilo Airport, estimated at Php30.4 billion, for PPP offering include:
  - Expansion of the passenger terminal building;
  - Expansion of the cargo terminal building;
  - Construction of parallel taxiway (including taxiway shoulders);
  - Expansion of key facilities such as car parking and administration building; and
  - Operation and maintenance for 30 years.

The LGU officials, business groups, and other stakeholders have also limited knowledge of the PPP offering of the project. Important concerns are being raised, including, among others, an apron expansion, which is not in the project investment requirements, may be necessary; security of tenure of affected CAAP employees; fair share of government on fees and charges; specifications of the required expansion of buildings to ensure quality work and adequate available space; and oversight role of the provincial and city governments during the concession period.

- **Unclear status of the PPP offering of the airport project**  
The Iloilo Airport and the Bacolod/Silay Airport are bundled in one offering under the Duterte Administration and are one of three packages for five regional airports as mentioned earlier. Based on earlier available information from DOTr, the five regional airports were originally bundled in only one package but, for undisclosed reasons, were later split into two packages, namely the Bacolod-Iloilo Airports bundle package and the New Bohol (Panglao)-Laguindingan-Davao Airports package. In the latter part of the Aquino Administration, the two packages were officially offered for bid solicitation and the

deadline was twice extended, until it was notified in February 2016 that submission was indefinitely extended. In July 2016, the PPP Center further adjusted the airport bundles into three packages as mentioned above.

Moreover, available DOTr information indicates that the new bundled packages will be re-submitted to the NEDA – Investment Coordination Committee (ICC) for another round of approval process. The Bacolod-Iloilo airports bundle, however, may not be re-submitted anymore as it was already approved by NEDA-ICC under the previous administration. The new bundled packages will also pass through a solicitation for comments from the five pre-qualified bidders and the official solicitation of bids will follow. Based on news reports and on an interview with DOTr Airport Planning staff, the common pre-qualified bidders for each of the five airport projects are as follows: Filinvest-JATCO-Sojitz Consortium, GMR-Megaworld Consortium, Maya Consortium (Aboitiz and VINCI Airports), Philippine Airports Consortium (Metro-Pacific and Aeroports de Paris), and SMHC (San Miguel Holding Corporation)-Incheon International Airport Corporation Consortium.

The information on target period and timetable for the approval and bidding/award process is unavailable from DOTr. Without a definite timetable on the target completion of the PPP offering, various stakeholders have been left hanging with their plans pending. This has particularly affected tourism-related businesses in terms of prospects and future investments, CAAP employees in relation to their employment tenure, and LGUs in relation to their tourism promotion and investment activities.

### *Recommendation*

- **Recommend the participation of concerned groups in the Regional Development Committee Meetings where the Iloilo International Airport will be discussed**  
RDC VI Infrastructure Committee should invite DOTr to provide regular updates on the PPP offering of the Iloilo International Airport and make sure that private business groups, particularly the Iloilo Business Club, are regularly invited to the meetings.

## **2. Sea Transport Connectivity**

### *Assessment*

The Iloilo Seaport, considered as a base port by PPA, serves as the hub of sea transportation not only for the city but also for the entire Iloilo Province. The port complex, which has both riverine and marine docking structures, consists of:

- Loboc Port (also known as Iloilo International Container Port), on the northeastern side of the Iloilo Strait in Lapaz District, which is used to service international and domestic container and bulk cargo ships;
- Fort San Pedro (also called Iloilo Domestic Port), on the southeastern side of the strait, which is used to service domestic cargo and passenger ships;
- Fast Ferry Complex, consisting of a landing structure, a platform, and a RoRo ramp, on the north side of Iloilo River in Barangay Progreso in Lapuz District, which is used to service fast craft ferries plying Iloilo-Bacolod and RoRo vessel for Iloilo-Guimaras;

- A marginal RoRo ramp, also on the north side of the river on Rizal Street, which is a dedicated structure franchised to FF Cruz Shipping for servicing of its light craft tank (LCT) barge also plying Iloilo-Guimaras; and
- Iloilo River Wharf, on the south side of Iloilo River on Muelle Loney, which is used to service general and breakbulk cargo of chartered vessels.

Inbound cargo, which represents about 80-84 percent of the total cargo traffic, includes, among other things, cement coming from domestic sources and abroad (Vietnam and Thailand) that is used in the construction of large public works and private structures in the city and the rest of Iloilo Province. Other major inbound cargo are steel bars and metal products from Cebu and vegetables from Cagayan de Oro. Large incoming volume of cement and construction steel materials are indicative of the recent surge in construction activities in Iloilo City. Outbound cargo, comprising about 16-20 percent of total cargo throughput, includes, among other things, fresh and dried fishery products and mineral ore from sources in Iloilo Province.

Several domestic shipping lines (for both cargo and passengers) call at the Iloilo Port, servicing various routes:

- Iloilo-Cebu route: served six days per week by Trans-Asia, Cokaliong, and 2Go Travel;
- Iloilo-Manila route: served three days per week by 2Go, with one day connected to the Iloilo-Cagayan de Oro route;
- Iloilo-Palawan (in Cuyo and Puerto Princesa) route: served four times per week by Montenegro and Milagrosa Shipping;
- Iloilo-Bacolod route: served twelve times per day by Weesam Express, Supercat, and Oceanjet; and
- Iloilo-Guimaras route via RoRo ships: served seven times per day by FF Cruz and Montenegro Shipping.

The current berth occupancy ratio of Loboc Port is estimated at 80 percent in 2015 and is nearing congestion. A berth extension project has already been planned and is awaiting approval from the PPA Central Office so that it can be implemented.

PPA's most recent projects include the repair of the Iloilo River Wharf along Muelle Loney and the expansion of the passenger terminal building in the fastcraft terminal complex to provide more convenience to the growing passenger traffic in the Iloilo-Bacolod route. About three years ago, the new Fastcraft Terminal complex was constructed to give way for the improvement of Muelle Loney on the south side of the river, where the former fastcraft terminal and docking spaces were located. These projects were in tandem with PPA's recent directive to shipping lines disallowing any storage or prolonged parking of both empty and loaded containers inside the port provide adequate spaces for both handling of cargo and berthing of vessels.

The Iloilo City Government has two landing structures that service outrigger boats plying the Iloilo-Guimaras routes. The Ortiz landing structure, immediately behind the City Hall building, serves outrigger boats going to the Municipality of Jordan (capital of Guimaras Province) at an interval rate of 15 minutes for a total of about 60 trips daily starting at 5:30 a.m. through 7:30 p.m.. The other one is the Parola landing structure, at the Rotary Park in Fort San Pedro, which serves outrigger boats going to the Municipality of Buenavista, another town in Guimaras Province, also at an interval rate of 15 minutes for a total of 60 trips daily starting 5:30 a.m.



through 7:30 p.m. At both landing points, there is no other facility for passengers other than the concrete landing structure or masonry wall on the seashore.

Recently, a ferry terminal complex called the Guimaras-Iloilo Ferry Terminal (GIFT) project has started construction at the Rotary Park with an estimated cost of Php135 million. The project, consisting of a concrete boat landing structure with a passenger terminal building cum commercial mall and full site development amenities, is a joint venture of the city government with Double Dragon Properties, a private property developer based in Iloilo City. When completed, the developer will operate and maintain the terminal complex for a period of 25 years and charge Php11 terminal fee per passenger aside for the right to commercially operate the mall. As of July 2016, the GIFT project is about to be completed and waiting for the building and occupancy permits from the City Engineering Office.

Some concerns have been noted regarding the operation of the Iloilo Port and the landing structures in the city. These include the following:

- **Inadequate consultation with stakeholders on PPP projects**

A number of stakeholders, particularly business groups like the Iloilo Business Club (IBC) and local shipping companies, have limited information of PPA's projects at the seaport. As the development of the boardwalk and riverside slope protection work on Muelle Loney is being undertaken by DPWH, a concern has been raised on whether the docking structures on the riverside will eventually be closed.

Owners of business establishments and warehouses along Muelle Loney are concerned that chartered vessels, which currently dock on the riverside port bringing their cargo, will experience difficulty and delay in finding convenient docking space if the riverside docking structures on Muelle Loney will be closed. These businesses' chartered cargo vessels are normally of less priority for a berthing slot at the Loboc Port or at Fort San Pedro. They are interested to know where PPA can assign alternative docking areas for their chartered vessels, assuming that the Muelle Loney river wharf will be closed. They want to know as well PPA's timetable in the implementation of the berth expansion at the Loboc Port so that they too can plan their future business activities and prospects.

PPA should convene the PMAC on a regular basis (at least quarterly) and always invite local business groups, shipping company associations, the city government, and other national government agencies with complementary and PPA-related activities such as DPWH and MARINA.

- **Opposition of the Guimaras Provincial Government and a private professional group to the GIFT project**

Published news reports showed that the Guimaras Provincial Government and the lawyer's group in that province are opposing the GIFT project, a joint venture of the Iloilo City Government and a private property developer. They are against the terminal fee of Php11 per person that will be charged to passengers who are generally from Guimaras, which will allegedly lead to increased prices of goods in Guimaras. It was reported that a compromise has been reached whereby the city government committed not to close the landing structures at both Ortiz Street and Parola so that people have options to use either the Ortiz/Parola landing, which is free of charge, or the GIFT.

The GIFT project was initiated by the Metro Iloilo-Guimaras Economic Development Council (MIGEDC) several years ago, but had not progressed until October 2012 when

the city government pursued the project alone by entering into a joint-venture agreement with a private property developer.

### *Recommendations*

#### **Request the Philippine Ports Authority to convene the Port Management Advisory Council regularly**

The IBC should request PPA to regularly convene the PMAC and to invite them to the meeting so that they can participate in discussion on port matters and projects affecting their members.

### **3. Land Transport Connectivity**

#### *Assessment*

##### National Roads

National roads in Iloilo City are under the jurisdiction of DPWH Iloilo City Engineering District covering all those within the whole city boundary. The engineering district is in turn under the supervision of DPWH Region VI which covers bigger public works projects or those with estimated cost of more than Php50 million, the limit of the contracting authority of the district office. The DPWH office is fully staffed with professional engineers who appear to competently manage their responsibilities for planning, programming, constructing, and maintaining extensive national roads in the city.

Based on available information, national roadlinks in the city have a total aggregate length of 65.6 km, which are all fully paved, and an additional 16 roadlinks in the urban areas, which have been converted from city roads to national roads through acts of Congress initiated by the Iloilo City Congressional District Office. With the assistance of Senator Franklin Drilon, who is from Iloilo City, a number of big ticket road improvement and new construction projects have been recently completed, which has enhanced the physical connectivity not only within the city but also with the neighboring municipalities in Iloilo Province. These roads are:

- Service road and bicycle lane along Senator Benigno S. Aquino, Jr. Avenue to provide complementary parallel roadlinks to short-route vehicles outside of the main 18-km eight-lane thoroughfare connecting the city proper with the airport;
- President Corazon C. Aquino Avenue (formerly, Iloilo Circumferential Road), a 12-km four-lane highway that runs from the west side of the city in Arevalo District to the east side in Jaro District (at Barangay Balabago), effectively bypassing the highly built-up areas of the city and at the same time intersecting the major connector roads including Senator Benigno S. Aquino, Jr. Avenue;
- Iloilo-Capiz Road, a new road construction project connecting Jaro District directly to the northeastern neighboring Municipalities of Leganes and Zarraga in Iloilo Province;
- Iloilo-Dumangas Coastal Road, a road improvement project connecting Lapaz District directly to the northeast neighboring coastal Municipality of Dumangas, whose port (Dumangas Port) now serves as an alternative loading/unloading port for cargo trucks coming from the central part of Iloilo Province to Bacolod City and Batangas City using RoRo shipping without passing through Iloilo City proper;

- Iloilo Radial Road, a road improvement project providing access from Jaro District to the Iloilo River Plains Housing Project, a National Housing Authority project, and then connecting northward while bypassing the town proper of the neighboring Municipalities of Leganes and Zarraga;
- Muelle Loney Bridge, a new two-lane bridge across Iloilo River connecting the new Fast Ferry Terminal complex of PPA at Progreso, Lapaz District directly to Muelle Loney; and
- Iloilo River Slope Protection projects, river training works on each side of Iloilo River between Carpenter Bridge along Donato Pison Avenue and Diversion Bridge along Senator Benigno S. Aquino, Jr. Avenue (total aggregate length of 2.5 km both sides for completed and ongoing sections) and river training work on the Muelle Loney side between the Muelle Loney Bridge and junction with Ortiz Street. The slope protection works between Carpenter Bridge and Diversion Bridge were further developed by the city government into a linear park now called Iloilo River Esplanade 1 (Mandurriao side of the river) and Esplanade 2 (Molo side of the river; halfway complete).

The ongoing and proposed projects consist of road widening, road shoulder concreting, or drainage works (both lateral and cross-over drainage improvement) in various sections of secondary national roads, such as the road widening and drainage works along Lapaz-Mansaya-Loboc section, which connects directly to PPA's Loboc Port.

#### Local Roads and Traffic Management

Based on available information, Iloilo City has a total aggregate of 131 km of city-managed roads consisting of 58 km city roads (fully concreted except for a few access roads to city relocation sites, which are programmed for concreting in 2017) and 73 km barangay roads (about 80percent paved). Roads leading to agri and aqua production areas and new tourist destinations are also programmed for improvement in coordination with the City Agriculturist and the City Tourism Officer, respectively. As a result of the conversion of 16 city urban roads to national roads under DPWH, the City Engineering Office has less responsibility in road maintenance and has thus focused its attention to other public works, concreting barangay roads, and drainage improvement of the remaining city-managed roads.

The present day Iloilo City was chartered in 1937 through Commonwealth Act 158, which incorporated the city proper with the then City of Jaro and the Municipalities of Villa Arevalo, Molo, Mandurriao, and Lapaz (which then included Lapuz as a district). All these later became the present seven districts, which were then natural geographically dispersed settlements.

Because of this natural condition, land transportation infrastructure has developed in a dispersed fashion, providing more room for expansion and avoiding physical congestion in the city as a whole. There is temporary traffic congestion, however, during rush hours due to the convergence of more vehicles servicing people in the CBD, a block or several blocks of urban area where major economic activities happen (e.g., city/district hall-church-plaza area). As the city grows, traffic congestion in the CBD will persist and potentially worsen if the city government is lax in implementing necessary measures such as strict enforcement of "no parking" and loading/unloading zones, the prohibition of manually-pedaled tricycles (*padyak*) in major thoroughfares, and the apprehension of *colorum* transport vehicles, among others.

## Intermodal Transportation Linkage

### **Road Transport Vis-à-vis Air Transport**

The Iloilo International Airport is well connected to the city via the 8-lane Senator Benigno S. Aquino, Jr. Avenue. There are also available public transport services such as taxis, cars and vans for hire, UV Express, and commercial service vehicles owned by hotels, tour operators, and resorts, to connect with the airport.

### **Road Transport Vis-à-vis Sea Transport**

The government ports in Iloilo City, both those on the south and north sides of Iloilo River, are served by public transportation services. The city-operated landing structures in Ortiz Street and Parola, as well as the proposed GIFT project, are also well-served by taxis, tricycles, and public jeepneys whose franchised routes pass through the vicinity of the structures.

### **Road Transport Inter-Connectivity**

The road transport inter-connectivity is excellent within Iloilo City and neighboring municipalities. The city is well served by an extensive road network. Plans are in the pipeline to further improve the density of the road network.

The City Tourism Officer suggested that roads leading to resorts should be developed. However, the ownership of the roads has to be ascertained since public funds should not be used to improve private properties.

### **Road Transport Services**

Road transport services come in the form of private-owned services and public commercial transport services, either registered with the city (i.e., *habal-habal* and tricycles) or franchised with the LTFRB (i.e., jeepneys, taxis, UV Express, and provincial buses).

Most people complain that there are too many jeepneys plying the city roads. The Regional Office of the LTFRB imposed a moratorium in granting new franchises to jeepneys. Currently, the dropping and substitution of franchised units, but franchise holders complain that there are still operators with *colorum* units.

The increasing number of vehicle registration in the region is a good indicator of available land transportation services in the area. Following nationwide trends, the number of motor vehicles registered in Region VI has been continually increasing, growing by 4.15 percent on the average between 2007 and 2015 (*Table 6*).

**Table 6. Motor Vehicle Registration, Iloilo LTO Regional Office, 2007 -2015**

	CARS	UV	SUV	BUSES	TRUCKS	MC/TC	TRAILERS	TOTAL
2007	26,715	82,744	5,270	1,672	27,682	160,694	721	305,498
2008	25,495	81,115	6,202	1,721	27,658	167,371	704	310,266
2009	27,685	86,599	7,772	2,757	27,953	179,906	769	333,441
2010	28,515	86,007	9,195	1,779	28,235	193,998	677	348,406
2011	29,369	86,074	10,323	1,643	27,688	220,566	666	376,329
2012	30,246	87,751	11,075	1,439	28,033	238,638	685	397,867
2013	28,880	86,792	12,957	1,301	28,875	236,089	782	395,676
2014	31,320	90,619	15,539	1,259	30,057	244,941	930	414,665
2015	33,404	97,286	17,845	1,148	30,341	240,734	945	421,703

\*MC/TC – motorcycle/tricycle

Source: Department of Transportation and Communications, Information Systems Division, and LTO Region VI

Some issues/concerns that have been raised on national and local/city roads and traffic management are as follows:

- **Inadequate consultation by DPWH on its river slope protection and road shoulder improvement projects along Muelle Loney**

Local stakeholders, particularly business groups like the IBC and local shipping companies, had limited awareness of DPWH's ongoing river slope protection and shoulder improvement projects along Muelle Loney. They are wondering if DPWH's projects will proceed throughout the length of the road using a baluster-type shoulder barrier, which effectively blocks or closes the docking structure on the riverside. The docking structures of PPA's river port have been used by chartered vessels transporting cargo that eventually go to the warehouses along Muelle Loney. If the DPWH project proceeds and the docking structures are closed, stakeholders would need to know where the chartered cargo vessels of local businesses will be assigned to dock.

It was suggested that IBC, as representative of the private business groups in Iloilo, should be invited to the monthly meeting of the RDC Infracom so that they can participate in the discussion and their views can be heard by the infrastructure planning body of RDC VI.

- **Need for additional road improvement in vegetable growing areas in the Municipalities of Leon and Alimodian by the Provincial Government**

Road improvement projects and support logistics facilities in semi-temperate growing areas were identified by an Australian Agency for International Development (AusAID) study called Coordinating Roads for Investment and Development (CRID), which was conducted by the Asia Foundation, with IBC and the Iloilo Provincial Government as local partners. Access roads to Barangays Cabaloan, Bacolod, and Cabuga-an in Leon, where semi-temperate vegetables (e.g., carrots, lettuce, cabbage, and bell pepper) are grown, are in bad condition and were recommended for improvement in the CRID study. Late in 2015, the IBC submitted the report to the RDC VI for endorsement to appropriate agencies for funding and implementation. However, based on an interview with a staff from the Iloilo Provincial Planning and Development Office, there has been no information yet on the status of the request.

In the Municipality of Alimodian, semi-temperate vegetables are also grown in seven upland barangays, namely Tabug, Cabacanan Proper, Cabacanan Rizal, Manasa, Dao, Lico, and Umingan, collectively called “seven cities.” Roads to these barangays need to be rehabilitated by the municipal or provincial government. Vegetables grown in these upland barangays are consolidated in the respective area and brought to Iloilo City by traders.

### *Recommendations*

- **Encourage the city government to implement traffic management schemes**  
The city government may wish to strictly enforce traffic rules to avoid congestion during rush hours. Some of these include regulations on "no parking," loading and unloading zones, and eliminating manually-pedaled tricycles along major roads. ***SURGE Project may consider providing technical assistance to the city government in formulating or updating traffic management plan.***
- **Project preparation for increased investments for road improvement projects.** The city government may consider increasing its road improvement budget yearly to fund construction and upgrading of barangay roads.
- **Request the Regional Development Council for regular updates of road projects in the city**  
RDC-VI Infrastructure Committee should regularly include DPWH's updates on ongoing/pipeline road projects in the agenda and always invite private business groups to the meetings.
- **Work for road improvements in vegetable growing municipalities**  
The provincial government should continue to support road improvement in semi-temperate vegetable growing areas in the Municipalities of Alimodian and Leon, particularly those identified in the CRID study submitted to the RDC-VI for fund sourcing assistance. ***SURGE Project may provide assistance to prioritize roads, identify funding streams, and package projects.***

## **4. Telecommunications and Digital Connectivity**

### *Assessment*

Telecommunication companies, namely PLDT/Smart and Globe Telecom, have fully reached Iloilo City with their respective telecommunications network or backbone. Each has connected its network through submarine cable lines originating from either Cebu or Capiz. Their lines are made of high capacity fiber optic wires, which is less expensive and more durable, or copper wires, which are slowly being phased out and replaced by the former. Their distribution lines are extensive in the city proper and become sparse going to the suburban districts in the eastern coastal areas in Arevalo and in the north and northeastern remote areas in Jaro and Lapaz, respectively. This pattern follows the availability of their services for landline telephony and internet connections.

Using microwave signal through their respective network of cellular sites, both telecommunication companies have also covered the city proper and majority of *barangays*, except for a few in the suburban areas in the eastern coastal areas in Arevalo and remote areas

in the northwest (in Mandurriao), in the north (in Jaro), and in the northeast (in Lapaz). In the covered areas, both cellular telephony and internet services are available for subscription. Each telco has a roll-out for additional cellular sites in the city, in Iloilo Province, and Guimaras. The two telcos are confident that they will have wider and stronger signal now that they have acquired the 700 MHz radio band from San Miguel Corporation.

Like in all the other cities, the local managers of the two companies have raised a similar concern on the long process they have to pass through before they can get permits from the LGUs, both barangay and city, for the construction and installation of their cellular phone site facilities. The process is very bureaucratic, cumbersome, and costly to cover informal fees/charges, and takes about six months or longer to completely get the necessary permits. For example, Globe has a roll-out which is slated for completion in 2019, but has been delayed since 2014 due to late issuance of local government permits.

#### *Recommendation*

- **Simplify the permitting process for constructing and installing cellular sites**  
The city government should streamline its permitting processes for the construction and installation of cellular sites. ***SURGE Project may provide technical assistance to the city government to explore simplifying the permitting and approval process.***

### **D. Tagbilaran City**

#### **1. Air Transport Connectivity**

##### *Assessment*

The Tagbilaran Airport, as the primary gateway to the city and the rest of Bohol Province, is critical to the economic growth of the area as tourism activities have geared up in recent years. The aggressive promotion by the Provincial Government of Bohol as an alternative destination with a more exotic flavor than nearby Mactan in Cebu City, together with the development of world-class beach resorts in Panglao Island, has largely contributed to the dramatic increase in the influx of both international and domestic visitors.

Presently, additional tourist sites are being developed. Coordination among hotels, resorts, restaurants, travel agencies, and transport service operators is being sought to attract more tourists.

Total tourist arrivals in 2015 stood at 481,736, based on data from accredited establishments in the province and city by the Department of Tourism (DOT) Region VII. This number, however, is considered not reflective of the real situation because some owners are uncooperative in having their establishments accredited for fear that their data will be used by the Bureau of Internal Revenue (BIR) to assess bigger taxes from them.

The number of tourist arrivals, particularly foreign visitors, was dampened, albeit temporarily, by the devastating earthquake of October 2013, which caused serious damage to a few establishments, administrative buildings, and heritage sites like century-old churches. Although some major roads suffered cracks in a few sections, these were not too severe to hinder vehicle passage. The devastating earthquake notwithstanding, tourist arrivals bounced back several months after and are increasing at a rate of more than 5 percent annually based on 2014-2015

data. The city and the Provincial Tourism Offices are confident of meeting the projected 1.7 million visitors in 2030 soon after the completion of the new Panglao (New Bohol) International Airport in the early part or middle of 2018.

The existing Tagbilaran airport, a visual landing airfield, is not able to accommodate the demand for more aircraft landing and passenger traffic with its current facilities. Traffic growth and air passenger arrivals have been stunted since CAAP's imposition a few years ago of the one wide-body aircraft landing and parking at a time policy. This policy resulted from the limited size of the existing apron and its inadequate offset distance from the passenger terminal.

There has been a proposal to expand the apron by constructing an apron annex and to build a temporary international passenger terminal in order to address PAL's request to land an international direct flight from Korea, which has seen greater demand since last year. As a result of what seems to be a strong influence from the local proponents, construction of the concrete flooring of the proposed temporary international passenger terminal has started and PAL's local proponents are pursuing their plan. The airport manager, however, has doubts if CAAP-Aerodrome Department will approve the final proposal as this will only make use of an air-conditioned tarp tent to serve as an international passenger terminal where immigration, quarantine, and custom processing will also be conducted. There is doubt on the structural suitability and safety of a tarp tent being used inside an airfield where air pressure and turbulence caused by operating aircraft is rather strong. The proposed new temporary international passenger terminal and the apron annex will be violating International Civil Aviation Organization (ICAO) standards.<sup>1</sup>

Three domestic airlines, namely Cebu Pacific, PAL, and Air Asia, use the Tagbilaran Airport where they serve the Manila-Tagbilaran route daily with eight flights combined during lean season or ten flights during peak season (March, April, and May). Cebu Pacific and Air Asia each has three to four flights daily, while PAL has two flights. As early as 2011, Korean Air and PAL have expressed their interest to serve international flights for either or both Busan-Tagbilaran and Incheon-Tagbilaran routes once a week. Likewise, China Airlines has been expressing its interest since 2014 to serve the Taipei-Tagbilaran route. These interests, however, received an unfavorable response as CAAP-Tagbilaran could not accommodate international flights due to space constraints at the terminal.

In response to the unmet demand, which has put pressure on existing airport facilities, the implementation of the new airport project was started in June 2015. It was originally due for completion by December 2017, but it could slide to about three to six months beyond due to a major proposed variation order in the scope of work.<sup>2</sup> Project construction is ongoing with an

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<sup>1</sup> The offset distance of the runway center line to the existing apron and passenger terminal building is not compliant (existing distance of 85 m is inadequate; it should be at least 150 m) such that an airplane parked on the apron becomes an object within the runway's Obstacle Limitation Surface (OLS). Thus, there would be a need to close the runway (one airplane at a time policy) and disallow any more landing whenever an aircraft is already on the apron, which is now being enforced by CAAP to all airlines. Likewise, the apron annex being constructed on the east side at the middle of the runway is estimated to also lie within the 150 m limit and thus, any aircraft parked therein would encroach inside the OLS. Clearly, any use of the apron annex is not compliant with the ICAO-mandated standard as well.

<sup>2</sup> In one meeting of the Project Management Office, it was discussed that there is a need for a variation order (VO) in the scope of work to include the following: revision to the passenger terminal design to have a mezzanine so that three units of passenger air bridges can be constructed as well to make the building more friendly to passengers, especially the elderly, pregnant women, and persons with disabilities (PWDs); and an extension of the runway design from 2,000 m to the ultimate length of 2,500 m so that an aircraft need not incur load penalties even when it carries more passengers. The proposed variation order has already been approved by the Regional Development Council-Region 7 (RDC-7) and submitted to NEDA and DOTr for consideration. The proponents of the VO are confident of getting the approval of DOTC considering that NEDA already approved it and no additional funding is necessary because this can be covered by the anticipated savings of about Php1 B, a result from a lower construction



estimated 30 percent completion level as of June 2016. Located about 19 km southwest of Tagbilaran City, in the Municipality of Panglao, and sitting on a 229-hectare site acquired by DOTC over the course of more than ten years, the new airport will have international standard facilities for runway, apron, taxiway, air traffic control tower, and passenger terminal, together with air navigation aids including an Instrument Landing System and runway lighting, which will allow aircraft landing even at night time. The new apron is capable of handling six wide-body jets at the same time. The passenger terminal design, originally a one-storey building, has been revised to have a mezzanine with three units of passenger air bridges in accordance with the request of the provincial governor so that the terminal will be more hospitable to the PWD, elderly, small children, and pregnant women. The new airport project, which costs Php7.14 billion and has been funded through a grant from JICA, is being implemented by the Chiyoda-Mishubishi joint venture construction with Engineering Equipment, Incorporated as its Filipino subcontractor.

A Multi-Partite Monitoring Team (MMT), consisting of officials from the Department of Environment and Natural Resources (DENR), DOTr, the provincial government, municipal and barangay governments, academe, non-governmental organizations (NGOs), and CAAP, meets every quarter to discuss the contractor's compliance with the provisions of the Environmental Clearance Certificate (ECC) issued for the project. Thus far, the MMT has met three times since the start of construction and found general compliance of construction activities to the ECC. The fourth meeting was slated for July 2016. Private business groups such as the Bohol Chamber of Commerce and Industry, the Panglao Chamber of Commerce and Industry, and the Bohol Association of Hotels, Resorts, and Restaurants (BAHRR) have expressed interest in attending MMT meetings as well as the bi-weekly PMO meetings so that they can hear firsthand about the progress and can provide inputs in the discussion when necessary. This interest has already been communicated to the provincial governor who expressed support to invite the private business groups to the meetings of these bodies.

A high-level LGU body called the Panglao Island-Tagbilaran Executive Council (PITEC), composed of the Provincial Governor of Bohol, the Tagbilaran City Mayor, and the municipal mayors of Dauis and Panglao, the two municipalities comprising the Panglao Island, was created through a Memorandum of Agreement (MOA) among and between the four parties. Its purpose is to collaborate and work together in addressing common concerns in urbanization and sustainable development (e.g., environmental issues, tourism development, economic planning). The parties involved also agreed to conduct an assessment of the impact of the New Bohol Airport to Tagbilaran City and to Panglao Island. The newly created body also provides the forum for coordination and harmonization of policies between and among the concerned LGUs, initially in relation with the new airport, and later on matters of development and governance.

When air transport operation is transferred to the new airport in Panglao, the area of the current airport will become available for other uses. Occupying a total area of 24 hectares, the current airport can be re-developed for higher-end economic uses such as an Information Technology Park, which is desired by the Provincial Governor, or a techno-park or business park, which are being proposed by the Bohol Chamber of Commerce and Industry. The proposed Bohol Business Park project, to be located on the soon-to-be vacated Tagbilaran Airport, was already approved by RDC VII and a request for a feasibility study was submitted to NEDA and the PPP Center for funding consideration. Of the 24 hectares, a parcel of six hectares is still titled to the provincial government, while two hectares are supposed to be the property of the city government. The remaining 16 hectares are supposed to be owned by DOTC/CAAP, which has

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contract price. The Provincial Governor has also written the Department of Budget and Management (DBM) justifying the VO and requesting that the anticipated project savings be used for the VO.

yet to consolidate their proof of ownership to the concerned parcels of land. According to the Airport Manager, a committee from CAAP Central Office personnel has been formed and are now making an inventory of DOTC/CAAP airport properties and conducting research to determine or establish ownership of their properties including those in the Tagbilaran Airport. With the ownership of the airport area split among three parties, there is a need to agree among the parties on having a joint redevelopment of the whole 24 hectares so that the project will be more attractive to potential private business partners.

Some concerns have been raised by key officials and stakeholders regarding the new airport facilities. These include:

- **Lack of awareness on the scope of the PPP-bundled airport project**

LGU officials, private business groups, and even the staff of the local CAAP office are not fully aware of the PPP project's scope and details. Based on the project brief from the PPP Center website, the estimated cost of the project is Php4.57 billion and the investment requirements for the development, operations, and maintenance of the Panglao International Airport for PPP offering include the following:

- Upgraded capacity of airport facility for passengers, freight and air traffic movement within the time frame set in the concession agreement;
- Provision of additional facilities and other necessary improvements to enhance passenger safety, security, access, passenger and cargo movement efficiency and operational efficiency;
- Actively marketing of the airport to develop direct international passenger traffic and diversify revenue sources; and
- Provision of the airport's operation and maintenance for 30 years.

The LGU officials, business groups, and other stakeholders also expressed a lack of knowledge of the PPP offering of the project. Important concerns are being raised including, among others:

- Security of tenure of affected CAAP employees;
- Fair share of government on fees and charges;
- Specifications of the required expansion of buildings to ensure quality work and adequate available space; and
- Oversight role of the provincial and city governments during the concession period.

- **Unclear status of the PPP offering of the airport project**

The New Bohol (Panglao) Airport together with the Laguindingan Airport are bundled in one package as earlier mentioned. This is one of the three packages in the PPP offering of five regional airports. Bidding for the Laguindingan-New Bohol (Panglao) airport package will be conducted only after the complete construction of the New Bohol Airport. Moreover, available DOTr information indicates that the Laguindingan-New Bohol airport new bundled package will be re-submitted to the NEDA-ICC for another round of approval process.

The unavailability of information from the DOTr regarding the target period and timetable for the approval and bidding/award process raised some concerns. Without a definite timetable on the target completion of the PPP offering, various stakeholders have been left hanging with their plans pending.

## Recommendations

- **Assist the stakeholders in facilitating the activities related to airport development**

The following actions are important in pushing for the development of the new airport.

  - The Bohol Provincial Governor (preferably with assistance from the Congressman of the Bohol First Congressional District) may wish to follow-up with the DOTr the proposed variation order for the new airport project earlier endorsed to RDC-VII.
  - Private business groups such as the Bohol Chamber of Commerce and Industry, the Panglao Island Chamber of Commerce and Industry and BAHRR should be invited to the airport's PMO bi-weekly or quarterly meeting.
  - The city government should assign dedicated personnel to consolidate land titles over its 2-hectare portion of the soon-to-be vacated Tagbilaran Airport site in preparation for the proposed joint venture re-development of the site with the provincial Government (owner of a 6-hectare portion) and CAAP (owner of a 16-hectare portion).

- **Consolidate the parcel of lots of the Tagbilaran Airport area prior to the proposed redevelopment project under PPP**

Consolidating records of lot ownership is critical to the solicitation of private business partners to the redevelopment of the Tagbilaran Airport area to determine the exact boundaries and area of the land. The Provincial Government already has its land titles, while CAAP has started to track its own documentary evidence. In this regard, the city government should start gathering documents to prove its ownership of a portion of the property. An instruction from the city mayor is necessary to specifically direct a team of at least two employees to perform the task of establishing the city's ownership in preparation for the proposed joint redevelopment of the Tagbilaran Airport with the provincial government and DOTr/CAAP.

The provincial and city governments must start discussing with the DOTr/CAAP on the proposed joint redevelopment project in order to encourage collaboration and properly strategize their redevelopment activities. The experience of Iloilo City in the redevelopment of the old Iloilo Airport area in Manduriao district under a PPP arrangement with Megaworld is an excellent model in pursuing the redevelopment of the Tagbilaran Airport area. A follow-up and advocacy to the PPP Center on the request for project preparation assistance should also be made in order to make favorable action more likely.

- **Prepare Tagbilaran City and the municipalities of Panglao and Dauis for the operation of the new airport in 2018**

The operation of the Panglao airport is anticipated to lead to a surge of international visitors to the Municipalities of Panglao and Dauis to avail of various services and products at the beach areas or on inland establishments. In anticipation of this, the LGUs should plan ahead, develop relevant public infrastructure and facilities and craft policies to guide private business establishments in the area. Tagbilaran City should also prepare for an increase in the number of visitors who will descend to the city to avail of urban services such as mall shopping, banking and museum visits that are not readily available either in Panglao or in Dauis. The three LGUs, for example, may wish to consider the following:

- Urgent preparation and approval of the Tagbilaran City Zoning Ordinance that will enforce the newly-approved Comprehensive Land Use Plan (CLUP). The local business groups expressed strong desire to participate in the public hearing for the new zoning ordinance as they failed to provide inputs in the crafting of the CLUP due to inadequate lead time accorded them to submit comments;
- Amend the CLUP of Panglao and Dauis and the supporting zoning ordinances to include the allocation of a minimum road right-of-way of 15 meters in all municipal and important barangay roads so these can conveniently accommodate two-lane roadways with at least a 1-m shoulder and a space for a side ditch on each side;
- Identify and prioritize access roads to beach areas in both Panglao and Dauis for concreting to two-lane roadways through funding from DOT and DPWH as mandated in RA 9593 or the Tourism Act of 2009 (see discussion on accessing funds through this law in the Land Transport Connectivity section of this report);
- Draft regulations on the responsibilities of beach resort owners in both Panglao and Dauis to put up structures or adopt measures to prevent erosion on their respective beach front areas and to maintain clean and green surroundings therein should be issued and be strictly enforced by the LGUs to ensure sustainable beachfront areas; and
- Issue regulation for mandatory compliance in the three LGUs to the DOT's accreditation system for all tourism-related establishments within their areas of jurisdiction for the purpose of monitoring visitor arrivals, establishing minimum standard for facilities and services, and coordinating response actions in various types of emergencies.

## **2. Sea Transport Connectivity**

### *Assessment*

The Tagbilaran Seaport, considered as a base port by PPA, serves as the hub of sea transportation not only in the city but also in the entire Bohol Province.

Inbound cargo, which comprise about 80 percent of the total cargo traffic, includes cement in large sacks and in bundles of 40-kg bags (from domestic and international sources), steel bars and construction aggregates, bottled cargo, vegetables from Cagayan de Oro and Manila, consumer products, and brand new vehicles, the demand for which has dramatically increased in tandem with the recent boom in tourism.

Outbound cargo, comprising about 20 percent of total cargo throughput, includes empty bottles, scrap metals, fresh and dried fishery products, and crushed limestone that pass through a dedicated private port also located on the same strait.

Four domestic shipping lines operate ferry vessels (for both cargo and passengers) and call at the port, namely: Trans Asia, Cokaliong, Lite Ferry, and FJ Palacio Line. These liners serve the Tagbilaran-Cebu route from one to three times a week; the Cagayan de Oro-Tagbilaran route (Trans Asia) three times a week; the Larena/Siquijor-Tagbilaran route (Lite Ferry and FJ Palacio) three to six times a week; and the Plaridel/Zamboanga Norte-Tagbilaran route (FJ Palacio) three times a week.

Three sea transport cargo companies – Oceanic, Pan Asia Shipping (formerly, Sulpicio Lines) and 2Go Freight – provide shipping services between Cebu and Tagbilaran. Three fast seacraft companies – Oceanjet (ten trips per day), Weesam Express (two trips a day), and Supercat/2Go (3 trips a day) – also serve the Cebu-Tagbilaran route, significantly contributing to the estimated 2,000 (ordinary season) to 2,500 passenger arrivals (peak season) into Tagbilaran daily.

Fast ferry services are also available for the Tagbilaran-Dumaguete route (one trip a day) and to other municipalities in Bohol such as in Tubigon (Cebu-Tubigon route by Kinswell and Starcraft for a combined 11 trips a day) and in Getafe (Cebu-Getafe route by Starcraft for three trips a day). The Cebu-Tubigon route contributes about 1,500 to 2,000 visitor arrivals in the Municipality of Tubigon daily.

International inbound cargo that comes in bulk, like cement and construction steel, is normally loaded using chartered vessels.

The current berth occupancy ratio is estimated at 39 percent in 2015<sup>3</sup>, which is way below congestion using the ten available berthing spaces with a total length of 633 lineal meters and two RoRo berths of about 15 m each.

Other port facilities that were damaged during the October 2013 earthquake were also reconstructed and expanded to meet the demand, which has been growing by at least 5 percent per year based on 2014-2015 data. In particular, domestic passengers have been increasing by 22 percent annually and cargo by 5 percent annually.

Ongoing and proposed projects include the following:

- New administrative building for PPA personnel that is slated for completion in July 2016;
- One back-up area with about 100 m RoRo berth being constructed to accommodate numerous RoRo vessels and light craft tank barge, which are now temporarily being accommodated on the conventional berthing areas;
- Port gate entrance development and passenger covered walkway being constructed;
- Dredging and widening of docking entrance channel which has been approved and expected to start this year; and
- Larger passenger terminal (with capacity of about 1,500-2,000 passenger at any one time) which is proposed in the 2017 budget of PPA to replace the existing smaller passenger terminal which will be converted as a Passenger Assistance Service Center soon after the new building is completed.

These projects, coupled with PPA's recent directive to shipping lines disallowing any storage or prolonged parking of both empty and loaded containers inside the port, are expected to provide adequate available space for both handling of cargo (both containerized and bulk cargo) and berthing of vessels.

In 2015, four cruise ships from Hong Kong and Singapore made calls by anchoring at the Tagbilaran Seaport. Hundreds of foreign tourists visited the city for about six to eight hours at a time. PPA, in coordination with the City Tourism Office, was able to handle the visits with improvements over time. There has not been any cruise ship visit since the beginning of 2016 and there is none scheduled through the rest of this year nor anytime in 2017. PPA also gathered

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<sup>3</sup> *The Bohol earthquake of 2013 is a large factor to the current berth occupancy ratio.*

information that only Manila, Cebu, Boracay and Puerto Princesa and Coron (in Palawan), excluding other destinations in the Philippines, are in the international cruise ship map. The City Tourism Office, however, is hopeful that there will be some visits by 2017 according to invalidated information from some travel agencies.

Bohol Island is fortunate to have several seaports that connect the provincial mainland not only with its numerous island-barangays but also directly with a number of its neighboring province such as the northeastern side of Cebu, Southern Leyte, and even provinces in Mindanao. Aside from the Tagbilaran Seaport, which serves as the central management port in Bohol, there are eight satellite seaports operated by PPA around the province. Three of which are in the northwestern side of the Province such as in Barangay Catagbacan (in the Municipality of Loon), in the Municipality of Tubigon, and in the Municipality of Clarin; four are in the north side in the Municipalities of Getafe, Talibon and Ubay, and in Barangay Tapal, which is also located in the Municipality of Ubay; and one is in the south side at the Port of Jagna. A number of these ports used to be municipal seaports originally established by their respective LGUs but were later improved by DOTr under its feeder port development program more than a decade ago. Realizing the high cost of maintenance and limited funds for capital improvements, the respective LGU later opted to turn-over the ownership and operation of these ports to PPA.

Except for the Port of Jagna, all the satellite ports serve as gateways to a large number of island barangays that are scattered in the respective municipality. Further, the ports in Tubigon and Getafe have direct fast ferry services (with about an hour travel time) to Cebu as these two ports are nearer to this regional destination. Likewise, the Ports of Ubay, Tapal, and Jagna are nearer to both Southern Leyte and to Camiguin in Mindanao making them ideal for connections with these neighboring islands through RoRo vessels and ferry boats.

All the satellite ports have practically no sea transport connection with the capital city, but are connected through land transportation infrastructure and services linked to the Bohol Circumferential Road, a two-lane national highway that terminates at the central business district of Tagbilaran. With the available intermodal connections and services (i.e., inter-island passenger boats, buses, and public utility vehicles), island barangays, particularly those that lie on the north and northeastern side of the province, can still reach and access services not only in their respective town centers but in Tagbilaran City.

Some concerns have been noted in relation to PPA and the operation of the ports in the Tagbilaran and the rest of the Province. These include the following:

- **Inadequate consultation with private business groups on port-related concerns**  
Although the Bohol Chamber of Commerce and Industry and few shipping lines have been invited to the PMAC meeting every quarter, BAHRR and the Panglao Island Chamber of Commerce and Industry, were not. BAHRR, consisting of 80 large and small tourism-related establishments all over Bohol Province, and the Panglao Chamber of Commerce and Industry, the one-year old group of business persons in Panglao Island, have expressed strong interest in participating in discussions of matters related to the seaports and airports in Bohol. These business groups have limited awareness of the status of the New Bohol (Panglao Airport) and are concerned with the readiness of both Panglao and Dauis LGUs for the expected influx of visitors to the beach resorts in their areas as soon as the airport opens in 2018. They are interested in being invited and attending the bi-weekly meeting of the airport PMO chaired by the provincial governor with DOTr's project engineer as co-chair, the quarterly meeting of the MMT being called by DENR and DOTr, and the quarterly meeting of PPA's PMAC. During the PITEC

meeting held before the end of the assessment period, this interest of business groups to be invited to the airport's PMO meeting was relayed to the Provincial Governor, who did not object to extending an invitation.

- **Shortfall in cargo throughput revenues to fully support port operations**

According to the Port Manager, PPA Tagbilaran's gross revenue in 2015 is Php95 million while its gross operating expenses in the same year is about Php200 million, incurred in operating and managing all nine seaports in Bohol Province. There is an evident financial operating shortfall of about Php105 million, which was covered from corporate-wide revenues from PPA's other sources including income from more profitable ports. The income shortfall in income in Bohol is mainly due to inadequate cargo throughput, both inbound and outbound, which would normally provide more revenues in port operation. Passenger traffic, although of larger volume, contributes relatively lower revenues to PPA.

Under these circumstances, PPA Tagbilaran City may want to consider adjusting its fees at the Passenger Terminal to recover a larger portion of its operating expenses and improve its financial position. The current fee of Php20 per person is too low for the cost of operating a fully-guarded air-conditioned terminal building with clean toilets and which is equipped with cargo and passenger x-ray machines. In comparison, the Tagbilaran Airport Passenger Terminal, which offers similar services, charges Php100 per person. When the new airport in Panglao is completed and operational, it is expected that the fee will increase to Php200 per passenger. Thus, it is reasonable for PPA to consider adjusting the passenger terminal fee higher, for example, to Php100 per person at the Tagbilaran Port and possibly Php50 per person at the Tubigon Port and other similar smaller ports in Bohol. Also, PPA may want to consider increasing the commercial spaces for lease to business establishments to provide more variety in terms of services in the passenger terminal and at the same time to be able to collect more revenues.

- **Need to reconsider the proposed Albuquerque Seaport Project**

According to PPA, a new port is being developed in the Municipality of Albuquerque primarily to service barges and cargo ships carrying construction materials. These ships carry aggregate materials imported from other provinces such as Negros Oriental for use in numerous construction projects since Bohol does not have good and DPWH-compliant source of these materials. If constructed, the port in Albuquerque will become the 10<sup>th</sup> port in the province. For a province of a land area of 4,821 square km (which is a lot smaller than Palawan Province with 14,650 square km land area and where PPA operates 11 ports), having ten operating ports appears more than what is required and consequently would entail higher costs to operate.

PPA and the provincial government, the proponent of the Albuquerque Port project, may want to reconsider pursuing the project and consider instead developing the Catagbacan Port (about 35 km north of Tagbilaran City) as the entry port for unloading construction materials. This port, given a deep harbor, has already been reconstructed by PPA and is expected to be used again by cargo ships which had earlier shifted to the Tagbilaran Port when Catagbacan Port suffered major damage in the October 2013 earthquake. Note that the damaged bridge going to Catagbacan Port is slated to be reconstructed by DPWH using the 2017 budget.

Currently, construction aggregates carried by barges from Negros Oriental for use primarily in the construction of the new airport in Panglao are unloaded at the Tagbilaran

Port and transported by trucks at nighttime. This arrangement has no compelling reason not to continue even for other construction materials needed in Panglao island, Tagbilaran City, and its suburbs in the future, thus, rendering unnecessary the port capital project in Alburquerque. Construction aggregates that would be needed outside the environ of Tagbilaran City can then use the Catagbacan Port in the northeast, Jagna Port in the east and the six other operating ports in the northern side of mainland Bohol.

- **Liability of motorized commercial passenger boats in case of accidents**

There is a concern related to some commercial boats providing sea transport services to passengers and cargo at the satellite ports. Being made of wooden hulls, the boats that dock at the satellite ports cannot be registered with MARINA which requires ships to be of steel hull or fiberglass for them to be eligible for registration. Without MARINA registration, insurance companies are refusing coverage, thus making the boat operators not legally liable in case of accidents.

These boats, however, are registered with either the city or the municipalities where they originate. The registration paper of these commercial boats need to be reviewed to make sure that there is stipulation therein on the legal liability of the boat owner/operator to its passengers in case of an accident while on water (third party liability), particularly its obligation for the compensation of affected parties and their families. As an alternative, local regulation should be prepared, issued, and strongly enforced for the mandatory purchase of travel accident insurance (e.g., accident insurance coverage of Php10,000) for each passenger using an LGU-registered wooden-hull vessel.

#### *Recommendations*

- **Encourage the PPA Tagbilaran to invite stakeholders in PMAC meetings**

PPA Tagbilaran should be encouraged to invite, aside from the Bohol Chamber of Commerce and Industry and few shipping lines, other private business groups, such as BAHRR and the Panglao Island Chamber of Commerce and Industry, to the quarterly meeting of the PMAC. An important subject to discuss is for PPA to revisit the proposed Alburquerque Seaport Development project.

- **Review the guidelines for registration of wooden hull passenger boats**

The city government should review the regulations for the registration of motorized wooden-hull passenger boats, especially on the liability of operators in case of accidents.

### **3. Land Transport Connectivity**

#### *Assessment*

##### National Roads

National roads in Tagbilaran City are under the jurisdiction of DPWH Bohol Engineering District 1 covering the city and 14 neighboring municipalities in Bohol Province. As with other local offices of DPWH throughout the country, DPWH-Bohol District 1 is fully staffed with professional engineers who appear to competently manage their responsibilities over a total of about 46 km (substantially paved) national road links in the city including the following critical national roads in the city proper:



- CP Garcia Avenue, which originates from the heart of Tagbilaran City at Plaza Rizal quadrangle, stretching through the northern quarter portion of the Poblacion area and all the way to the neighboring Municipalities of Cortes;
- CP Garcia East Avenue, which has a common origin as CP Garcia Avenue at the east corner of Plaza Rizal quadrangle and also the junction with A. Clarin Avenue, and then proceeds easterly at almost parallel orientation with V. P. Inting Avenue up to its terminus at the Mansasa-Dampas Road in Barangay Mansasa;
- J. A. Clarin Avenue, which originates at the back corner of Plaza Rizal, then passes through a perpendicular junction with CP Garcia Avenue at the corner of Plaza Rizal quadrangle, and then proceeds in the northeast direction, forking out of the way of CP Garcia Avenue and dividing further another quarter of the Poblacion as it goes to the neighboring Municipality of Corella;
- V.P. Inting Avenue, which originates from its junction with A. Clarin Avenue at the back corner of Plaza Rizal quadrangle and then throughout the eastern coastal barangays of the city while proceeding to the neighboring coastal Municipality of Baclayon;
- Airport Road which is about a 250 m long roadlink that forks out of CP Garcia Avenue going to the entrance compound of the Tagbilaran Airport;
- C. Putong Road which is about 600 m long roadlink that forks out perpendicularly from CP Garcia Avenue going to the entrance compound of the Tagbilaran Seaport;
- Tagbilaran Causeway Bridge (1<sup>st</sup> Bridge Crossing Tagbilaran Strait), a two-lane concrete causeway-bridge combination originating from the intersection of J. A. Clarin Avenue and V. P. Inting Avenue at the back corner of Plaza Rizal and then proceeds southwesterly as it crosses the Tagbilaran Strait going to the northern side of Dauis; and
- J. Borja Bridge (2<sup>nd</sup> Bridge Crossing Tagbilaran Strait), a four-lane concrete causeway-bridge combination originating from its junction with V. P. Inting (at the eastern coastline of the City) and then proceeds southwesterly as it crosses the Tagbilaran Strait going to the southern side of the Municipality of Dauis.

Ongoing projects consist of road concreting with asphalt overlay, road widening, road shoulder concreting, or drainage works (both lateral and cross-over drainage improvement) in some sections of CP Garcia Avenue and A. Clarin Avenue. These two main highways, together with V.P Inting Avenue, serve as the main arterial road links from where the city's main road network in about two-thirds of the city proper and its suburban area are connected. Other major projects have been proposed as well by the private business group and the provincial and city Governments, and are worthy of consideration by DPWH:

- **Widening of or Parallel Bridge Construction on the Tagbilaran Causeway Bridge**  
The Tagbilaran Causeway Bridge connects Tagbilaran City's main business district directly with Panglao Island by crossing the Tagbilaran Strait. Currently, it is a two-lane concrete causeway-bridge combination with pedestrian sidewalk but no road shoulder on each side. Traffic volume is heavy everyday especially in the morning when students, workers, and traders from both Dauis and Panglao traverse the causeway in going to the city. This is aggravated by parked vehicles along the roadside and by people buying fish

at the fishport cum fish market located at the right side entrance of the structure. Although the city government plans to relocate the fish port operation soon after the rehabilitation of the Manga Fishport, there is still a great need to widen the structure or alternatively build a parallel bridge beside the existing structure to address the increasing volume of traffic and to facilitate an unencumbered passage across in as much as connecting roads at each side are already three- or four-lane roadways.

- **Proposed construction of a third bridge across the Tagbilaran Strait**

A third bridge across the Tagbilaran Strait is being proposed by the provincial government to have another direct connection between Tagbilaran City and Panglao Island. A feasibility study is supposedly being conducted by DPWH including the identification of a technically viable and environmentally acceptable crossing structure on the Tagbilaran Strait. This proposal, although very laudable, may potentially encounter strong opposition and face complicated implementation due to the need to acquire high-priced right-of-way on each end of the structure.

### Local Roads and Traffic Management

Based on the City Engineer's inventory, Tagbilaran has a total of 127.53 km of city roads and barangay roads, consisting of 46.13 km cement concrete (36.2 percent); 15.2 km asphalt concrete (11.9 percent); 18.7 km asphalt macadam or bituminous surface treatment (14.7 percent); and 47.4 km gravel surfaced (37.2 percent). Of these, cement and asphalt concrete roadways are of permanent surfacing (paved roads) which comprise a total of 61.33 km or 48.1 percent, as compared with macadam and gravel roadways which are of non-permanent surfacing (unpaved roads) with a total of 66.2 km or 51.9 percent. Paved roads are largely in the city urban areas (89.8 percent). Likewise, many of the unpaved roads are still in city urban areas (53.8 percent). Obviously, the City Engineering Office still has much work to do in road concreting in both urban and in rural barangay areas.

The emerging dynamic and progressive technical team that is the City Engineering staff, however, was again stymied by the 2013 earthquake, which caused major damage to the City Hall building, resulting in the office displacement of the personnel to various temporary work areas. Normal work output, including that of the City Engineering staff, suffered due to cramped workplaces and poor working conditions. The City Engineering staff has yet to recover from the hiatus and it is hoped that they will perform better when they transfer to a more conducive place of work after the retrofitting and reconstruction of the City Hall building which is on-going. Some of the urgent tasks ahead include the following:

- **Submission of prioritized list of city roads for use in the CRID study.** The Coordinating Roads for Investment and Development or CRID is a technical assistance grant of AusAID being implemented by the Asia Foundation in coordination with the respective local chamber of commerce and industry and city engineering offices in several cities in the Philippines. The prioritized list is necessary so that the study can proceed and be completed soon this year.
- **Facilitation of planning and programming of public works projects**, including road improvements slated for funding under the 2017 Annual Investment Plan of the city government. Worthy of priority consideration are the following:
  - Improvement and concreting of the T. Butalid Street, a 250 m deteriorated asphalt

road starting from the Tagbilaran Sub-Fire Station going through the back area of St. Joseph Cathedral until it connects to the Tagbilaran Causeway. The vertical as well as horizontal alignments of this street needs improvement and careful study is advised in order to have a better transition of its junction with the Tagbilaran Causeway Bridge. The City Engineering Office may seek the assistance of DPWH in preparing the design and planning for its funding. The city and the provincial governments may want to recommend the funding of this through the Tourism Infrastructure and Enterprise Zone Authority (TIEZA) of the Department of Tourism (DOT) considering that Bohol is a tourism enterprise zone.

- Reconstruction and repair of the concrete yard and parking area of the Manga Fishport (including the concreting of the short entrance road connection from the national highway), which was damaged by the 2013 earthquake. The fishport facility was completed by DA in mid-2013 and was about to be commissioned a few months later when the earthquake occurred in October 2013 causing major damage and putting the facility out of use. The reconstruction work is necessary for the transfer of the fishport operation from the right entrance side of the Tagbilaran Causeway, which is a traffic chokepoint as previously discussed, to Manga Fishport.

Typical of an old Spanish settlement as Tagbilaran City, major economic activities radiate from where the church and nearby seat of government are located. The St. Joseph Cathedral and the adjacent Plaza Rizal quadrangle, where the Provincial Capitol and the old City Hall Building (now a museum) are located, serve as the heart of the city. It is the confluence of the four major thoroughfares – CP Garcia Avenue, JA Clarin Avenue, V. P. Inting Avenue, and CP Garcia East Avenue – and the terminus of a large number of vehicles plying the streets of the urban core.

From there, within a radius of 1 km to 1.5 km is what can be considered the Poblacion area, which is experiencing traffic congestion almost the entire day because of the large number of passing vehicles, the majority of which are tricycles and motorcycles, and the lack of discipline among motorists and pedestrians even in the presence of traffic law enforcers. According to the City Traffic Management Office head, the city's field traffic personnel are lax in enforcing the city traffic ordinance, particularly the "no parking" zone in the central business district. The shoulder concreting by DPWH to the main roads to effectively increase the carriageway did not contribute much to alleviate congestion as these only provided convenient parking spaces for motorists.

The city government has recognized the seriousness of the traffic congestion problem and the City Traffic Management Office chief is looking at the following measures to address the problem:

- Strict implementation of "no parking" zones in roads as mandated in the traffic code ordinance of the city. Traffic enforcers will be trained to strictly enforce traffic rules especially on "no parking" zones by using tire clamping devices on erring vehicles to reduce the number of owners who evade apprehension.
- Pay parking, as allowed in the city traffic code, on the road side of less busy and relatively wider roads will be implemented in coordination with the concerned *barangay* officials in such a way that the latter will deploy parking personnel who will be paid on agreed percentage share in the parking fees collected from parked vehicles.
- Proposed amendment to the traffic code ordinance will be undertaken to effect the following:
  - Increase the "no parking" violation fee from Php200 to Php700 to serve as a strong deterrence to motorists not to violate traffic rules; and

- Amend the tricycle franchise regulations to consider confining tricycle movement to a particular route, group of *barangays*, or any cluster of roadways in the urban core. This measure can free up some roadways and reduce congestion. The franchise fee may also be reviewed for adjustment in anticipation of the possible decrease in income of tricycle drivers/owners when confined to smaller service area.
- Regular seminars or training to traffic enforcers (every six months or as often as needed) and to franchised vehicle owners/drivers (once a year) will be conducted to add and refresh knowledge on traffic rules and regulations.
- Two new additional units and five replacement traffic lights will be installed in strategic intersections in the urban core. Including the five old units, there will be a total of 12 intersections that will be served with traffic lights when the new ones are installed.

### Intermodal Transportation Linkage

#### **Road Transport Vis-à-vis Air Transport**

The transfer of the airport to Panglao would mean new concerns for the road network in Tagbilaran, which would remain offering higher-end services as the center of commercial, financial, educational, medical, and administrative activities in the whole province and the entry point of visitors using ferry ships at the Tagbilaran Seaport. Although there are already two bridges connecting the Panglao Island to mainland Bohol, it is uncertain if these bridges will be enough to handle the traffic created by the new airport. Even today, there are traffic problems at the first bridge brought about by the fish market situated alongside the bridge. During the trip to Panglao by the SURGE team, the choked traffic extended about a kilometer long and was reduced to a crawl.

A solution is needed to ensure the speedy flow of traffic between the city and the new airport in Panglao, such as transferring the fish port to a new location. Another approach would be to widen the first bridge and its approaches or to construct a third bridge across Tagbilaran Strait. An in-depth study needs to be undertaken to pick the most economically-sound solution.

#### **Road Transport Vis-à-vis Sea Transport**

PPA has programmed port developmental projects to respond to the growing traffic and changing modes. The city must also respond by planning for a proposed Cargo Distribution Center so that container trucks need not enter the city center to transport goods. The roads in the city are relatively old and may not be able to handle the heavy axle loads of container trucks for much longer. Moreover, the geometrics of the city streets make it particularly hard for the long container trucks to maneuver, thereby causing traffic congestion.

#### **Road Transport Inter-Connectivity**

The establishment of the Integrated Bus Terminal and the Integrated City Market in separate blocks but adjacent with each other by the City Government represented a concrete step to promote trade and inter-connectivity; the roads going thereto, however, must also be carefully planned. Their alignments and designs, not only the pavement but also particularly the shoulders, embankments, and drainage systems, which are almost non-existent in the roads outside the city center, should be carefully studied and designed.

## Road Transport Services

Several road transport services are available in Tagbilaran City, from for-hire motorcycles to buses. There are a number of spots in the city where tourists can rent a motorcycle for a day so that the more adventurous tourists can visit scenic spots at their leisure, although it seems that this is presently not regulated as to safety and rental rates.

Although there are a number of taxis in the city, tricycles usually serve as the main means in going around the city. The tricycles do not have their own areas of operation, as is the case in Metro Manila where tricycles are organized into Tricycle Owners and Drivers Associations with their own specific area of operation (usually a barangay). Currently, the city has authorized the operation of 3,000 tricycles, the cap for the number of tricycles in the city.

There is also the UV Express service (formerly GT Express). Some of these vehicles are hired by tourists to be more comfortable in going around the province visiting various tourist spots.

For longer trips to far-flung municipalities, there are regular bus services emanating from Tagbilaran City. The city has constructed the Integrated Bus Terminal with complementary neighboring main public market in separate blocks outside of the main Poblacion area so that buses and delivery trucks do not have to go to the city center and add to traffic congestion.

There has been a surge in vehicle ownership in Tagbilaran. From a total of 43,806 vehicles registered in 2007, the vehicle population has increased to 50,083 in 2012. Motorcycles and tricycles make up almost 70 percent of the registered vehicles (*Table 7*). A significant increase in the number of trailers is also noticeable, meaning there are now more truck trailers registered in the city, most probably to convey containers in and out of the city.

**Table 7. Motor Vehicle Registration, Tagbilaran LTO District Office, 2007-2012**

	CARS	UV	SUV	BUSES	TRUCKS	MC/TC	TRAILERS	TOTAL
2007	2,170	11,480	797	168	2,553	26,630	8	43,806
2008	1,752	9,190	457	108	1,790	26,711	26	40,034
2009	1,772	9,362	435	93	1,825	27,662	47	41,196
2010	1,887	9,796	558	89	1,935	30,556	95	44,916
2011	2,028	10,136	721	123	2,189	33,100	133	48,430
2012	1,954	10,902	725	148	2,080	34,107	167	50,083

\*MC/TC – motorcycle/tricycle

Source: Department of Transportation and Communications, Information Systems Division

### Recommendations

- Coordinate with the Regional Development Committee for national road improvements**  
 The city and provincial governments should request RDC-VII to approve and endorse to DPWH and/or to TIEZA projects that will alleviate traffic congestion, such as the T. Butalid Road improvement and the widening of or construction of new parallel bridge on the Tagbilaran Causeway Bridge. ***SURGE Project may assist the city and the provincial governments to prepare project profiles for use in getting endorsement of RDC-VII and then, to follow-up regularly DPWH and/or DOT TIEZA to have a higher likelihood of getting favorable action from them.***

- **Improve traffic management and planning in Tagbilaran City and in the municipalities of Panglao and Dauis**

There is no traffic management plan that is detailed enough and can be referred to in addressing traffic congestion in major thoroughfares. The city also needs to review Tagbilaran Traffic Code to possibly increase the traffic violation fee and disallow tricycles to pass through major thoroughfares for a certain time of the day. It should amend the tricycle franchise ordinance so that tricycle movements will be confined to a particular route or group of barangays. The city government should therefore prepare a Traffic Management Plan. SURGE can provide assistance to review and possibly revise the traffic code and to develop a traffic management plan.

The municipalities of Dauis and Panglao should amend/revise their respective zoning ordinances and physical framework plans and implement physical improvements in their areas to respond to the influx of tourists when the new airport will be completed in 2018. SURGE can provide assistance to review their zoning ordinances and to prepare the physical plans of their respective growth corridors.

The city should relocate fish landing/market activities that currently occur on the side of the Tagbilaran Causeway Bridge to alleviate traffic congestion along the causeway, and consider the rehabilitation and use of Manga fish landing facilities.

- **Organize and capacitate a separate department under the city government organization for traffic management and administration**

The task for traffic management and administration is lodged in the traffic management group, a special program under the Office of the City Mayor. It is staffed by one traffic group's head (regular employment status) with 12 administrative support staff and 89 field traffic enforcers who are all daily-paid or "casual" workers of the city government.

Nobody from among the 102 workers has had formal training in traffic planning and management. The traffic group's head has attended seminars for a few days but this is not extensive enough to provide him with the necessary competencies in traffic planning and administration. According to the group's head, they need more resources, particularly human resources and equipment, to effectively discharge their duties and help address the traffic problem.

There is a need to convert the Traffic Management Group as a stand-alone regular office, as a department or division under a larger office, such as the Department of Public Order and Safety, rather than under the Office of the City Mayor. This proposed office should have its own budget and regular plantilla positions where dedicated workers can effectively function and perform their duties and responsibilities.

#### **4. Telecommunications and Digital Connectivity**

##### *Assessment*

Telecommunication companies, PLDT/Smart and Globe Telecom, have fully reached Tagbilaran City with their respective telecommunications network or backbone. They have both connected their network through submarine cable lines originating from Cebu. Their lines are made of high capacity fiber optic wires, which is less expensive and more durable, or copper wires, which are slowly being phased out and replaced by the former. Their distribution lines are extensive in the

city proper and becomes sparse going to the sub-urban districts toward the coast and the rural *barangays*. This pattern follows the availability of their services for landline telephony and internet connections.

Using microwave signal through their respective network of cellular sites, both telcos have also covered the city proper and majority of barangays, except for a few in the sub-urban areas in the north and northeast side of the urban core, such as in the districts of Dao and Booy, and further north of CP Garcia Avenue. In the covered areas, both cellular telephony and internet services are available for subscription. The two telcos are confident that they will have wider and stronger signal now that they have acquired the 700 MHz radio band from San Miguel Corporation.

As in all the other cities, the local managers of the two telcos have raised a similar concern on the long process they have to pass through before they can get permits from the LGUs, both barangay and city, for the construction and installation of their cellular phone site facilities. The process is very bureaucratic, cumbersome, and costly to cover informal fees/charges.

#### *Recommendation*

- **Simplify the permitting process for constructing and installing cellular sites**  
The city should consider streamlining the process for the issuance of permits to construct and install cellular sites. ***SURGE Project may provide technical assistance to the City Government to explore simplifying the permitting and approval process.***

## **E. Cagayan de Oro City**

### **1. Air Transport Connectivity**

#### *Assessment*

The Laguindingan Airport is the primary gateway to Cagayan de Oro City and the rest of what is called the Cagayan-Iligan Corridor (CIC), an identified growth area in the northwestern side of Mindanao consisting of the Cities of Cagayan de Oro and Iligan and the Provinces of Lanao del Norte, Misamis Oriental, and Bukidnon. The airport is critical to the economic growth of Cagayan de Oro City, the rest of the CIC, as well as Camiguin Province as trade and services, including tourism activities, have geared up in recent years.

The growth of trade and services in Cagayan de Oro, together with the development of a variety of tourist destinations in neighboring Camiguin Province, largely contributed to the increase in visitor arrivals through the airport. More tourism circuits, adventure sites, and eco-tourism destinations, are being developed in the city, as well as in Camiguin, Bukidnon, and Misamis Oriental to attract more visitors. Aside from entertainment, leisure, and services offerings, the City Tourism Office is promoting MICE tourism to attract more visitors to come to the city.

Total tourist arrivals in 2015 stood at 655,176, surpassing both annual total arrivals in 2013 and in 2014. Of the total arrivals, about 5 percent are foreigners, largely Koreans and Europeans, and overseas Filipinos or *balikbayans*.

The existing international airport, an instrument landing airfield, is located in Barangay Moog, Municipality of Laguindingan, about 35 km west of Cagayan de Oro City. It is connected to the city proper through the four-lane Cagayan de Oro-Iligan National Highway, which until recently

has suffered traffic congestion due to the large volume of vehicles carrying both passengers and cargo in and out of the city proper. The Igpit/Opol-Gusa/Cagayan de Oro section of the Cagayan de Oro Coastal Road has recently been completed, allowing passage of vehicles, particularly cargo trucks transporting agri-fishery products in and out of the Bulua Market, and partially easing traffic congestion along the arterial national highway.

The Laguindingan Airport, which opened for operation initially as a Visual Flight Rules airway in June 2013, has been designed to accommodate total annual passenger traffic of 1.6 million based on the feasibility study and master plan prepared in 1991 by USAID. At the end of 2013, the total annual traffic was recorded at 1.64 million passengers, which already breached the target passenger capacity of the airport facilities. For a time, the airport had been limited to daytime operation until February 2015 when air navigation facilities, including runway lighting, were installed and then commissioned, thereby allowing night flights. Commercial aircraft started night flights in March 2015, which continue on allowing more landing slots to the airlines and preventing congestion at the passenger terminal. At present, the airport operates from 5:00 AM through 9:00 PM. At the end of 2015, the airport accommodated an annual total of about 1.7 million passengers.

The CAAP-Laguindingan Airport Manager estimates an annual traffic growth rate of 5-7 percent, which will bring more than two million passengers in four years. With the anticipated easing of vehicular traffic congestion resulting from the full completion of the Cagayan de Oro Coastal Road (east-west connectivity) and the Cagayan de Oro-Laguindingan Airport Mountain Diversion Road (south-northwest connectivity), which both provide bypass routes outside of the city proper, air traffic volume from Bukidnon, Misamis Oriental, and the eastern part of Lanao del Sur is anticipated to increase in two to three years.

To prevent congestion resulting from increasing volume of passenger and cargo traffic, CAAP has the option to operate longer hours to give more time slots for aircraft landing. Furthermore, CAAP-Laguindingan has proposed the expansion of the passenger terminal building. The planned expansion, however, has been on hold since 2014 because of the proposed PPP offering of the airport.

Necessary repair of major airport equipment (i.e., a non-functioning airway bridge whose electro-mechanical component has been in disrepair for more than a year) seems to have been affected by the PPP offering. Due to this, the only available jet bridge is being used by any aircraft on a first-to-come basis to the discomfort of other passengers.

Based on available information published by airline companies, two domestic airlines, namely Cebu Pacific Airways and PAL, serve Cagayan de Oro City for four domestic destinations and no international destinations. PAL provides a total of 56 flights per week, consisting of five flights daily to Manila and three flights daily to Cebu. Cebu Pacific, including its subsidiary CebGo, has 54 flights per week to four domestic destinations, consisting of five flights daily to Manila, one flight daily to Cebu, ten flights weekly to Davao City, and two flights weekly to Iloilo. Further, there will be an additional 57 flights per week to various domestic destinations, which are scheduled to start on various future dates (e.g., in October or December 2016 and March 2017). It is possible that Cebu Pacific may adjust its regular current flights when the additional flights start. The City Tourism Office is pushing for direct flights between Cagayan de Oro and Korea, either to Busan and/or Incheon, considering that a large number of Koreans come to the city to study English. There is no clear indication from any airline if the proposed routes to Korea are being considered seriously.



The airport is one of five regional airports being bundled for PPP offering by the DOTr. Most recent information from DOTr indicate that the five airports will be offered in three bundle packages as earlier mentioned. The Laguindingan Airport together with the New Bohol (Panglao) Airport are bundled in one package. Key officials and a few stakeholders raised concern over the lack of information on the scope and the status of the airport project under PPP. The only information that is publicly available is the project brief from the PPP Center website, which indicates an estimated project cost of Php14.62 billion and the following investment requirements for the development, operations and maintenance of the Laguindingan Airport:

- Expansion of the passenger terminal building;
- Expansion of the cargo terminal building;
- Construction of the parallel taxiway;
- Expansion of other key facilities such as car parking and the administration building;
- Expansion of the runway;
- Construction of an additional apron area; and
- Provision of operation and maintenance for 30 years.

Local officials, business groups, and other stakeholders had also limited knowledge of the PPP offering. Some of the issues raised were:

- Length of the proposed runway expansion considering that the airport is being proposed to service direct international flights. Hence, it would require a runway length of 2,500 m for the convenient landing of bigger aircraft (current runway length is 2,100 m);
- Security of tenure of affected CAAP employees;
- Fair share of government from the winning private concessionaire on fees and charges;
- Specifications of the required expansion of buildings to ensure quality work and adequate available space; and
- Oversight role of the provincial and city governments during the concession period.

DOTr information indicates that the Laguindingan-New Bohol airport new bundled package will be re-submitted to the NEDA-ICC for another round of approval process. There is no available information from DOTr as to the target period and timetable for the approval and bidding/award process. Without a definite timetable on the target completion of the PPP offering, various stakeholders have been left hanging with their plans pending.

### *Recommendations*

- **Coordinate with CAAP for the repair of the passenger airway bridge of the Laguindingan Airport**  
One unit of passenger airway bridge has been in disrepair for more than one year. Hence, the provincial governor, with assistance from the city mayor and any Congressmen of Cagayan de Oro City, may consider requesting the CAAP to expedite the release of the maintenance budget for this facility.
- **Coordinate with the Regional Development Committee for the involvement of stakeholders in discussions related to the airport.**  
RDC X Infrastructure Committee may be requested to invite DOTr to provide regular updates on the PPP offering of the Laguindingan Airport and make sure that private business groups, particularly the Oro Chamber of Commerce and Industry and PhilExport-X, are regularly invited to the meetings.

## 2. Sea Transport Connectivity

### *Assessment*

The Cagayan de Oro Seaport, considered as a base port by PPA, serves as the hub of sea transportation not only for the city and CIC area but also for the entire Region X. The port complex, located in Barangay Macabalan on the eastern estuary of Cagayan River, is a fully equipped port capable of handling passengers and RoRo, containerized, bulk, and breakbulk cargo. It has a total quay length of 1,152 m divided into 13 common-use berth spaces, each of which is assigned for particular vessel types such as passenger vessels coming from Cebu and Manila, domestic bulk and breakbulk, domestic container, and international vessels.

The port has one RoRo ramp to service Light Craft Tube type ships and a 1.5-hectare passenger terminal complex to service the large number of ferry passengers coming from Cebu, Tagbilaran, Bacolod, and Iloilo. It is also equipped with two units of weigh bridges, each with a 60-ton capacity; three gantry cranes; and six rubber-tire gantries. Both gantry and rubber-tire cranes have recently been augmented in the face of growing cargo traffic. As agreed with NEDA, JICA and the PHIVIDEC Industrial Authority, the owner of the Mindanao Container Terminal (MCT), the other government seaport in the area, the PPA port will service domestic vessels carrying passengers and any type of cargo, as well as international vessels carrying non-containerized cargo; international container vessels have to be serviced at MCT.

Inbound cargo of 2.89 million tons, which comprised about 55 percent of the total cargo volume in 2015, includes fertilizers, grains, and cement from domestic and international sources. Other major inbound cargo includes steel bars and metal products from Cebu and Manila. Outbound cargo of 2.36 million tons, comprising about 45 percent of total cargo throughput in 2015, includes fresh bananas, vegetables, and coconut products for domestic and foreign destinations.

Total cargo volume in 2015 was 5.25 million tons, which grew by about 13 percent from 2014 total cargo throughput. The 2015 cargo volume consisted of about 4.7 million tons of domestic products (89percent) and 0.55 metric tons of foreign products (11percent). Total passenger volume in 2015, on the other hand, was 1.15 million, consisting of 623,000 disembarking passengers (53.8percent) and 534,575 embarking passengers (46.2percent). The number of passengers grew by 2.5percent between 2014 and 2015.

Several domestic shipping lines (for both cargo and passengers and combination cargo-passengers) call at the Cagayan de Oro Port servicing various routes, such as:

- Cebu-Cagayan de Oro route for combined passengers and cargo: 16 times per week by Trans-Asia Shipping (daily schedule) and 2Go Travel, Asian Marine Transport Corporation-Super Shuttle Ferry, Philippine Span Asia Carrier Corporation (formerly Sulpicio Lines), Carlos Gothong and Negros Navigation (one to two trips per week). For dedicated cargo, the same route is served five times per week by Super Shuttle Ferry (one trip per week if full RoRo vessel) and Gothong Southern Shipping (four trips per week);
- Manila-Cagayan de Oro direct route: two days per week each by combined passenger-cargo shipping lines and by all-cargo shipping lines;
- Tagbilaran-Cagayan de Oro route: three days per week by Trans-Asia Shipping; and

- Iloilo-Cagayan de Oro and Bacolod-Cagayan de Oro routes: one day per week by 2Go Travel.

The current berth occupancy ratio of Cagayan de Oro Port is estimated at 80 percent during normal season, but can go as high as 10 percent during peak season according to the PPA-Cagayan de Oro Manager. To address the imminent congestion for berth spaces for ships carrying cargo and passengers, an Extension of Wharf and Expansion of Back-Up Area Project has been contracted by PPA recently to a local contractor, UKC Builders, for a cost of Php334 million.<sup>4</sup> The New Passenger Terminal Building project was also contracted on June 14, 2016 to another local contractor, Jejor's Construction, amounting to Php276 million. The construction period is estimated to last up to two years.

Other measures to prevent further congestion at the port have been planned such as the proposed Opol Alternate Port Development Project in the neighboring Municipality of Opol, located about 10 km west of Cagayan de Oro proper, to serve vessels whose cargo are coming from/to the western side of the city. This would reduce cargo in the Cagayan de Oro port and the number of hauling trucks passing through the city proper that contribute to traffic congestion. This proposed project for 2017 with an estimated cost of Php150 million for Phase I was endorsed by RDC X through Resolution No. 22 (series 2016), approved on April 22, 2016. Local consultation is now being conducted as part of the process in obtaining an environmental clearance for the project. Other PPA projects for 2017 endorsed by RDC X in the same resolution include the following:

- Laguindingan Port Development project, amounting to Php150 million for Phase I, to serve ferry ships that will serve the proposed Laguindingan-Camiguin route and the Laguindingan-Balingoan route according to the PPA Port Manager. Currently, ferry ships use the Balingoan Port in the Municipality of Balingoan (Misamis Oriental), about 88 km east of Cagayan de Oro, for about an hour voyage to Benoni Port in Camiguin Province. There are a total of 17 trips serviced by three shipping lines from 5:00 AM to 6:00 PM daily with about a 30- to 45-minute interval per trip.
- Construction of six-lane electronic gate at the Cagayan de Oro Port with an estimated cost of Php50 million;
- Construction of New Passenger Terminal Building at the Cagayan de Oro Port for an estimated cost of Php300 million. As earlier mentioned, the same project has already been awarded with a Notice to Proceed issued by PPA-Central to a local contractor;
- Construction of a Breakbulk/Palletizing Facility at the Cagayan de Oro Port for an estimated cost of Php35 million;
- Construction of two-story Administration Building at Benoni Port (Camiguin) with an estimated cost of Php35 million;
- Improvement of Back-up Area, Phase 2 at Benoni Port with an estimated cost of Php 30 million; and

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<sup>4</sup>(Notice to Proceed issued on June 17, 2016)

- Balingoan Port Expansion Project in the Municipality of Balingoan, Misamis Oriental with an estimated cost of Php150 million.

These proposed projects under the Misamis Oriental/Cagayan de Oro Port Management Office have a total estimated cost of Php900 million. Six of these projects were also endorsed as part of PPA's 2016 project list by RDC X under Resolution No. 6 (series 2015), approved on March 19, 2015. These are the following: Opol Port Development, Laguindingan Port Development, construction of six-lane Electronic Gate at Cagayan de Oro Port, Passenger Terminal Building at Cagayan de Oro Port, Construction of Breakbulk/Palletizing Facility, and Improvement of Back-up Area Phase 2 of Benoni Port. The official reason why RDC X endorsed the same projects is not clear. It may be possible, however, that PPA-Cagayan de Oro has requested RDC-X endorsements for the same projects in 2015 (for proposed projects in 2016) and again in 2016 (for proposed projects in 2017) to make sure that these are properly covered and can proceed with project implementation in case funding from the PPA-Central Office would be available in either of the two years.

Another seaport of major importance to Cagayan de Oro and to the rest of the CIC area is the Mindanao Container Terminal or MCT inside the PHIVIDEC Industrial Estate in the Municipality of Tagoloan (Misamis Oriental), about 25 km east of Cagayan de Oro Port. The industrial estate and MCT are owned and managed by the PHIVIDEC Industrial Authority (PIA), a government-owned-and-controlled corporation under the Office of the President. MCT is being operated under a 25-year concession contract with PIA since 2010 by the Mindanao International Container Terminal Services, Inc. (MICTSI), a subsidiary of the International Container Terminal Services, Inc., which is the port operator of the Manila International Container Terminal. The modern port facilities, including the administration building, site development, bulkhead, wharf, and quay-side gantry cranes, were developed through a Japanese loan that PIA amortizes from its corporate earnings. As agreed with NEDA and the Japanese Government, MCT will exclusively serve international container cargo vessels, while PPA-Cagayan de Oro Port will serve international bulk/breakbulk cargo and domestic passenger and bulk/breakbulk, container and RoRo vessels.

Total annual container cargo throughput in twenty-foot equivalent units (TEUs) at MCT stood at 177, 217 TEUs in 2015. This was a significant decline when compared with 2014 at 200,217 TEUs (11.5 percent decrease) and with 2013 at 224,539 TEUs (21 percent decrease), which can be attributed to lower exports of falcata sawn lumber from China, according to PIA-MCT officials. Other export products include canned pineapples, activated carbon, desiccated coconuts, chemical coco fatty acid, abaca pulp, aquamarine products, fresh pineapples and bananas, dried mango slices, and other agricultural products. Major imports, on the other hand, include rice, coffee, sugar, soya beans, veneer/plywood, and food products (dairy, pastry/bakery, juice concentrates, fruits, anhydrous milk fat, and food preparation stuff). Goods are transported regularly by three international shipping lines (Maersk, APL, and SITC, which directly sail to Hong Kong, Singapore, Taiwan, and China and indirectly to several countries in Asia and Europe and USA) and three domestic container lines such as Lorenzo Shipping, NMC Shipping, and MCC Transport Philippines.

The berth occupancy ratio of MCT currently stands at 75 percent, while its yard occupancy rate is 65 percent, and both are anticipated to rise as more and bigger international container vessels are expected to use the port. The port's current berth length of 300 m can accommodate only one international vessel and one domestic vessel at the same time. If a large international vessel of 32,000 GRT, as proposed will come, then only one vessel and no other ship can be accommodated at berth. For this reason, PIA has been looking at options for berth expansion

either through a loan or through a PPP scheme. Current available options include the following:

- Proposed JICA grant for a port expansion master planning and pre-feasibility study project with no obligation from PIA to get a loan from JICA after project completion. The PIA Board of Directors are apprehensive that in the course of the study, MCT's and PIA's financial records and data will be exposed and may disadvantage PIA.
- MICTSI, the current operator of the MCT, expressed interest in submitting an unsolicited technical and financial proposal for a proposed 200-m berth expansion through a PPP mode. MICTSI is waiting for a notice on this matter from PIA so that they can submit an official proposal. When asked for its opinion, the Office of the Government Corporate Counsel advised that PIA should use solicited mode (i.e., competitive bidding) rather than an unsolicited mode in implementing its berth expansion project.

PIA created a team from among its staff to conduct research and study various modes and schemes for the implementation of the port expansion and to recommend the most appropriate options that will guide the Board of Directors in making decisions soon.

Some concerns have been raised regarding the Cagayan de Oro Port and the MCT:

- **Inadequate consultation on the PPA and PIA projects**  
A number of stakeholders, particularly business groups like the Oro Chamber of Commerce and Industry and the PhilExport-X, have limited awareness of PPA's and PIA's respective port projects. They are interested in participating in the discussions on these projects and providing inputs from the business sector's point of view. They are particularly interested in knowing the implementation schedules of the projects so that they too can plan their future business activities and prospects.

PPA should be encouraged to convene, on a regular basis (at least quarterly), the Port and Maritime Management Advisory Council (PMMAC) and to always invite local business groups, shipping company associations, city government, and other national government agencies with complementary and PPA-related activities, such as DPWH and MARINA, so that they can participate in the meetings and discussion.

- **Lack of support from restaurants and other establishments on the coastline of Opol for the proposed Opol Alternate Port Development project due to perceived negative effects on their businesses**

An officer of PhilExport-X heard that owners and operators of restaurants and other establishments on the coastline of Opol are not supportive of the proposed Opol Alternate Port Development project because they think that it may negatively affect their business. These establishments are apprehensive that their beach areas will be affected by the structures that will be constructed and by the activities of ships that will use the port.

PPA's consultation with the affected community as part of the process of gathering environmental clearance for the project, as mentioned earlier, should make sure that the establishments on the coastline of Opol and in the immediate vicinity of the project site will be invited so that their concerns can be discussed and appropriate measures, if any, can be considered in the project.

## *Recommendations*

- **Convene a forum to discuss seaports in Cagayan de Oro**  
Either RDC X Infrastructure Committee or the Macajalar Bay Development Alliance (chaired by Xavier University) may wish to convene regular meetings with local stakeholders to monitor both PPA's and PIA's ongoing/ proposed projects. They should invite private business groups from Cagayan de Oro and neighboring municipalities to the meetings. An important agenda for discussion is for PPA to reconsider the proposed Laguindingan Seaport Development Project.
- **Reconsider the proposed Laguindingan Port Development Project**  
According to the Cagayan de Oro Port Management Office, which has jurisdiction over government ports in the Provinces of Misamis Oriental and Camiguin, the proposed Laguindingan Port will serve ferry ships coming to/from Camiguin and Balingoan carrying tourists that supposedly will also use Laguindingan Airport. If this is the justification for the project, then Laguindingan Port will compete with Cagayan de Oro Port where visitors from Cebu, Bohol, Iloilo, and Bacolod disembark and then proceed to tourist destinations in Cagayan de Oro and neighboring places including Camiguin via Balingoan Port.

A new Passenger Terminal Building at Cagayan de Oro Port is being constructed primarily to address the increasing number of passengers at this port. This projected increase in traffic will likely be realized in the immediate future as supported by historical records and trends. It is not certain if ferry ships from Cebu and other cities in Visayas will shift to Laguindingan Port when it becomes operational. Also, the proposed Laguindingan-Camiguin route will directly compete with the Balingoan-Camiguin ferry route whose ports are also being improved by PPA. It makes little business sense to invest in capital projects at both Laguindingan Port and Balingoan Port when each will compete for the same market or users in the future.

The proponent of the Laguindingan Port project should take heed of the stoppage of Paras Sea Cat fastcraft service between Cagayan de Oro Port and Benoni Port in Camiguin in recent years due to low market demand. The fastcraft had operated one trip each way per day (once in the morning and then a return trip in the afternoon) traveling for two hours one way and charging almost double the fare of the Balingoan-Benoni route. The latter has been served by three shipping lines for several trips (about 17 trips at present) throughout the day on each end of the route at 30- to 45-minute intervals.

In addition, with several bypass roads being constructed and arterial and connector roads being widened between Cagayan de Oro and its neighboring municipalities on the east and on the west, traffic flow is expected to ease up in the next two years so that the 35-km distance from Laguindingan Airport to Cagayan de Oro can be traversed conveniently in 30 minutes (down from the 45 minutes it takes at present) and the 88-km distance from Cagayan de Oro to Balingoan Port can be negotiated in less than two hours as it is now. Given all of this, it appears that the proposed Laguindingan Port is likely not justified economically and should be reconsidered by PPA.

### 3. Land Transport Connectivity

#### *Assessment*

##### National Roads

National roads in Cagayan de Oro City are under the jurisdiction of DPWH Cagayan de Oro City First and Second Engineering Districts, which covers all roads within the whole city boundary. The engineering districts are in turn under the supervision of DPWH Region X, which covers larger public works and highway projects or those with an estimated cost of more than Php50 million, the limit of the contracting authority of a district office. As with other local offices of DPWH throughout the country, these DPWH offices are fully staffed with professional engineers who appear to competently manager their responsibilities for planning, programming, constructing, and maintaining the extensive national roads in the city.

Based on available information (2014 data), national road links in the city have a total length of 82.57 km, which are all fully paved. As a result of dramatic improvements in management and governance capacity in recent years at DPWH, a number of big ticket road improvement and new construction projects have been initiated, some of which are partially completed and some are still ongoing. These projects have helped improve physical connectivity, including traffic flow not only within the city proper but also in the neighboring municipalities that are part of Misamis Oriental and Bukidnon. The major roads include, among others:

- Cagayan de Oro-Laguindingan Airport Mountain Diversion Road, which provides an alternate route from the middle southwestern section of the city at Pueblo de Oro township development directly to the western municipalities of Misamis Oriental beginning at the Municipality of Laguindingan, wherein lies the Laguindingan Airport. Construction of the 30-km new road project has started in sections with no right-of-way issues, while negotiation for right-of-way acquisition is ongoing in other sections;
- Cagayan de Oro Diversion Road (Pueblo de Oro-Balubal Section), an east-west lateral road beginning at the terminus of the Cagayan de Oro-Laguindingan Airport Road at Pueblo de Oro and ending at the junction of Sayre Highway at Barangay Balubal which provides a direct route from the southeastern edge of the city from Sayre Highway to the middle southwestern section of the city. With an interconnection with the Cagayan de Oro-Laguindingan Road, there will now be a diversion route from Sayre Highway directly to the western coastal municipalities of Misamis Oriental Province beginning at Laguindingan and effectively bypassing the Cagayan de Oro Poblacion;
- Cagayan de Oro Coastal Road (Opol-Gusa Section), an alternate route to the CDO-Iligan National Highway beginning at Barangay Igpit in the Municipality of Opol, passing through the Balulang Public Market cum Agri-Fishery Bagsakan, then through Barangay Puntod where the access road to the Cagayan de Oro Port connects and up to Barangay Gusa. This provides a direct route for cargo trucks from the west to the Bulua Agri-Fishery Bagsakan and to the Cagayan de Oro Port without passing through the highly built-up areas of the Cagayan de Oro Poblacion. This is a passable road and almost complete except for road shoulder and side ditch works;
- Cagayan de Oro Coastal Road/Gusa-Puerto Bypass road (Junction at the terminus of Sayre Highway), the continuation of the Cagayan de Oro Coastal Road from Barangay

Gusa, and proceeding up to the terminus of the Sayre Highway at Barangay Puerto; this route again bypasses the highly built-up areas of the eastern coastal barangays of the city. This eastern section of the coastal road is in the advance stage of construction with a few sections concreted and some sections ongoing concreting and right-of-way acquisition;

- Alae-PHIVIDEC Bypass Road, an alternate route from the Sayre Highway at Barangay Alae in the Municipality of Manolo Fortich directly to the entrance of PHIVIDEC Industrial Estate and to the Mindanao Container Terminal in the Municipality of Tagoloan. This 13-km new road construction project is almost complete except for an ongoing construction of a bridge gap in Manolo Fortich; and
- Cagayan de Oro New Western Diversion Road (Carmen-Patag-Bulua-Cagayan de Oro Coastal Road), a south-north connector road from Barangay Carmen passing through Barangays Patag and Bulua directly to a junction with the Cagayan de Oro Coastal Road. This new road serves as an alternate route to the existing winding road connecting the old Lumbia Airport to the Butuan-Cagayan de Oro-Iligan National Highway and has ongoing concreting works.

Other proposed/approved roads include Cagayan de Oro-Opol Bypass Road and the Lumbia-Planned City Extension Road. Ongoing and proposed minor projects consist of road widening, road shoulder concreting, or drainage works (both lateral and cross-over drainage improvement) in various sections of primary national highways and secondary national roads. This includes the ongoing road widening and shoulder works on several sections along the Butuan-Cagayan de Oro-Iligan National Highway and the widening of a few sections along the Sayre Highway or the Cagayan de Oro-Bukidnon Road.

### Local Roads and Traffic Management

Based on available information (2012 data), Cagayan de Oro City has a total aggregate of 553 km of city-managed roads, consisting of 225 km paved and 328 km unpaved roads, which are mostly barangay roads located on the southwestern part of the city. A few urban roads were successfully converted to national roads under DPWH through an act of Congress initiated by the Cagayan de Oro City Congressional District 1 Office. More bills have been filed by the same office for the conversion of city roads to national roads. Given this, the City Engineering Office has focused its attention to concreting *barangay* roads, particularly roads leading to agricultural production areas and new tourist destinations in coordination with the City Agriculturist and the City Tourism Officer. Proposed road projects include an access road improvement from the national highway to mountain resort hotels in Barangay Macasandig in the south upland side of the city.

Under the new City Council, the City Engineer is confident that a larger part of the budget will be allocated for concreting *barangay* roads. This has been a priority of the city mayor, especially those in the southern part of the city where agricultural areas are suited for coffee, cacao, and mango production, as proposed for development by the City Agriculturist. The produce from these farms can then be brought to the proposed Agriculture Processing Complex in Cluster E area in the Planned City Extension (PCE) concept in Barangay Lumbia.



The PCE is an 850-hectare concept plan prepared with assistance from the United Nations-Habitat under its Achieving Sustainable Urban Development (ASUD) Project and now being proposed for development by the city government. It consists of five proposed clusters:

- Cluster A: Government Center and mixed residential and commercial use, located on the runway of the old Lumbia Airport;
- Cluster B: affordable and low-cost housing;
- Cluster C: medium density residential, health and educational facilities and low-intensity commercial;
- Cluster D: eco-tourism, mountain view resort, water retention ponds; and
- Cluster E: agri-processing complex, mixed use zone, and community facilities.

According to the City Planning Office, the PCE concept plan will be revised because the old Lumbia airport, as covered in Cluster A, has been turned- over to the Philippine Air Force under a signed MOA between and among the DOTr, CAAP, and the Department of National Defense (DND) for use and development as a military air force base.

Cagayan de Oro City has grown into a large mix of residential, commercial, and industrial urban sprawl, extending from its western border (Barangay Bulua) to its eastern boundary (Barangay Bogo), and from its mid-southern half (Barangay Lumbia) all the way to the Macajalar Bay in the north. Accordingly, the city's highly built-up areas are on the floodplain of Cagayan River and along the coast of Macajalar Bay. Moreover, the high volume of economic activities has resulted in traffic congestion in these areas especially during the daytime. As the city develops, traffic congestion, particularly in the Poblacion's 40 *barangays*, will persist and potentially worsen if the city government is lax in implementing traffic rules and regulations. Recognizing the serious issue of traffic congestion, the city government, through the Road and Traffic Administration Office, is looking at the following measures to address the issues:

- Signalization of an additional 63 intersections, in phased implementation, from the current 25 intersections with traffic signals;
- Installation of a CCTV in each intersection with a centralized monitoring system, in phased implementation;
- Implementation of no contact apprehension of traffic violators and connecting violation with the renewal of vehicle registration from the Land Transportation Office;
- Rationalization of registration and routes of *motorela*, an indigenous version of the tricycle, which has an official franchise that is limited to 2,400 units although another 2,400 units (*colorum*) are believed to be plying the roads including major highways and are becoming traffic hazards especially at nighttime; and
- Regulation of *habal-habal* or commercial commuter motorcycles, which have proliferated in both urban and rural barangays transporting people and small cargo.

Although the city government recognizes the traffic congestion problem in the city proper, city officials have not given sufficient attention to address the problem. As this problem persists and worsens because of the growing number of vehicles, the economic losses in terms of increased vehicle operating costs, unproductive time, and generated illness, aside from environmental ill-effects, will also grow in magnitude.

## Intermodal Transportation Linkage

### **Road Transport Vis-à-vis Air Transport**

Since the opening of the Laguindingan Airport in 2013, various road transport issues have beset the access to the airport. There have been continuing re-blocking construction of the national highway, improvement of bridges, and diversion of truck routes, among others, that make the trip to the airport a big hassle. It appears that the road projects of DPWH are not adequately coordinated.

Poor traffic conditions in Cagayan de Oro are affecting the traffic volume at Laguindingan Airport as well. Some passengers from Bukidnon find it better to use Davao Airport rather than Laguindingan Airport due to traffic congestion in Cagayan de Oro, even as the former is farther but have more available flights to destinations outside of Mindanao.

### **Road Transport Vis-à-vis Sea Transport**

The inter-connectivity between road and sea transport is relatively good. Road connections originating from the city going to either the Cagayan de Oro Port in Barangay Macabalan or the MCT in PHIVIDEC Industrial Estate in the Municipality of Tagoloan are conveniently available and in good condition for passage by both private and public transport services.

### **Road Transport Inter-Connectivity**

Cagayan de Oro City has a privatized integrated transport terminal that is in good operation. However, the provisions of its concession contract, entered into and approved by the previous city government administration, are somewhat vague according to some stakeholders interviewed. Examples of these are the standard service and facility specifications required of the private operator and the extent of the regulatory powers of the city government including conditions for mandatory compliance and for initiating the process of rescinding the contract.

### **Road Transport Services**

Road transport services come in the forms of private-owned services and public commercial transport services, franchised or registered either with the city (i.e., *habal-habal* and tricycles) or with the LTFRB (i.e., jeepneys, taxis, UV Express, provincial buses). Cagayan de Oro City is well served by public transport services.

The increasing number of vehicle registration in the region is a good indicator of available land transportation services in the area. Region X registered one of the healthiest growth rates in vehicle registration in the country, with average annual growth rate of 7.45 percent from 2007 to 2012 (*Table 8*).

**Table 8. Motor Vehicle Registration, Cagayan de Oro LTO Regional Office, 2007 -2012**

	CARS	UV	SUV	BUSES	TRUCKS	MC/TC	TRAILERS	TOTAL
2007	11,653	42,638	4,102	984	12,215	85,958	866	158,416
2008	11,674	42,949	4,644	780	12,472	97,720	653	170,892
2009	11,851	45,314	4,938	816	13,380	103,324	769	180,392
2010	12,718	49,957	5,836	783	14,400	111,676	785	196,155
2011	14,969	58,369	7,603	648	16,520	120,818	998	219,925
2012	13,841	55,504	7,599	632	17,354	130,573	907	226,410

\*MC/TC – motorcycle/tricycle

Source: Department of Transportation and Communications, Information Systems Division

### Recommendations

- **Improve traffic management and planning in the central business district**

The city government should prepare a traffic management master plan, which may consider amending the tricycle franchise ordinance to include confining the movements of tricycles and passenger motorcycles (*habal-habal*) within a particular route or group of barangays. The city government, both the executive and legislative branches, in coordination with various sectors, need to jointly address the traffic problem in the city.

The city government, through the Road and Traffic Administration Office, is on the right track in looking at regulatory measures to ease traffic congestion. However, it should prioritize those that are doable in the immediate term so that people will see that the city government is taking concrete steps to address the issue. Some of these measures include the following:

- Apprehension of *colorum motorelas* and confining those with franchises within their assigned routes to reduce congestion in areas outside of their franchised area;
- Prohibition of improvised tricycles from using national highways, especially the sections in Barangays Puerto, Gusa, and Lapasan of the Bukidnon-Cagayan de Oro-Iligan National Highway on the eastern side of the city where heavy traffic is experienced throughout the day; and
- Strict enforcement of no parking and no loading/unloading zones, especially on narrow roads in the Poblacion area and along national highways passing through built up areas.

***The SURGE Project may provide advisory assistance to formulate strategies for effective enforcement of traffic ordinances and to support the development of the traffic management plan.***

- **Encourage regular meetings of the Regional Development Council**

RDC X InfraCom should regularly meet to monitor ongoing and pipeline road projects of DPWH and invite other stakeholders including private business groups to the meetings.

- **Improve the farm-to-market roads in agriculture-growing areas**

The city government should continue farm-to-market road improvement in the southern part of the city to support the agricultural development for coffee, cacao, and mango, whose produce can then be processed in the proposed agri-processing complex in the

PCE township in Lumbia area. ***SURGE Project may provide technical assistance to the City Government in prioritizing farm-to-market roads, identifying funding stream, including the Kalsada Program of DILG, and packaging of projects.***

#### **4. Telecommunications and Digital Connectivity**

##### *Assessment*

Telecommunication companies, PLDT/Smart and Globe Telecom, have fully reached Cagayan de Oro City with their respective telecommunications network or backbone. Each has connected its network through submarine cable lines originating from either Cebu or Davao. Their lines are made of high capacity fiber optic wire, which is less expensive and more durable, or copper wires, which are slowly being phased out and replaced by the former. Their distribution lines are extensive in the city proper but become sparser as they extend to the sub-urban barangays in the southwestern and southeastern sides of the city. This pattern follows the availability of their services for landline telephony and internet connections.

Using microwave signal through their respective network of cellular sites, both telcos have also covered the Poblacion *barangays* and the majority of the other urbanized *barangays*. In the covered areas, both cellular telephony and internet services are available for subscription. Each telco has a roll-out for additional cellular sites in the city's urbanized barangays but not in the rural *barangays* where settlements are scattered and not yet financially viable to cover. The two telcos are confident that they will have wider and stronger signal now that they have acquired the 700 MHz radio band from San Miguel Corporation.

As in all other cities, the local managers of the two telcos have raised concerns about the long process they have to pass through before they can get permits from the LGUs, both barangay and city, for the construction and installation of their cellular phone site facilities. The process is very bureaucratic and cumbersome, not to mention costly to cover informal fees/charges.

##### *Recommendation*

- **Simplify the permitting process for constructing and installing cellular sites**  
The city may wish to streamline the approval process for the issuance of permit to construct and install cellular sites. SURGE can provide technical assistance to the city government in simplifying its permitting processes.

#### **F. Zamboanga City**

##### **1. Air Transport Connectivity**

##### *Assessment*

The Zamboanga International Airport is the primary gateway to Zamboanga City and two geographic corridors, namely the island provinces of Basilan, Sulu, and Tawi-Tawi (BASULTA) and the Zamboanga Peninsula (Region IX). BASULTA, with the exception of Isabel City, the capital city of Basilan Province, are part of the Autonomous Region in Muslim Mindanao (ARMM). The airport is critical to the economic growth of these areas as it provides air transport connectivity support for major economic activities in trade, industry, agriculture and aquaculture, and services.

The growth of these sectors is reflected in increased air transportation activities. Based on DOTC data, the volume of passengers in the airport had grown at a compounded annual growth rate (CAGR) of 15.12 percent from a total passenger volume of 293,232 in 2004 to 904,668 passengers in 2012. Likewise, air cargo traffic grew at the rate of 5.72 percent during the same period, from a total cargo volume of 6.92 million tons in 2004 to 10.8 million tons in 2012.

The city unfortunately experienced the Zamboanga siege for a period of 20 days beginning September 09, 2013. This resulted in major economic disruptions in the city including substantial decreased airport arrivals for the rest of the year. Air passenger volume started to pick up anew in 2014 with 905,760 total passengers, which increased to 906,682 in 2015. Total air cargo volume also rebounded to about 10 million tons in 2015. It is expected that cargo and passenger volume will continue to grow as local trade and services have perked up recently with the opening of a new large mall in the city in December 2015.

The existing international airport, an instrument landing airfield, is located in the heart of the city, in a dense built-up area, which constrains facility expansion and area development as right-of-way acquisition is very costly. This has also resulted in the airport not being compliant with international standards because the required 300-m safety runway strip is encroached by residential houses and installations of a military camp nearby. A parked aircraft on the existing apron and the passenger terminal building also infringe into the 7:1 transition surface of the required 300-m runway strip. Moving the apron and the passenger terminal building further away from the existing runway will require costly acquisition of permanent residential and commercial establishments including a private school. Also, the existing runway has no end safety areas and providing this will entail relocating a cemetery and closing active city roads on both ends and re-aligning them across the same community.

The Zamboanga International Airport, equipped with an Instrument Landing System and runway lighting, is capable of serving both large and small aircraft throughout the day including nighttime. The runway, with an effective length of 2.5 km, is also being used by the military at the adjacent Edwin Andrews Air Base, which has its own apron to park its aircraft. As earlier mentioned, some installations on the air base are encroaching the 300-m safety runway strip making the airport non-compliant with the International Civil Aviation Organization safety standards.

Based on available information published by airline companies, two domestic airlines, namely Cebu Pacific Airways and PAL serve Zamboanga City for four domestic destinations and no international destinations. PAL provides two flights daily to Manila. Cebu Pacific provides a total of 64 flights a week to four domestic destinations, consisting of 30 flights a week to Manila, two flights daily to Cebu, nine flights weekly to Davao City, and 11 flights a week to Tawi-Tawi, the southernmost island-province of the country. According to the MinDA, Cebu Pacific has expressed interest in serving the Zamboanga-Sandakan route and is currently conducting a market study.

Although the airport can service both domestic and international flights, the existing passenger terminal building has not been set-up to accommodate these flights. The existing passenger terminal building can hardly accommodate passenger volume especially when two flights are scheduled very close to each other. Although flights from Zamboanga to Kota Kinabalu and Labuan in Malaysia became operational for a few months in early 2000 with the expansion of activities under the BIMP-EAGA cooperation, they were discontinued due to low traffic volume. Ventures by other airlines for the same routes were initiated and were again short-lived due to the effects of the Asian financial crisis and partly because of cheaper sea transport alternatives

(by conventional vessels or by fastcrafts) through the Zamboanga-Sandakan route two or three times a week.

An airport master plan and feasibility study updating project commissioned by DOTr in 2009 showed that the airport needs to be relocated to a new site to fully comply with international safety standards and to continue to support the economic growth not only of the city but also of BASULTA and the Zamboanga Peninsula. The study shows that relocating the airfield and developing a new airport in an identified suitable area in the Mercedes-Talabaan area, about 13 km northeast of the city proper, are economically feasible and recommended.

The proposed new airport, with projected costs of Php9.8 billion (in 2009 prices), including civil works and right-of-way acquisition, was then endorsed by RDC-IX in December 2014 to both NEDA and DOTr. The Chair of MinDA also endorsed the project in a letter to DOTr in January 2015. Again, in November 2015, the RDC-Infrastructure Committee Region IX endorsed the same project to DOTr for inclusion in its Medium-Term Public Investment Program (MTPIP). However, for unclear reasons, DOTr has neither included the project in its MTPIP nor acted to move the project forward. NEDA, for its part, has included the project in its Comprehensive Infrastructure Investment Plan (CIIP), which is the main source for planning infrastructure needs in the country, but it is still DOTr that will decide when to implement the project.

Based on recent information from the DOTr-Air Transportation Planning Division, funding has been allocated for another updating of the airport's master plan and feasibility study including the conduct of a parcellary survey of all necessary facilities, back-up areas, and a possible military camp area assuming that the Philippine Air Force will also transfer. The consulting firm is being procured and expected to be awarded within the year for the study to begin in the latter part of the year or in early 2017. The work is slated to be executed and completed in 8 months.

A few concerns have been raised by key officials and stakeholders regarding the airport:

- **Delayed implementation of the New Zamboanga Airport Development Project in a new site**

DOTr has not acted to move forward the proposed New Zamboanga Airport Development Project to a new site despite several studies<sup>5</sup> showing that the project is not only economically feasible but necessary for safety reasons. The existing airport, which is not compliant with international safety standards, cannot be further developed as right-of-way acquisition is very costly and socially unacceptable to affected residential and commercial establishments and service facilities. With DOTr's most recent move to update the project feasibility study and master plan, it is hoped that the Zamboanga Airport project will receive priority status for inclusion in the agency's MTPIP. According to Congressman Manuel Jose Dalipe of the Zamboanga City Second Congressional District on July 27, 2016, President Duterte supposedly said "okay, within my term" in response to the former's appeal to transfer the airport to the Mercedes area. This statement, if recorded accurately, could be considered by DOTr as President Duterte's commitment to implement the project during his term.

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<sup>5</sup> There had been six studies conducted since 1992, namely: (1) Civil Aviation Master Plan (CAMP), (2) Master Planning Project for Zamboanga International Airport (1992), (3) Pre-Feasibility Study by Ambiji Group of Australia (1997), (4) DOTC Pre-Feasibility Study and Master Planning of the New Zamboanga International Airport (2006), (5) Master Planning Study on the Strategy for the Improvement of National Airports (2006), and (6) DOTC Updating of Feasibility Study of Zamboanga Airport (2009). These have all supported the relocation of the airport to a new site for the proposed airport development project. For about these roughly 24 years since the initiation of the studies, no concrete steps to implement the project have been taken.

- **Need to support the DOTr in expediting the airport project**

DOTr has neither regional nor local presence in Zamboanga City. On matters of its airport projects, it relies on the CAAP Zamboanga Office for support to and coordination with its local activities. At times, DOTr staff perform their tasks and field work by themselves and sometimes encounter the usual problems in the field. To expedite the execution of DOTr's activities for the airport project, local support from the city government and the local community is necessary.

The airport project needs a Manila-based champion, aside from the city mayor, who can regularly follow-up efforts of DOTr and readily articulate or explain any concerns of Manila-based officials regarding the project. The champion can also harness immediate response/action, if necessary or if required by DOTr, from the city government or any Zamboanga-based office or agency.

- **Speculative increases in land prices at the proposed new airport site**

DOTr staff expressed their concern on what appears as abnormally high speculative land price increases in the proposed new airport site in the Mercedes-Talabaan area of Zamboanga City. The same information has been gathered during an assessment visit by SURGE's Land Tenure Group under Component 2. This speculative pricing distorts the market value of land not only in the Mercedes-Talabaan area, where the PCE township is also being proposed to be developed in accordance to the recently-concluded UN Habitat grant assistance, but also in the rest of the City.

The abnormally high price of land and the resulting cost of land acquisition for the new airport site may unduly affect the feasibility of the project and may even forestall its implementation. The city government should help prevent this situation to happen if it desires the project to proceed by meeting the community leaders in the proposed project site and negotiating with them reasonable price increase of their land as a gesture of their support to the project and also avert any protracted application and litigation of the government's right to expropriate needed right-of-way lands for its projects, which will further delay the long-sought new airport project.

### *Recommendations*

- **Request the DOTr to fast track the proposed New Zamboanga Airport Development Project at the new site**

The city mayor may consider requesting the DOTr to fast track implementation of the feasibility study updating the project for the new airport and to include the project in DOTr's MTPIP in accordance to the RDC IX resolution.

- **Organize a Task Force for the new Zamboanga Airport**

The Zamboanga City Mayor may wish to create a multi-sectoral task force to serve as a dedicated group that will coordinate and assist on-the-ground DOTr's activities for the project. ***SURGE Project may provide assistance to create, convene, operationalize, and support the task force.***

- **Coordinate with the Mindanao Development Authority to support the airport project.**

The city mayor should solicit assistance of MinDA to push the new airport project forward and ask help to identify Manila-based project champion.

## 2. Sea Transport Connectivity

### *Assessment*

The Zamboanga Seaport, considered as a base port by PPA, serves as the hub of sea transportation not only in the city but also in BASULTA and the entire Zamboanga Peninsula. The port complex, located in Zone 1 Poblacion, is a fully equipped port capable of handling passengers, RoRo, containerized, bulk, and breakbulk cargo. It has a total berth length of 1,812 lineal meters divided into 27 common-use berth spaces, each of which is assigned for particular vessel types such as passenger fastcraft coming from Basilan and ordinary ferry vessels coming from BASULTA area, domestic bulk and breakbulk, domestic container, and international vessels. It has three RoRo ramps to service combination RoRo and passenger type ships from Manila and Cebu and a 750-person capacity passenger terminal and a 240-person capacity Travellers Hub to service ferry passengers mostly coming from BASULTA. It is also equipped with a weigh bridge, one 70-ton crane, and three units of 25- to 35-ton cranes.

Domestic inbound cargo of 1.18 million tons, which comprised about 61 percent of the total domestic cargo volume in 2015, includes grains, consumer goods from Cebu, Manila, and Malaysia, and cement from domestic sources. Outbound cargo of 0.75 million tons, comprising about 39 percent of total domestic cargo throughput in 2015, includes canned tuna and sardines, coconut products, fresh and semi-processed seaweeds, and fruits. Total domestic cargo volume was 1.93 million tons (94.9 percent), while total foreign cargo was 102,965 metric tons (5.1 percent) for an overall total cargo throughput of 2.034 million tons in 2015, which grew by 10.5 percent from 2014 total cargo throughput.

Foreign cargo consists of imported goods at 101,728 metric tons (98.8percent) and export cargo at 1,237 metric tons (1.2percent), which decreased by 6.3 percent from the 2014 total foreign cargo volume. The decrease in foreign cargo can be attributed to the decrease in ship calls due to the perceived security problem since the Zamboanga Siege in 2013.

Total passenger volume in 2015, on the other hand, was 2.7 million, consisting of 1.36 million disembarking passengers (50.4percent) and 1.34 million embarking passengers (49.6percent), which grew by 7.47 percent from 2014. Of this, 19,208 passengers are from/to foreign destination, mostly from Sandakan in Malaysia, constituting about 0.7 percent of the total passenger volume in 2015.

Several domestic shipping lines (for both cargo and passengers and combination cargo-passengers) call at the Zamboanga Port servicing various routes, such as:

- Zamboanga-Cebu route for combined passengers and cargo as being served once a week each by 2Go Travel and George and Peter Shipping via Dumaguete (passengers only) and for container cargo ship two times a week by Aleson Shipping;
- Zamboanga-Manila route for combined passenger and cargo as being served once a week each by 2Go Travel and Sulpicio Lines (via Iloilo) and for cargo ships by Lorenzo Shipping (two times weekly), Oceanic Container Lines (three times a week), and Asian Marine Transport-Super Shuttle (once a week);



- Zamboanga-Isabela/Basilan route for combined passenger and cargo/RoRo six times per day by Aleson Shipping and for pure passenger/fastcraft four times a day by SRN/Weesam;
- Zamboanga-Lamitan/Basilan route for combined passenger and cargo/RoRo four times per day by Aleson Shipping;
- Zamboanga-Jolo route for combined passenger and cargo/RoRo by Aleson Shipping (seven times a week), Sing Shipping (three times a week) and Ever Shipping (three times a week), and for pure passenger/fastcraft once a day by SRN/Weesam; and
- Zamboanga-Bongao/Tawi Tawi route for combined passenger and cargo/RoRo three times weekly by Aleson Shipping.

The Zamboanga-Sandakan route is listed on the Aleson Shipping website as being served two times a week, but a cross check with its ships' schedule did not indicate such. PPA-Zamboanga, however, said that Aleson Shipping serves Zamboanga-Sandakan route once a week.

A few wooden-hull ships, also called Moro boats by a traveler, carry both passengers and cargo to remote island-municipalities in the BASULTA such as Mapun and Taganak (Turtle Islands) in Tawi-Tawi Province. The schedule of these boats, however, is not regular as they depend largely on the weather and sea conditions. A number of wooden-hull vessels also operate as tramping vessels transporting dried seaweeds from the island municipalities of BASULTA to Zamboanga City or to Cebu where seaweed processing plants are located. An exception is a shipping line of wooden-hull vessels, Katrafar Shipping, which regularly transports cargo and passengers four times a week to Jolo. This company has its share of passengers and cargo by offering big discounts on shipping fares.

The berth occupancy ratio of the Zamboanga Port at the end of 2015 is estimated at about 45 percent, which indicates plenty of available space for vessels to dock even in the near future. The port has recently completed the expansion of its T-wharf, which added three berth spaces with a combined length of 423 meters. Its parking space and cargo handling areas at the Open Storage and Container Marshaling Yard are being paved and expanded to accommodate a proposed quay crane. Dredging of berthing spaces is also being performed to accommodate vessels with deeper draft. A Traveler's Hub has also been recently completed, pending the installation of air-conditioning units, to provide a more convenient passenger terminal building.

A proposed seaport development project located about 25 km west of the PPA-Zamboanga Port is being proposed by the Zamboanga City Special Economic Zone Authority and Freeport (Zambo Ecozone Authority or ZEA), a government-owned-and-controlled corporation. The proposed Zambo Ecozone International Container Terminal is envisioned to attract more locator companies, particularly industrial, manufacturing, and processing companies, into the 728 hectares ecozone area (Phase 1 and 2 development areas) located in Barangay San Ramon, about 25 km away west of the Zamboanga Poblacion. There are, at present, 30 company locators in the ecozone consisting of, among others: four agri-product trading companies; seven small manufacturing firms for rubber, feeds, clothing accessories, agri-product repacking, fish canning, and bottles; three transport freight and storage; five manpower companies; two power/energy producer; and two telecom companies.

A master plan and feasibility study was prepared in 1998 by CL Rosales Consultancy, a Zamboanga-based firm, which recommended project implementation. The ZEA is pushing for the implementation of the seaport project and had convinced RDC-IX to make it a priority regional project, second in line to the proposed New Zamboanga Airport Development Project. The seaport project was endorsed to NEDA, which recommended that a detailed feasibility study and master plan be conducted again.

During the assessment visit/meeting with ZEA staff, they were told that assumptions and projections made in the feasibility study should be validated and updated to current conditions to make sure that they are valid. ZEA staff were also told that the preliminary design and cost estimate should be checked and updated as well, considering that the proposed seaport site is in an open sea where waves are strong and deep-seated and costly breakwater (15-m depth of water on that point according to ZEA staff) on each side of the port structure will have to be constructed for convenient docking of vessels. Also, given existing and projected traffic the attraction of foreign container vessels does not seem promising, considering that an established world-class competitive port, the PPA Zamboanga Port, is available 25 km away. To help them in making a final decision regarding the port project, ZEA staff wanted to pursue updating the project's master plan and feasibility study by allocating budget for it and hiring a consultant.

The city government, through the City Tourism Office, operates a landing structure at Paseo del Mar, a newly developed gated esplanade with restaurants on a reclaimed coastal area about 1 km east of the City Hall for use as the take-off point of island residents and visitors to the Sta. Cruz Island Resort (at Great Sta. Cruz Island). The resort, also operated by the City Tourism Office, offers recreational facilities and a 500-m stretch of pink-sand beach area. The two Sta. Cruz Islands, both declared as protected areas under the National Integrated Protected Area Systems Act, have been developed in a very limited scale such that:

- Small Sta. Cruz Island is reserved as a marine sanctuary;
- Great Sta. Cruz Island is for controlled development only:
  - Three to four hectares reserved as a multiple-use zone mainly for residences of 78 Sama Bangingi original settlers
  - 30 hectares reserved as a recreational zone including three hectares for development of structures and facilities inclusive of the 500-m beach area and an army detachment; and,
  - 217 hectares strictly for mangrove forest reservation and marine/animal habitat.

Under the control of the City Tourism Office, about 5-10 outrigger motor boats per day transport about 50-100 visitors in and out of the island during lean season and 15-50 boats per day carrying 150-500 visitors during peak season (March, April, and May). Island residents who normally use their family-owned outrigger motor boats for the 15- to 20-minute travel to/from the city proper are free to use the landing structure. As observed during the assessment visit to the site, the landing structure is poorly built and requires expansion and improvement so that it can safely and conveniently serve both visitors and island residents.

Some concerns have been raised regarding the Zamboanga Port and the proposed Zamboanga International Container Terminal of ZEA. These include:

- **Congestion of vehicles and passengers at the Zamboanga Port Passenger Terminal Building**  
Corcuera Street, which connects to Zamboanga Port's Gate 2, the exit/entrance gate to the Passenger Terminal building and ferry ships, is obstructed by tricycles and roadside vendors causing traffic congestion along Corcuera Street and up to the adjoining block

at the corner of NS Valderosa Street. Congestion is aggravated by parked vehicles in front of commercial and office buildings along Concuera Street. City traffic enforcers should restrict entry of tricycles on the section of Concuera Street immediately connected to Gate 2 to prevent traffic congestion.

- **Need to validate the feasibility of the proposed Zamboanga International Container Terminal Project of ZEA**

As recommended by both NEDA Central and the Department of Budget and Management (DBM), ZEA should conduct a more detailed feasibility study and master plan in order to confirm the economic viability of the proposed Zamboanga International Container Terminal project. The outcome of the feasibility study will help ZEA decide on the next steps needed to take for the project.

#### *Recommendation*

- **Reconsider the Zamboanga International Container Terminal Project**

The Zamboanga Ecozone Authority should reconsider the proposed Zamboanga International Container Terminal project as this will directly compete with and duplicate the functions of the more established PPA-managed Zamboanga Seaport and considering the uncertainty of generating adequate cargo traffic from locator companies at the Zambo Ecozone.

### **3. Land Transport Connectivity**

#### *Assessment*

##### National Roads

National roads in Zamboanga City are under the jurisdiction of DPWH Zamboanga City 1<sup>st</sup> and 2<sup>nd</sup> Engineering Districts covering those within the whole city boundary. The engineering districts are in turn under the supervision of DPWH Region IX, which covers bigger public works and highway projects or those with estimated cost of more than Php50 million, the limit of the contracting authority of a district office. As with other DPWH local offices, these offices are fully staffed with professional engineers who appear to competently manage their responsibilities for planning, programming, constructing, and maintaining the extensive national roads in the city.

Based on the available information (2015 data), national roadlinks in the city have a total aggregate length of 146.12 km, of which 127.1 km (87percent) are fully paved. As a result of dramatic improvements in management and governance capacity in recent years at DPWH, a number of big ticket road improvement and new construction projects have been initiated and are improving physical connectivity including traffic flow not only within the city proper but also in the sub-urban areas of the city. The major roads include, among others:

- Zamboanga City Bypass Road, a 36.7 km bypass road, which begins in Barangay Culianan at its junction with the Zamboanga-Pagadian National Highway or the Pan-Philippine Highway (renamed Maria Clara Lobregat Highway) on the east and runs on southwesterly direction through Barangay Lumbangan, then through an area outside the city's built-up area in Barangay Pasonanca, and then turns northwesterly passing through Barangay Sinunoc and La Paz until terminating in Barangay San Ramon in the west coast at junction with the Zamboanga West Coastal Road. The new two-lane road which

passes across Pasonanca at about 5 km north of the Poblacion effectively connects the western industrial areas in Ayala, where several canneries are located, and San Ramon-Talisayan, where ship building and the Zambo Ecozone Area lies, to the eastern agricultural area in Culianan-Mercedes area, where the proposed new airport and the Planned City Extension township will be established. The multi-year multi-million (estimated cost of about Php2.28 billion) new road construction started in 2012 and is targeted for completion in 2017. Sections with no right-of-way issues are undergoing construction, while acquisition of right-of-way in some sections is still in the process;

- Zamboanga-Labuan-Limpapa West Coastal Road, a 4-lane national coastal road beginning at its terminus junction with Governor Camins Avenue in Barangay Baliwasan, and then proceeds westerly up to Barangay Ricodo where it turns northwesterly in Barangay Ayala through San Ramon, and then northerly up to the city boundary at Barangay Labuan; it then proceeds as a two-lane coastal road in northerly direction to the Municipality of Limpapa of Zamboanga del Norte Province;
- Zamboanga-Ipil-Pagadian National Road or the Pan-Philippine Highway, a 4-lane main arterial highway beginning at the its junction with RT Lim Boulevard in Barangay Baliwasan and proceeds northeasterly cutting across the main urban district of the city along the eastern side of the Zamboanga Airport runway in Barangay Canelar, through main intersections such at Sta. Cruz Market and Veterans Avenue in Barangay Tetuan and then proceeds through the suburban barangays of Guiwan, Putik and Divisoria, and finally through the rural barangays on the eastern side such as Culianan, Cabaluay, and Sangali until Barangay Licom, the city northern boundary with the Municipality of RT Lim of Zamboanga Sibugay Province. The section of the road between RT Lim Boulevard and Veterans Avenue is known as Governor Camins Avenue;
- RT Lim Boulevard, a 4-lane national highway, which begins at the junction with Governor Camins Avenue in Barangay Baliwasan, then goes easterly along the coast until it ends at the entrance of the Zamboanga Port in Zone 1 Poblacion; and
- Veterans Avenue, a 4-lane national highway, which serves as the eastern boundary of the Poblacion district beginning at the edge of Plaza Pilar in Barangay Sta. Barbara and then proceeds northerly until its terminus at junction with Governor Camins Avenue/Maria Clara Lobregat Highway in Barangay Tetuan.

Other proposed/approved projects include an Asian Development Bank-assisted diversion road improvement between Barangays Tagasilay and Vitali on the north side of the city and a flyover at the intersection of Veterans Avenue and Governor Camins Avenue at Sta. Cruz Market area, which is being proposed by the Zamboanga City 1<sup>st</sup> Congressional District Office. Ongoing and proposed minor projects consist of road widening, road shoulder concreting, or drainage works (both lateral and cross-over drainage improvement) in various sections of primary national highways and secondary national roads, such as the ongoing road widening and shoulder works on several sections along the Zamboanga West Coastal Road and the widening of few sections along Governor Camins Avenue.

### Local Roads and Traffic Management

Based on the available information, Zamboanga City has a total aggregate of 343 km of city-managed roads consisting of 40.9 km urban or city proper roads and 303 km barangay or rural roads. Proposed road projects include four connecting roads to the main Zamboanga Bypass

Road, which is now being constructed by DPWH to benefit barangays traversed by the bypass road, particularly Barangay La Paz where semi-temperate vegetables, cut-flowers, cacao, and coffee are grown. Access roads to the proposed new airport and the Planned City Extension township in Mercedes are also being proposed to be improved by the City Engineering Office.

As with other highly urbanized cities in the country, the present day Zamboanga City has grown into a large mix of urban sprawl extending from the west coast in Barangays Recodo and Ayala (mix of industrial and residential areas) to the central urban core spanning a radius of 5-km distance (mix of commercial and residential areas, separated between the north and south side by the Zamboanga Airport runway) from the coast up to the east coast (mainly residential areas). Accordingly, these built-up areas, particularly the Poblacion *barangays*, are where a high volume of economic activities happen resulting in the congestion of traffic flow especially during daytime. As the city grows economically, so will the urbanized *barangays* (total of 29 *barangays*) where traffic congestion will persist since roads are narrow and will potentially worsen if the City Government is lax in implementing traffic rules and regulations. Recognizing the serious issue of traffic congestion, the City Government through the City Administrator's Office, which is responsible for traffic administration, is looking at the following measures, among others, to address the issues:

- Installation of CCTV in key intersections not later than October 2016 with the assistance of the Department of Information and Communication Technology (DICT) to implement the project;
- Upgrading of traffic signal lights in important intersections in coordination with the City Disaster Risk Reduction Department, which is responsible for these facilities;
- Implementation of one-way routes in pre-identified roads to ease traffic congestion; and
- Rationalization of registration and routes of tricycles, which are now allowed to move throughout the city. Discussion has been conducted with tricycle operators/drivers so that tricycles will slowly be restricted from passing through national highways.

### Intermodal Transportation Linkage

#### **Road Transport Vis-à-vis Air Transport**

Once the airport is transferred to Mercedes-Talabaan area, the national highway leading to it must already be completed. Proper coordination with DPWH right after the completion of the airport master plan is therefore a must so that parallel scheduling can be done.

#### **Road Transport Vis-à-vis Sea Transport**

Cargo trucks make use of a truck corridor to move through the city streets. However, passengers going to the passenger terminal building of the Zamboanga Seaport have to pass through the narrow streets near the city market. Planning for better traffic circulation in the area could make navigating more convenient for passengers.

#### **Road Transport Inter-Connectivity**

As of now, the city is already experiencing traffic problems in the city proper, especially since a large shopping mall opened at the busy intersection of Governor Camins Avenue and Mayor Jaldon Street, on the eastern edge of the Zamboanga Airport runway. The city has hired Palafox and Associates to conduct city-wide planning, which may include recommendations to address

urban congestion. It is best to wait for the outcome of the study.

## Road Transport Services

There are different kinds of public transport services available in Zamboanga City, from tricycles to jeepneys to long-range provincial buses. Road transport services come in the forms of privately-owned services and public commercial transport services, franchised or registered either with the city (e.g., tricycles) or LTFRB (e.g., jeepneys and provincial buses).

The city government operates an Integrated Bus Terminal at the northern edge of the suburban area, that is well-designed and well-maintained. There is still some space in the terminal complex, which can be further developed for other economic activities.

The increasing number of vehicle registration in the region is a good indicator of available land transportation services in the area. The number of motor vehicles registered in Region IX grew at an annual compounded growth rate of 6 percent from 2007 to 2012 (*Table 9*).

**Table 9. Motor Vehicle Registration, Zamboanga LTO Regional Office, 2007-2012**

	CARS	UV	SUV	BUSES	TRUCKS	MC/TC	TRAILERS	TOTAL
2007	4,320	29,179	1,791	668	5,921	126,567	189	168,635
2008	4,420	31,681	2,417	808	6,675	128,721	198	174,920
2009	4,689	34,815	2,999	700	7,467	125,167	234	176,071
2010	5,150	39,315	3,150	402	8,262	132,347	234	188,860
2011	5,604	41,214	3,760	408	9,249	154,024	248	214,507
2012	6,967	44,976	4,384	489	9,868	158,510	305	225,499

\*MC/TC – motorcycle/tricycle

Source: Department of Transportation and Communications, Information Systems Division

## Recommendations

- **Improve traffic management and planning in the central business district**

The city should initiate strict enforcement of traffic rules to avoid vehicle congestion during rush hours including: regulations on the "no parking," loading and unloading zone, and no travel of tricycles along major highways. SURGE can provide advisory assistance to formulate strategies for effective enforcement of traffic ordinances.

The City Government should prepare a traffic management master plan, which may consider the following: amending the tricycle franchise ordinance to include confining tricycle and passenger motorcycle ("*habal-habal*") movements on a particular route or group of barangays. SURGE can provide assistance to develop a traffic management plan.

- **Implement the concreting of roads in rural areas**

The City Engineering Office should continue concreting roads in rural areas, particularly in Barangay La Paz in support of small growers (mostly women) of vegetables, cut flowers, and cacao farms in the area, in barangays that need to be connected with the Zamboanga Bypass Road, and in Barangay Mercedes for the access road of the new

airport and PCE township. SURGE can provide assistance to prioritize roads, identify funding streams, and package projects.

- **Implement additional road improvements in Barangay La Paz**

Road improvements in Barangay La Paz are needed to support agricultural farms for semi-temperate vegetables, cut flowers, cacao, and coffee, as is being proposed for development by the City Agriculturist.

#### **4. Telecommunications and Digital Connectivity**

##### *Assessment*

Telecommunication companies, PLDT/Smart and Globe Telecom, have fully reached Zamboanga City with their respective telecommunications network or backbone. Each has connected its network through cable lines originating from either Dipolog or Cagayan de Oro. Their lines are made of high capacity fiber optic wire, which is less expensive and more durable, or copper wires, which are slowly being phased out and replaced by the former. Their distribution lines are extensive in the city proper but become sparse going to the sub-urban barangays in the southwestern and southeastern sides of the city. This pattern follows the availability of their services for landline telephony and internet connections.

Using microwave signal through their respective network of cellular sites, both telcos have also almost covered the urbanized *barangays* and some sub-urban *barangays*. In the covered areas, both cellular telephony and internet services are available for subscription. Each telco has a roll-out for additional cellular sites in the city's urbanized *barangays* but not in the rural *barangays* where settlements are scattered and not yet financially viable to cover. The two telcos are confident that they will have wider and stronger signal now that they have acquired the 700 MHz radio band from San Miguel Corporation.

As in all other cities, the local managers of the two telcos have raised concerns on the long process they have to pass through before they can get permits from the LGUs, both barangay and city, for the construction and installation of their cellular phone site facilities. The process is very bureaucratic and cumbersome, not to mention costly to cover informal fees/charges.

##### *Recommendation*

- **Simplify the permitting process for constructing and installing cellular sites**

The city government may wish to streamline the process for the issuance of permits to construct and install cellular sites. SURGE can provide technical assistance to the city government to explore simplifying the permitting and approval process.

## Annexes

### Annex 1. Diagnostic Tool for Assessing Urban-Rural Connectivity

#### 1. Introduction

A city has to be connected externally so that the local economy would grow through interaction and integration with larger regional economies. Transportation and telecommunication infrastructure and services are key to achieving external connectivity and, thus, of economic growth. Improved airport and seaport facilities are necessary so that air and sea transport services can move people and products faster and at reasonable cost. Arterial roads need to provide seamless connection for products and people to move unimpeded into larger regional markets. High-capacity telecommunication infrastructure and services should also be available so that voice and data can easily be transmitted outside.

Along the same vein, the city has to be connected internally so that it will become a coherent and integrated economic unit with raw material producers from rural areas regularly supplying the urban processors and consumers. Moreover, the urban area as the center of administrative, commercial, financial, and educational activities should be sustained so that it can provide the necessary services to the people including those in the fringes and rural areas.

For cities to become engines of inclusive growth, expansion of urban-rural connectivity should be encouraged so that economic gains and opportunities in the urban core would reach rural areas where producers live and residents are relatively poor. Connectivity between the urban core and rural areas, either within or outside the city boundary, could be in terms of physical connection using transportation infrastructure and services (roads, airport and seaport) and through communications and digital linkages (telephone, internet, television, and radio). As the urban core develops and its facilities and services improve, seamless connectivity between the urban and rural areas provides equity as the latter are able to access needed services that have become efficient and effective from the former and, at the same time, supply the same with raw materials at competitive cost.

The following lays out a procedure in assessing the city's connectivity in terms of its physical (i.e., roads, airport and seaport infrastructure and services) and communications/digital linkages, with focus on those that support or would support increased trade and investment. The assessment will analyze the existing situation in terms of adequacy to current and future demand, as well as the planned/programmed activities to meet the demand. It will then use this information in identifying gaps and in making recommendations to address the gaps and the unmet demand.

#### 2. Air Transportation Connectivity

Island economies such as those in the Visayas and the island-provinces in Mindanao require airports and air transport services to be connected. As gateways into and from the city, airports with efficient and well-managed facilities will benefit not only city dwellers but also residents of adjoining municipalities and remote provinces who avail of these facilities or come to the city for high-end services in finance and banking, education, and health care that are only available in the city proper. Rural residents and farm growers who supply food to the city and out-ship outside also stand to benefit from efficient and well-managed airport facilities.

Air transportation facilities and related services will be assessed by looking at the current



situation in terms of physical attributes; operation and management of facilities; and quantity, quality, and cost of services to both cargo and passengers, taking into consideration the special needs of persons with disabilities (PWDs), women, children, and the elderly. Likewise, planned/programmed activities and projects will be gathered and analyzed in terms of adequacy, appropriateness, timeliness, economic benefits, and sensitivity to gender and PWD issues to determine whether these address current and future needs. When possible, cost of air transport services will be extrapolated for “with” and “without” project/program to understand the direct economic impact of the project/program.

Data and information will be gathered from published and unpublished reports and studies, as well as from interviews of and discussions with key informants from concerned agencies. These agencies include the following:

- Department of Transportation and Communications (DOTC) – Air Transport Division: planning/programming and implementing capital projects in government airports;
- Civil Aviation Authority of the Philippines (CAAP): operating and managing airport facilities including air traffic control;
- National Economic and Development Authority (NEDA): providing macroeconomic planning, coordination, and oversight of government projects/programs;
- Department of Trade and Industry (DTI): trade and industry development, regulation, and promotion including assistance and support to trade/industry groups.
- Relevant reports and studies commissioned by donors such as ADB, USAID, JICA, AusAid and ADZ, among others, will also be consulted to gather data/information.

Supply chains of priority products out-shipped by air originating from the growers’ farms to the processors and markets, will be identified and their intervening stages analyzed to know if support air transport logistics facilities, such as cold storage, warehouse/consolidation centers, sorting/packing building, and related services, are necessary along the way to improve product quality or supply chain efficiency. Note that a parallel value chain analysis of priority products in agriculture and aquaculture (for four CDI Cities) and a parallel transport infrastructure assessment are being conducted to know the situation, issues/gaps, and appropriate recommendations formulated to address the gaps. These analyses /studies will then be appropriately integrated into the logistics assessment report.

## **2.1 Airport Facility Operation and Management**

CAAP’s airport personnel are critical in attaining efficient and well-managed airport facilities. Being part of the agency mandated to operate, manage, secure, and maintain airport facilities including air traffic control, the CAAP personnel and service providers’ attitude and manner of providing services weigh heavily on the efficiency and competitiveness of airport operation.

Specifically, an interview with the airport manager, or with select airport personnel in the absence of the manager (e.g. airport operations head or the chief administrative officer), will be conducted to gather data on the following:

- Current capacity of airport facilities;
- Current and projected traffic;
- Plans or programs for expansion or improvement of facilities in accordance with the information gathered from DOTC;
- Current and future programs and measures to improve various services rendered by CAAP and to make the facilities more efficient and passenger-friendly especially to children, PWDs, and elderly so that the airport will be more competitive;

- Airlines currently using the airport and duration of turn-around time;
- Indicative origin and destination of passengers and cargo traffic and the respective general breakdown;
- Major products being shipped-out/shipped-in and general breakdown in volume;
- Annual revenues and general breakdown as to source;
- Annual expenses and breakdown per cost item;
- Current facility operator, concessionaires and service providers and breakdown as to type, number and percentage of revenues generated per type;
- Internal and external means of communication in the airport and its availability and quality; and
- Issues and concerns related with personnel, facility rental and concessionaires, safety, security, disaster preparedness and other operational matter in the airport.

To generate these data, the following guide questions will be used:

1. What is the passenger traffic capacity of the airport based on its design?
2. What is the annual total passenger traffic as of December 2015? What is the percentage ratio of incoming and outgoing passenger traffic? Has there been a seasonality trend observed through the years? Peak month(s)? Lean month(s)?
3. What is the average percentage growth of annual traffic based on the last three years? With the current growth trend, when will the airport start to be congested?
4. What is the planned/proposed expansion or improvement of facilities or measures to address congestion? What is the status of the proposed/planned expansion?
5. What is CAAP's current and future program or action to provide better and more efficient services to passengers, more specifically to children, PWDs, pregnant women, and the elderly?
6. What are the airlines being serviced and the frequency of each of their landing/usage of the airport per route? What is the average daytime turn-around time of aircraft (from the time of landing to parking and to take-off)?
7. What is the indicative origin and destination of passengers and cargo traffic as of May 2016? Please provide percentage breakdown of the place of origin and of destination. What are the major products being shipped-out and being shipped-in as of May 2016? Please provide indicative volume per type of product.
8. What is the airport's annual revenue? Please provide percentage breakdown per revenue source.
9. What is the airport's annual expenses? Please provide percentage breakdown per expense type.
10. What are the current facility operator, concessionaires, and service providers in terms of type/grouping and number and percentage revenue contribution per type?

11. What are the means of communication of CAAP – both internal and external of the airport? Please describe each means of communication.
12. Do you have specific programs to employ/engage more qualified women and/or to maintain a gender-sensitive workplace? Please describe if any.
13. Do you have any issues and concerns related with personnel, passengers, facility rental and concessionaires, safety, security, disaster preparedness, and other operational matters in the airport? If any, please describe.
14. Do you find the RDC-NEDA Infracom adequate for conducting consultations and getting feedback on your projects from other stakeholders? If not, would you agree to establish a regular consultation mechanism through a monitoring/advisory body so that DOTC can regularly report the status of its projects and get feedback or assistance whenever necessary from local officials and other stakeholders?

## **2.2 Airline and Air Cargo Service Operator**

Next to CAAP's employees, airline personnel and service providers play a large role in attaining airport efficiency and customer's satisfaction. While under a formal regulation and arrangement with CAAP, airline personnel also have leeway in executing rules and procedure in terms of the requirements and documentation of air transport service. Their efficiency and professionalism in performing their tasks mean heavily to service satisfaction of passengers and shippers/cargo forwarders.

The airline ground cargo head or its cargo service operator will be sought to gather data on their operation and their relationship with shippers or cargo forwarders and the airport personnel. Interview will be requested to gather data on the following:

- Number of aircraft landing at the airport and their type, capacity, and route;
- Type and volume of primary products being carried/handled incoming and outgoing of the airport;
- General airfreight rates per kilo per type of cargo;
- General origin and destination of shipped-in and shipped-out cargo;
- Dwell time at the airport of incoming and outgoing cargo;
- Any special rates given for large volume cargo or more frequent customers or shippers;
- Forms of communication (internet/social media, telephony, radio, television, and print media) used in disseminating service provision, promotions, and advisory to customers, as well as in getting feedback from customers;
- Maintenance of database and sharing arrangement with CAAP; and
- Issues and concerns in dealing with CAAP, its service providers, and shippers or cargo forwarders.

To generate these information, the following guide questions will be used:

1. How many aircraft are currently landing at the airport? Please indicate the type, capacity and route of the aircraft.
2. What are the types and how much is the volume of primary products that you carry/handle incoming and outgoing of the airport? Please give percentage breakdown of each type.

3. What are the current airfreight rates per kilo per type of cargo?
4. What is the general origin and destination of shipped-out and shipped-in cargo? Please give percentage breakdown for each place of destination and origin.
5. What is the average or usual dwell time of cargo incoming (time difference when cargo arrived at the airport and when it was picked-up or claimed by the shipper/cargo forwarder) and outgoing (time difference when cargo is delivered to the airport and when it actually was carried by aircraft)?
6. Do you give special rates for large volume cargo or frequent customers/shippers? If yes, describe terms of special rate.
7. What forms of communication are being used (internet/social media, telephony, radio, television, and print media) in disseminating provision of service, promotions, and advisory to customers, as well as in getting feedback from customers?
8. Do you maintain a database and have a sharing arrangement with CAAP?
9. Do you have any issues/concerns in dealing with CAAP (on security/safety, fees or charges, rules and procedure, inspection/control of cargo, etc.) and with shippers or cargo forwarders (on promptness of delivery and pick-up of cargo, packing/packaging compliance, booking compliance, collection of freight, etc.)?
10. Do you have any current actions and future plans to make your service more efficient and competitive? Please describe if any.
11. Do you have any specific programs to employ/engage more qualified women and/or to maintain a gender-sensitive workplace? Please describe if any.

### **2.3 Shippers and Air Cargo Forwarders**

Shippers use air transportation in delivering high value products including highly perishable agri-fishery products. Cargo shipments are of relatively smaller quantity (in volume and weight) and pre-shipment documentation and processing requirements are relatively less complicated due to the high service cost. Despite of its high cost, the service's inherent advantage of speed, light packing requirement, and security of cargo may still result to net profit for some shippers.

At times, shippers, either of their own products or acting as traders, opt to use cargo forwarders who are already familiar with the rules/procedure and actors in the process to do the shipment for them. Mark-up fee or fixed service fee is charged by cargo forwarders as payment for their service. An officer or a representative member of the shippers' association, the local PhilExport, and/or cargo forwarder of major products will be interviewed to gather necessary information including but not limited to the following:

- Type and size of business;
- Type and volume of out-shipped cargo;
- Origin and destination of shipped cargo;
- Landed price of cargo and percentage share of transport logistics cost;
- Cost of transportation logistics, broken down in percentage of airfreight cost, trucking cost, documentation/clearance cost, forwarding fee (if by cargo forwarder), and informal

- cost, if any;
- Experience or gathered information on the service quality of truckers, airport's cargo service operator, and CAAP personnel or its service provider;
- Experience or gathered information on the condition of roads/routes normally taken in transporting the cargo from the source to the sending airport and from the receiving airport to the final destination;
- Potential need for commercial cold storage, wholesale market, warehousing and cleaning, sorting, and packing/packaging facilities to make products more competitive;
- Access to or need of telecommunications services and advanced digital applications to have more efficient business transactions; and
- Any problems, and recommended solutions to the problems, as well as recommendations to improve the system to make shipped cargo more competitive in the market.

To generate necessary information, the following guide questions will be used:

1. What is the type and size of your current business?
2. What types and how much volume of your out-shipped cargo are using air transportation?
3. What is the origin and destination of shipped cargo? Please give percentage breakdown as to destination.
4. What is the landed price of shipped cargo? What is the percentage share of transport logistics cost at this landed price?
5. What is the cost of transportation logistics? Please give percentage breakdown as to airfreight cost, trucking cost, documentation/clearance cost, forwarding fee (if by cargo forwarder), and informal cost, if any.
6. What is your experience or any gathered information on the service quality of and related cost and issue with truckers, CAAP, airlines, and airport's cargo service operator? Do you find each of their fees/charges reasonable, or high/low? If unreasonable or high, do you have any suggestions to improve the service?
7. Do you experience any problems engaging with trucking services to transport cargo to the sending airport and from the receiving airport to the final destination?
8. What is your experience or any gathered information on the condition of roads/routes normally taken in transporting the cargo from the source to the sending airport and from the receiving airport to the final destination?
9. Is there a potential need for commercial cold storage, wholesale market, warehousing and cleaning, sorting, and packing/packaging facilities to make agri-products more competitive? If yes, please elaborate.
10. Do you think having access to telecommunications services (even advanced services, if available, and/or advanced digital applications) will increase the efficiency of business transactions? Will you avail of these services?
11. Do you see or hear any problems and recommended solutions to improve the system

and make shipped cargo more competitive in the market?

12. Do you have any current actions or future plans to make your product more competitive? Please describe if any.

13. Do you have any specific programs to employ/engage more qualified women and/or maintain a gender-sensitive workplace? Please describe if any.

### **3. Sea Transportation Connectivity**

As with air transport, island economies such as those in the Visayas and the island-provinces in Mindanao require seaports and water transport services as a means to be connected. When available, these provide a less costly alternative transport mode for passengers and cargo relative to air transportation. Of the two transport modes, sea transport is preferred by people with limited economic means, while air transport by those in upper economic classes who can afford higher fares and place higher value on time.

Sea transportation facilities and related services will be assessed by looking at the current situation in terms of physical attributes, operation and management of facilities, and quantity, quality and cost of services to both cargo and passengers, taking into consideration the special needs of person with disabilities (PWDs), women, children and the elderly. Likewise, planned/programmed activities and projects will be gathered and analyzed in terms of adequacy, appropriateness, timeliness, economic benefits and sensitivity to gender and PWD issues to determine whether these address current and future needs. When possible, cost of sea transport services will be extrapolated for “with” and “without” project/program to understand the direct economic impact of the project/program. Data and information on these will be gathered from published and unpublished reports and studies, as well as from interviews of and discussions with key informants from concerned agencies such as:

- Philippine Ports Authority (PPA): planning/programming and implementing capital projects in government seaports, operating/managing major public seaports, and regulating private ports;
- Maritime Industry Authority (MARINA): regulating the shipping industry and related services;
- National Economic and Development Authority (NEDA); and
- Department of Trade and Industry (DTI).

Relevant reports and studies commissioned by donors such as World Bank, USAID, JICA, AusAid and ADZ, among others, will also be consulted to gather data.

Supply chains of priority products out-shipped by sea originating from the growers’ farms to the processors’ and markets will be identified and intervening stages analyzed to know if support sea transport logistics facilities such as cold storage, warehouse/consolidation centers, sorting/packing building, and related services are necessary along the way to improve product quality or make the chain more efficient. Note that a parallel value chain analysis of priority products in agriculture and aquaculture (only for four CDI cities) and a parallel transport infrastructure assessment are being conducted to know the situation and issues/gaps and appropriate recommendations formulated to address the gaps. These analyses /studies will then be appropriately integrated into the logistics assessment report.

#### **3.1 Seaport Facility Operation and Management**

PPA plays a critical role in attaining efficient and well-managed seaport facilities. It has evolved from its creation as a government-owned-and-controlled corporation (GOCC) in 1978 into a more professional and competent organization and a viable government entity. A number of the major ports that it operates and manages, mostly under a whole port management contract with private firms, has been granted ISO 9001 certification, a proof of good housekeeping and management. PPA has also evolved into a capable organization in regulating not only public ports but also private product-dedicated ports, a function that has been criticized by private business groups as conflicting to its operational function and partly contributory to the high cost of sea transportation in the country.

PPA's conflicting function, notwithstanding, the attitude of its personnel and service providers, particularly the cargo handling operator, and the way they provide services weigh heavily on the efficiency and competitiveness of seaport operation. Specifically, an interview with the seaport manager or with select port personnel, in the absence of the manager, such as the port terminal operations head or the chief administrative officer, will be conducted to gather data/information on the following:

- Current capacity of seaport facilities;
- Current and projected traffic;
- Current and future target on cargo handling productivity including number and type of cargo handling equipment being used;
- Plans or program for expansion or improvement of facilities to meet projected traffic;
- Current and future programs and measures to improve various services including cargo handling and to make the facilities more efficient and customer-friendly especially to passengers including children, PWDs, pregnant women and elderly;
- Shipping lines currently using the airport and duration of turn-around time;
- Indicative origin and destination of cargo traffic and the respective general breakdown;
- Major products being shipped-out/shipped-in and general breakdown in volume;
- Annual revenues and general breakdown as to source;
- Annual expenses and breakdown per cost item;
- Current facility operator, concessionaires and service providers and breakdown as to type, number and percentage of revenues generated per type;
- Internal and external means of communication in the port and its availability and quality; and
- Issues and concerns related with personnel, facility rental and concessionaires, safety, security, disaster preparedness and other operational matter in the port.

To generate these data, the following guide questions will be used:

1. What is the berthing capacity of the port based on its design? What is its current berth occupancy rate?
2. What is the annual total cargo traffic as of December 2015? What is the average percentage ratio of inbound and outbound cargo? Is there a seasonality trend through the year? When are the peak and lean months?
3. What is the average percentage growth of annual traffic based on the last 3 years? With the current growth trend, when will the port start to be congested?
4. What is the planned/proposed expansion or improvement of facilities or measures to address congestion? What is the status of the proposed/planned expansion?

5. What is the current and future target on cargo handling productivity, including number and type of equipment being used?
6. What is PPA's current and future programs or actions including cargo handling to provide more efficient and better services to cargo shippers, ships, and other customers, especially to passengers including children, PWDs, pregnant women, and the elderly?
7. What are the shipping lines and how often is the frequency of each of their call/usage of the port per month? What is the average turn-around time of vessels (from the time of docking/calling to departure)? Is this at par with international standards?
8. What is the indicative origin and destination of passengers and cargo traffic as of May 2016? Please provide percentage breakdown of the place of origin and of destination.
9. What is the port's annual revenue? Please provide percentage breakdown per revenue source.
10. What is the port's annual expenses? Please provide percentage breakdown per expense type.
11. What are the current facility operator (cargo handling), concessionaires, and service providers in terms of type/grouping and number and percentage revenue contribution per type?
12. What are the means of communication of PPA both internal and external of the port? Please describe each means of communication.
13. Do you have specific programs to employ/engage more qualified women and/or to maintain a gender-sensitive workplace? Please describe if any.
14. Do you have any issues and concerns related with personnel, passengers, facility rental and concessionaires, safety, security, disaster preparedness, and other operational matters in the port? If any, describe.
15. Would you agree to revitalize the Port Management Advisory Council (PMAC) for the purpose of transparency of your programs and projects to other stakeholders?

### **3.2 Shipping Lines**

Next to PPA and its cargo handling operator, shipping lines and their agents play a major role in attaining port efficiency and customer satisfaction. Although under a formal regulation and arrangement with PPA and cargo handling operator while at the port, shipping lines also have leeway in executing rules and procedure in terms of the requirements and documentation of their service. Their efficiency and professionalism in performing their tasks mean heavily to service satisfaction of its customers.

The local manager or agent of a major shipping line will be sought to gather data on their operation and their relationship with shippers/cargo forwarders and PPA port personnel including cargo handling operator. Interview will be requested to gather data on the following:

- Number of ships calling at the port and their capacity and route;



- Types and volume of major products that is carried incoming and outgoing of the airport;
- General sea freight rates per ton per type of cargo;
- Any special rates given for large volume cargo or more frequent customers or shippers;
- Form of communication (internet/social media, telephony, radio, television, and print media) used in disseminating service provision, promotions, and advisory to customers, and in getting feedback from customers;
- Maintenance of data base and sharing arrangement with PPA; and
- Issues and concerns in dealing with PPA and/or its cargo handling operator and with shippers or cargo forwarders.

To generate these information, the following guide questions will be used:

1. How many ships are currently calling at the port? Please indicate type, capacity, and route.
2. What are the types and how much is the volume of primary products being carried by your ship incoming and outgoing of the seaport? Please give percentage breakdown of each type.
3. What are the current sea freight rates per ton per type of cargo? Please give breakdown if necessary.
4. What is the average turn-around time of your vessel (time difference between when the ship docks and when the ship actually departs the port)? Do you strictly maintain a fixed turn-around time? Do you experience delays in maintaining a fixed turn-around time? If yes, why?
5. Are you regularly able to fulfill your booked berthing slot? If not, why?
6. Do you give special rates for large volume cargo or frequent customers/shippers? If yes, describe terms of special rate.
7. What forms of communication (internet/social media, telephony, radio, television, and print media) are being used in disseminating provision of service, promotions, and advisory to, and in getting feedback from customers?
8. Do you maintain a database and have a sharing arrangement with PPA?
9. Do you have any issues or concerns in dealing with PPA (on security/safety, port and berthing facilities, reefer plug availability, timeliness of departure, fees/charges, rules and procedure, inspection/control of cargo, etc.), cargo handling operator (on availability or adequacy of equipment such as trucks and trailers, cargo handling productivity, fees/charges, etc.) and with shippers/cargo forwarders (on timeliness of delivery and withdrawal of cargo, overweight container, retention of container, etc.)?
10. Do you find the charges/fees of PPA and the cargo handling operator reasonable for the level of service, or high/low? If unreasonable or high, do you have any suggestions to improve or make the service more competitive?
11. Do you have any current actions and future plans to make your service more efficient and

competitive? Please describe if any.

12. Do you have specific programs to employ/engage more qualified women and/or to maintain a gender-sensitive workplace? Please describe if any.

### **3.3 Shippers and Cargo Forwarder**

Shippers in Mindanao and in the island provinces in the Visayas and Luzon use sea transportation in moving large quantity of products directly to the market or to transshipment point when necessary. Products that can tolerate longer hours (10-15 hours for Mindanao-Cebu and 50-72 hours for Mindanao-Manila) on travel including less perishable agri-fishery products are moved primarily using sea transportation, which has developed relatively well-established procedures and modal connections throughout the years.

At times, shippers, either of their own products or acting as traders, use cargo forwarders who are already familiar with the rules/procedure and actors in the process to do the shipment for them. Mark-up fee, fixed percentage fee, or fixed service fee is charged by cargo forwarders as payment for their service. An officer or a representative member of the shippers association, the local PhilExport, and/or cargo forwarder of major products will be interviewed to gather necessary information, such as:

- Type and size of business;
- Type and volume of out-shipped cargo;
- Origin and destination of shipped cargo;
- Landed price of cargo and percentage share of transport logistics cost;
- Cost of transportation logistics and broken down in percentage of sea freight cost, trucking cost, documentation/clearance cost, forwarding fee (if by cargo forwarder) and informal cost, if any;
- Experience or gathered information on the quality of service of truckers, cargo handling operator and PPA personnel or its service provider;
- Experience or gathered information on the condition of road/route normally taken in bringing the cargo from the source to the sending port and from the receiving port to the final destination or transshipment point;
- Potential need for commercial cold storage, wholesale market, warehousing and cleaning, sorting and packing/packaging facilities to make product more competitive;
- Access to or need of telecommunications service and advance digital applications to have more efficient business transactions; and
- Any problems and recommended solutions to improve the system and make shipped cargo more competitive in the market.

To generate necessary information, the following guide questions will be used:

1. What is the type and size of your current business?
2. What types and how much volume of your out-shipped cargo are using sea transportation?
3. What is the origin and destination of shipped cargo? Please give percentage breakdown as to destination.
4. What is the landed price of shipped cargo? What is the percentage share of transport

logistics cost at this landed price?

5. What is the cost of transportation logistics? Please give percentage breakdown as to sea freight cost including cargo handling at port, trucking cost, documentation/clearance cost, forwarding fee (if by cargo forwarder), and informal cost, if any.
6. What is your experience or any gathered information on the service quality of and related cost and issue with truckers, PPA, port's cargo handling operator, and shipping lines? Do you find each of their charges reasonable, or high/low? If unreasonable or high, do you have suggestion to improve or make the service better?
7. Do you experience any problems in engaging with trucking services to transport cargo to the sending port and from the receiving port to the final destination or the transshipment point if that is the case?
8. What is your experience or any gathered information on the condition of roads/routes normally taken in transporting the cargo from the source to the sending port and from the receiving port to the final destination or to the transshipment point as the case may be?
9. Is there a potential need for commercial cold storage, wholesale market, warehousing and cleaning, sorting, and packing/packaging facilities to make products more competitive? If yes, please elaborate.
10. Do you think having access to telecommunications services (even advanced services, if available, and/or advanced digital applications) will make more efficient business transactions? Will you avail of these service?
11. Do you see or hear any problems and recommended solutions to improve the system and make shipped cargo more competitive in the market?
12. Do you have any current actions or future plans to make your product more competitive? Please describe if any.
13. Do you have any specific programs to employ/engage more qualified women and/or maintain a gender-sensitive workplace? Please describe if any.

#### **4. Land Transportation Connectivity**

Land transportation facilities such as highways, roadways and pathways provide physical connectivity to cities—internally within to integrate spatial components and externally to interact with neighboring municipalities and other regional components. For island cities and provinces such as in the Visayas and Mindanao, roads provide inter-modal transport linkages with airport and seaport facilities.

National arterial roads which connect the city with the rest of the region as well as secondary connector roads will be identified and their conditions assessed as to their physical attributes, adequacy and capacity to meet current and future traffic needs, while considering gender-specific and PWD needs. Data and information will be gathered from the Department of Public Works and Highways, the agency responsible in planning/programming, implementing and maintaining national roads. Likewise, city, barangay and farm-to-market roads will be identified and assessed as to their physical attributes, adequacy, capacity, and sensitivity to gender and

PWD issues to meet current and future traffic needs particularly in support of agricultural activities and human settlements or housing projects.

Data and information will be gathered from the City or Provincial Engineering Office, whichever has administrative jurisdiction over the concerned roads, and from the local office of the Land Transportation Office (LTO) and the Land Transportation Franchise and Regulatory Board (LTFRB) on routes and franchises of public utility vehicles (PUVs). Interview of key informants in these agencies will also be conducted to verify recorded data and to know related issues and concerns on current and planned activities for use in the analysis and in submitting recommendations to local or national authorities for action or decision.

With the resurgence of trade and commerce together with the emergence of liberal financing for vehicle acquisition, land transportation services in urban areas have never been most active as in the last decade, resulting to serious vehicular traffic problems in the urban core. The traffic situation and related plans and programs to ease traffic congestion in the central business district (CBD) will be assessed by looking at roadway attributes including geometric, surface characteristics, and attached drainage facilities; traffic flow and routes; regulatory, instructional and informational signs; and behavior of motorists and pedestrians.

Road facilities including traffic lights, if any, road channelization, islands, intersections and roundabouts, and pedestrian sidewalks and ramps, which are most necessary for safe and convenient passage of PWDs, children and elderly, will also be assessed for adequacy and appropriateness. Data will be analyzed and appropriate next steps toward addressing the traffic congestion problem will be formulated and presented to LGU officials for appropriate decision and action.

Specific road sections that serve and support commodities, products, or projects considered or emerging as a priority for development by the city will be targeted for assessment to determine their current condition and planned improvement, if any. Based on this, appropriate recommendations to address any gap for improvement will be formulated and submitted to the concerned LGU offices and/or government agencies for appropriate action. Priority commodities, products, or projects will be based on the city's development plan and information gathered in earlier activities, namely industry studies under the USAID Investment Enabling Environment (INVEST) Project, including the Assessment of Prospective Cities for USAID Assistance under the Cities Development Initiative (OIDCI, December 2014), and, earlier consultations conducted under SURGE such as the rapid assessment in October-November 2015 for the six CDI cities and the Stakeholders' Forum in each city in February 2016. Materials and reports gathered from relevant national government agencies will also be reviewed to confirm the LGU priorities.

Logistics routes and requirements for each product or project need determination as requisites in the performance of the assessment. A parallel value chain study of priority commodities is being conducted to define the logistics route and determine the requirements to streamline, if not reduce, the cost of transportation and capture or add value along the route. The value chain study, together with the parallel assessment/study of the transport infrastructure, will be integrated into a coherent logistics and communications assessment report to know the gaps and formulate recommended activities and actions to address these gaps.

#### **4.1 National Arterial and Secondary Roads**

As the primary agency in planning, programming, implementing, and maintaining national roads consisting of primary national roads (arterials, east-west laterals, and roads of strategic

importance, such as those that lead to airports, seaports, and tourist site) and secondary national roads (such as inter-municipal roads and national road connections), the regional DPWH office will be sought for an interview and discussion as to its current and future projects/programs, policies on maintenance and convergence of activities with other national agencies and City and Provincial LGUs, and any measure or action to improve its operation and services. The following questions will be asked in the interview:

1. How many national roads in the city/province are under DPWH's jurisdiction? Please give breakdown as to lengths of primary roads and secondary roads and the corresponding lengths of Portland Cement Concrete Pavement (PCCP), asphalt concrete, gravel or double bituminous surface treated (DBST), and earth/dirt road under each.
2. What are the ongoing major road improvement and construction projects in the city under DPWH's General Appropriations Act (GAA), foreign-assisted, and convergence with other agencies (DA, DAR and DILG) and/or LGUs? Please give status of each as of to date.
3. What are the about-to-start proposed major road improvement and construction projects in the city under DPWH's GAA, foreign-assisted, and convergence with other agencies and/or LGUs? Please give status of each as of to date.
4. Specifically with regards to your convergence with DA and DILG, have you assisted these agencies in designing and implementing road projects under DA's World Bank-assisted Philippine Rural Development Program (PRDP) and under DILG-LGU's Kalsada Program? If yes, please give more details on each road project.
5. For road maintenance, do you have adequate funding from road user's fund for routine and periodic maintenance? If not, where do you source the shortfall in funding?
6. On regulatory and warning signage, do you have regular programs to properly maintain, replace damaged ones, and provide additional ones on national roads? Would you agree to establish a mechanism so that motorists can recommend which signage need replacement and where additional signage are needed for road safety improvement?
7. Do you have current and future programs to make your operation/services better and internationally-competitive (e.g., getting ISO-9001 certification)?
8. Do you find the RDC-NEDA Infracom adequate for conducting consultation and getting feedback on your projects from other stakeholders? If not, would you agree to establish a regular consultation mechanism through a monitoring/advisory body so that you can regularly report the status of your projects and get feedback or assistance whenever necessary from local officials and other stakeholders?
9. Do you have any programs to employ more qualified women and create a more gender-sensitive workplace?

## **4.2 Local Roads and Traffic Management**

Local roads (i.e., provincial, city, municipal, and barangay roads) are under the jurisdiction of the respective LGUs where they are located. To avoid confusion, the roads under whose LGU jurisdiction have already been identified and definite listing prepared for use in computing the respective LGU share in the road user's fund intended for road maintenance. Accordingly,

provincial roads are those that connect city/municipality to another city/municipality or to any national road; and, city/municipal roads are those that link barangays or *sitios* or connect to the national road within the city/municipality and are excluded from the national and provincial road jurisdiction.

The City Engineering Office is responsible in planning, programming, and implementing all public works in the city including road improvement and construction projects of city roads. This office serves as the local government counterpart of DPWH, although often with limited capability and lesser means in performing public works activities. This office may also be responsible in traffic management, although in a lot of cities, this particular function is lodged under a separate traffic management office or combined with regular city government departments such as the City Administrator's Office or the General Services. The City Engineer and/or the chief of the traffic management office will be sought to gather information on the situation of city roads and current and future projects including traffic administration policies and programs. Guide questions include:

1. How many city roads are under the responsibility of the City Engineering Office? Please give breakdown as to lengths of roads and the corresponding lengths of PCCP, asphalt concrete, gravel or DBST, and earth/dirt road under each.
2. What are the ongoing city road improvement and construction projects directly being implemented by your office under the city budget? How about those under the national budget (e.g., DA, DAR or President's Calamity Fund, etc.)? How about those implemented by other agencies, if any, under the convergence program? Please give status of each to date.
3. What are the about-to-start proposed city road improvement and construction projects under your office? Please give status of each as of to date. Do you have definite plans to improve the roads going to priority agriculture production areas? Please provide status or describe any plan.
4. Specifically with regards to your convergence with DA and DILG, are you participating in DA's World Bank-assisted PRDP and/or in DILG-LGU's Kalsada Program? If yes, please give more details on each road project.
5. For road maintenance, do you have adequate funding from road user's fund for routine and periodic maintenance? If not, where do you source the shortfall in funding?
6. Do you have a traffic management plan and/or a strategy to improve traffic in the city proper? Do you need any assistance in this regard?
7. Do you have a strategy to address the road safety problem caused by slow-moving tricycles and "trisikad" (or manually-pedaled tricycles) traveling along major highways?
8. Do you have a strategy to regulate the proliferation of commuter private motorcycles called "habal-habal" that transport passengers and cargo from rural barangays to the city proper?
9. Do you have current and future programs to make your operation/services better? Do you need assistance in project planning, programming and implementation?

10. Do you have any programs to employ more qualified women and create a more gender-sensitive workplace?

#### **4.3 Agri-Fishery Trader or “Comprador”**

1. What agri-fishery products do you trade and where is your area of operation? Are you a producer as well or do you finance producers?
2. What is your scheme of trade? Do you have an advance buying agreement with a grower or group of growers or only on-spot buying scheme?
3. How large is your operation/business? How much is your capitalization? Is trading profitable?
4. Do you use your own truck in hauling goods? If not, what is the mode of your vehicle rental: how much, how far in distance, and for how long will be the rent?
5. In transporting and traveling with your goods, what roads or what part of the city roads do you find difficult or dangerous to traverse? Do you normally encounter traffic in entering the city proper and going to the city market/trading post?
6. Do you normally encounter informal payments (bribes) to authorities along the road? If yes, describe how this is being collected or being paid by you or your worker.
7. Do you encounter any problems in dealing with growers, truckers, LGU traffic personnel, market master, and buyers? Please describe each problem. What do you suggest to address the problem or improve the system?
8. What is your long-term plan for your business? Do you have any plan to improve your operation/business? What do you need to improve your business/operation?

### **5. Communications and Digital Connectivity**

Digital connectivity is a necessary requisite to expand trade and increase business investments and activities in the city. Business and financial transactions, at any appropriate stage and form, generally use communications and digital platforms to effect and realize deals.

#### **5.1 Telephony and Digital Connectivity Providers**

Digital connectivity in the city in the form of telephony and internet service provided by the two dominant telecommunication companies (telcos), namely Globe Telecom and PLDT/Smart, will be assessed as to availability or adequacy of service, strength and quality of signal, and extent of coverage.

Primary information and data as to the current situation and planned expansion will be gathered from key local officials from each of the two dominant telcos. Using cellular phone units, the availability or quality of signal will be checked in various areas, such as the specific road segment leading to the production area of a priority commodity or product (including tourist destinations).

Guide questions to be used in the interview with key informants are as follows:

1. Is your telecom backbone/network complete? How much are fiber optic wires and how much are copper wires? Do you have programs to replace copper wires?
2. Do you have redundant networks in the city for the purpose of resiliency, as required by ICT companies?
3. Do you have the adequate current or planned systems capacity to provide high-end connectivity to existing and proposed ICT companies in the city?
4. Do you have any issues of interconnection with the other telco? Do you find the interconnection arrangement with them reasonable and fair?
5. Do you agree that we now have a duopoly in the telecom industry, especially since Globe Telecom and PLDT/Smart combined have bought out San Miguel Corporation's proposed third telco project?
6. Is there a way to reduce the cost of internet service in the Philippines, which is said to be more than three times the global average internet cost?
7. Do you have a definite roll-out of additional cellular sites to provide connectivity to remote rural areas of the city, especially where agricultural production areas are located? Please give a timetable and location of roll-out cell sites to know if priority agricultural production areas will be connected soon.

## 5.2 ICT Policy and Regulatory Bodies

Research review of publications and studies, as well as interviews will be conducted to gather data and information from government agencies concerned with the ICT industry, such as the following:

- National Telecommunications Administration (NTC): regulates the telecommunication industry;
- Department of Science and Technology-Information and Communications Technology Office (DOST-ICTO), recently transformed into a Department of Information and Communications Technology (DICT): tasked to formulate policies and monitor and implement government ICT projects; and
- Third party groups such those from the private users and consumers - ICT council in the city or association of ICT-related industries and businesses - will also be consulted.

Some guide questions to DOST-ICTO (now DICT):

1. What is the functional delineation of the National Telecommunications Commission (NTC) and the newly created Department of Information Technology and Communications (DITC)?
2. How does DITC or NTC plan to address the slow and high cost of internet service in the Philippines considering that a duopoly of telecom service has been sealed by the purchase of San Miguel Corporation's proposed third telco project by Globe and PLDT/Smart?
3. Does DOST-ICTO (or DICT) have a plan or proposed project to provide connectivity to rural areas? Please describe if any.



4. What is the plan of action to migrate DOST-ICTO's operation under DICT? Please elaborate.
5. Do you have any programs to employ more qualified women and to have a more gender-sensitive workplace?

## **6. Policy Issues and Regulatory Barriers Affecting Urban-Rural Connectivity**

Policy and regulations have to be supportive to attaining unencumbered urban-rural connectivity through air, sea, and land transportation facilities and telecommunication services. Normally, policies and regulations of government authorities promoting competition and provision of alternative or redundant facilities and services are desired as these would lead to better quality services and competitive cost charges.

In the course of site visits and interviews and discussion with key informants, policy and regulations in doing business will be sought and clarified to know if there is any constraint or barrier in the process. Outstanding policy and enforcement issues, such as possibly the following, will be clarified and discussed with the concerned agencies/entities during data gathering and interview sessions with each of them to determine whether or not, and/or how, these hinder or impede urban-rural connectivity:

### **Air Transportation**

1. Congestion of airside facilities at the Manila International Airport resulting to delayed take-off or landing of aircrafts at the CDI cities;
2. Poor coordination between DOTC and CAAP, the latter being an attached corporation under the former, in the planning and implementation of airport capital projects so much so that CAAP personnel in CDI cities are unaware of the development projects in their own airports;
3. Poor planning, programming, and implementation of airport capital projects, especially in remote island provinces;
4. Value for money of user charges in airport's passenger terminals; and
5. Arbitrary enforcement of priority embarkation or boarding of small children, elderly, pregnant women, and PWD.

These issues, among others, will be clarified and discussed during data gathering at DOTC and NEDA and interviews with concerned entities such as the CAAP airport manager, local airline manager or cargo service provider, and a representative cargo shipper/forwarder as can be seen in the formulated guide questions for each of them presented in the appropriate section of this tool.

### **Sea Transportation**

1. Rationalization in the registration by MARINA of wooden-hull vessels, especially tramping vessels transporting seaweeds from Tawi-Tawi and Sulu to Zamboanga City;
2. Security and safety of shipped cargo and passengers with carry-on baggage in roll-on-roll-off passenger (ROPAX) vessels and other conventional vessels plying the CDI cities from remote parts of the city or neighboring towns or provinces;
3. Prohibition in the issuance of patronage or privilege pass (non-revenue passengers) in fast crafts and conventional passenger vessels in Zamboanga City by government authorities in support of fair business revenues of shipping companies; and
4. Reverting of freight rates based on volume, and not based on lane meter, resulting to re-

imposition of higher charges for rolling cargoes (e.g., cargo vehicles and vans) contrary to the intent of the Strong Republic Nautical Highway Program as has been supported by PPA and MARINA.

These issues, among others, will be clarified and discussed during data gathering at MARINA, DOTC and NEDA and interviews with concerned entities such as the PPA port manager including its cargo handling operator, local shipping line manager or its agent, and a representative cargo shipper/forwarder as can be seen in the formulated guide questions for each of them presented in the appropriate section of this tool.

### **Land Transportation**

1. Poor traffic planning and management in the CBD;
2. Rationalization in the issuance of route franchise and registration of public utility vehicles/jeepneys (PUVs/PUJs) by LTFRB and of tricycles by the LGUs to prevent traffic congestion in the urban core;
3. Rationalization and management towards safe and legal operation of private single motorcycles (called "*habal-habal*" in Cebuano) as an alternative transportation mode for passengers and cargo in both urban and rural areas;
4. Exploring possible incentives to jeepneys and tricycles to serve missionary routes in remote parts of the city where production farms and rural families largely reside; and
5. Governance issues of both local and national law enforcement authorities manning check points along national highways over private and public utility vehicles, more particularly truck cargo vehicles transporting agri-fishery and consumer products in and out of some CDI cities.

These issues, among others, will be clarified and discussed during research activities at NEDA and donor agency studies and interviews with concerned entities such as representatives from DPWH, City Planning, and/or City Engineering Office, commodity traders or "*comprador*" as can be seen in the formulated guide questions for each of them presented in the appropriate section of this tool.

### **Communications and Digital Linkages**

1. Lack of or poor cellular phone and internet signal/services in sub-urban settlements, more particularly in rural farm areas;
2. Need of additional competition to two existing telcos (PLDT-Smart and Globe Telecom), resulting to less urgency to address congested or narrow bandwidth of cellular phone and internet services throughout the country;
3. Security and safety from vandalism and lawless elements of existing cell sites, cable wires (fiber optic wires) and posts, and other outside plant facilities of telcos; and
4. Rent-seeking activities of local officials down to the barangay level in the issuance of location clearance for proposed cellular phone sites.

These issues, among others, will be clarified and discussed during research activities at NEDA, NTC and donor agency studies and interview, with concerned entities such as DOST-ICTO and local offices of PLDT/Smart and Globe Telecom, and possibly local ICT Council, as can be seen in the formulated guide questions for each of them presented in the appropriate section of this tool.

## **7. LGU Growth Plans and Inter-LGU Coordination to Promote Urban-Rural Connectivity**

At times, production areas or sources of raw materials are located outside of the city or in adjoining municipalities. Growth and development in the urban core should also translate into growth benefits to these production areas by establishing and enhancing the linkages between them. This is attained by establishing alliances and clusters between and among LGUs for the purpose of pooling resources and assisting each other toward common goals, which is being encouraged by the Local Government Code.

City-to-city or city-to-municipality sisterhood relationship can also be established for mutual benefits of the LGUs, but more often to the differential benefits for the lesser developed of the two. Expansion of business groupings or membership beyond the physical boundary of the city, to include those in the rural areas and even in adjoining municipalities, can be encouraged as a form of business outreach program.

The existence or potentiality of inter-LGU alliances or groups will be assessed in the interviews of key informants from both the LGUs and the private business groups to know if there is a need for assistance and how any efforts and initiatives can be moved forward by providing technical assistance.

Interview with the City Planning and Development Coordinator, City Agriculturist and/or City Tourism Officer will be sought using the following guide questions:

### **City Planning and Development Coordinator (CPDC)**

1. What are the priority economic development activities of the city based on the approved City Development Plan? Please give general spatial delineation where the priority development activities are to happen.
2. Are there definite efforts (focused activities/programs with back-up budget) to establish or construct support facilities such as farm-to-market roads, storage building, and processing centers, among others, for the priority development areas? Please enumerate and describe.
3. Are there support legislation or LGU policies to encourage and incentivize farmers and private businesses to support and invest in priority economic activities?
4. What is one economic activity among your priorities that will have a huge impact or transformation benefits into the economic lives of people?
5. What are the LGU's strategies to advance or realize the economic development priorities? What are the challenges and constraints that hinder the realization of these priorities?
6. Is there political harmony among and between LGU officials, such as harmony between the City Mayor and the City Council and among city department heads, in implementing the City's development strategies?
7. Is there an inter-LGU coordination body that serves as an avenue to undertake common endeavors or programs/projects to address any common concern/issue or to share resources with each other? If yes, please describe.

**City Agriculturist / City Tourism Officer**

1. Among priority agri-fishery products, what are your top three priorities for development? Why?
2. What are your strategies to move forward the priority agri-fishery products?
3. What are the challenges and constraints in developing the priority agri-fishery products?
4. Do you access support from DA to move forward the priority products? Please describe the normal set-up in accessing DA's assistance.
5. Are there definite plans/projects and LGU funding to construct/establish support facilities such as farm-to-market roads, storage shed/building, storage facilities, and consolidation centers?
6. What are your means of communication to disseminate information and extension services to rural farmers and growers? Do you have a market price information board which can be accessed by farmers, growers, and traders?
7. 7What are the most common problems encountered by farmers/growers, traders, shippers, or exporters in transporting products from farms to markets?