



# Philippines: Maritime Industry Development Plan (MIDP) 2019-2028

**Nationally Integrated and Globally  
Competitive Maritime Industry**



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# **PHILIPPINES: MARITIME INDUSTRY DEVELOPMENT PLAN (MIDP) 2019-2028**

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***DRAFT MASTERPLAN  
As of 8 December 2018***

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Notes: In this publication, "\$" refers to United States dollars

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Conference of Maritime Manning Agencies (COMMA)

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Philippine-Japan Manning Consultative Council  
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Society of Naval Architects and Marine Engineers (SONAME)  
Supply Chain Management Association of the Philippines (SCMAP)  
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## List of Abbreviations

AFP	Armed Forces of the Philippines
ASEAN	Association of Southeast Asian Nations
BCDA	Bases Conversion Development Authority
BFAR	Bureau of Fisheries and Aquatic Resources
BI	Bureau of Immigration
BIR	Bureau of Internal Revenue
BITR	Bureau of International Trade Relations
BLE	Bureau of Labor Employment
BOC	Bureau of Customs
BOI	Board of Investments
BSMarE	BSc in Marine Engineering
BSMT	BSc in Marine Transportation
CDA	Cooperative Development Authority
CEZA	Cagayan Economic Zone Authority
CHED	Commission on Higher Education
CICC	Cybercrime Investigation and Coordinating Center
CIWT	Coastal and Inland Waterways Transport
CIWT-IS	Coastal and Inland Waterways Transport Information System
CLIA	Cruise Lines International Association
CNFIDP	Comprehensive National Fisheries Industry Development
CPA	Cebu Port Authority
CTA	Cape Town Agreement
DA	Department of Agriculture
DBP	Development Bank of the Philippines
DENR	Department of Environment and Natural Resources
DFA	Department of Foreign Affairs
DICT	Department of Information and Communication Technology
DILG	Department of Interior and Local Government
DND	Department of National Defense
DOF	Department of Finance
DOLE	Department of Labor and Employment
DOST	Department of Science and Technology
DOT	Department of Tourism
DOTr	Department of Transportation
DSS	Domestic Shipping Service
DTI	Department of Trade and Industry
EMB	Environmental Management Bureau
EO	Executive Order
FARMC	Fisheries and Aquatic Resource Management Council
FGD	Focus Group Discussion
FVSC	Fishing Vessel Safety Certificates
FVSRR	Fishing Vessels Safety Rules and Regulations
GDP	Gross Domestic Product
GFI	government financing institutions
GISIS	Global Integrated Shipping Information System

IA-TWGs	inter-agency technical working groups
ICTs	information communication technologies
IEC	information, education, and communication
ILO	International Labor Organization
IMO	international Maritime Organization
ISPS	International Ship and Port Facility Security
IUUF	illegal, unreported, and unregulated fishing
IWT	inland waterway transport
KII	key informant interview
LBP	Land Bank of the Philippines
LGUs	local government unit
LOA	length overall
LSCI	Liner Shipping Connectivity Index
MARINA	Maritime Industry Authority
MDFO	Municipal Development Fund Office
MET	Maritime Education and Training
MHEIs	maritime higher educational institutions
MICT	Manila International Container Terminal
MIDP	Maritime Industry Development Plan
MIKC	Maritime Innovation and Knowledge Center
MNH	Manila North Harbor
MNPICC	MIDP National Policy and Implementation Coordination Committee
MOA	Memorandum of Agreement
MSH	Manila South Harbor
MSME	small- and medium-sized enterprises
MTRC	Maritime Training and Research Center
NAMRIA	National Mapping and Resource Information Agency
NCR	National Capital Region
NCTDSAP	National Cruise Tourism Development Strategy and Action Plan
NEDA	National Economic and Development Authority
NIB	News and Information Bureau
NLEX	North Luzon Expressway
NMSC	National Maritime Safety Council
NPCO	National Project Coordination Office
NSC	National Steering Committee
OFW	Overseas Filipino Workers
OTC	Office of Transportation Cooperatives
OTS	Office for Transportation Security
OWWA	Overseas Workers Welfare Administration
PCG	Philippine Coast Guard
PCIEERD	Philippine Council for Industry, Energy and Emerging
PCOO	Presidential Communications Operations Office
PD	Presidential Decree
PDP	Philippine Development Plan
PFDA	Philippine Fisheries Development
PFSP	Plan Port Facility Security Plan
PHIVIDEC	Philippine Veterans Investment Development Corporation

PIA	Philippine Information Agency
PMMA	Philippine Merchant Marine Academy
PN	Philippine Navy
PNA	Philippine News Agency
PNP	Philippine National Police
PNPMG	Philippine National Police Maritime Group
POEA	Philippine Overseas Employment Administration
PPA	Philippine Ports Authority
PPS	Policy Planning Service
PSA	Philippine Statistics Authority
PSIC	Philippine Standard Industrial Classification
R&D	Research and Development
RA	Republic Act
RbME	Results-based Monitoring and Evaluation
RCM	Route Capacity Measurement
RORO	Roll-On Roll-Off
RRTS-SRNH	Roll-On Roll-Off Terminal System-Strong Republic Nautical Highway
S&R	search and rescue
SBMA	Subic Bay Metropolitan Authority
SBSR	ship building and ship repair
SCS	Strategic Communication Service
SDG	Sustainable Development Goals
SEC	Securities and Exchange Commission
SLEX	South Luzon Expressway
STCW	Standards of Training, Certification and Watchkeeping for Seafarers
STI	science, technology, and innovation Technology Research and Development
TESDA	Technical Education and Skills Development Authority
TEU	Twenty-foot equivalent unit
TTPs	tactics, techniques, and procedure
UNCTAD	United Nations Conference on Trade and Development
UP	University of the Philippines
UP MSI	University of the Philippines Marine Science Institute
UNCLOS	United Nations Convention on the Law of the Sea
VSP	Vessel Security
WHS	wooden hulled ships



**Message from the Secretary  
Department of Transportation (DOTr)**

(To be inserted later)

## Foreword

The creation of the Maritime Industry Authority (MARINA) under Presidential Decree No. 474 on 1 June 1972 carried with it the responsibility of preparing and annually updating a “**Ten-Year Maritime Industry Development Program (MIDP)**” for the country pursuant to Section 5 of this law. The Program, subsequently determined as being more appropriately called a **Plan** for its very nature, is prescribed to “...*contain a rational and integrated development of the (country’s) maritime industry*” to be approved by the President of the Philippines and implemented by all concerned participating agencies and stakeholders, with MARINA coordinating and steering the inter-agency and multi-sectoral collective effort for effective and efficient execution of the MIDP to achieve its goal and objectives.

After four and a half decades of propelling and steering the development of the Philippine maritime sector, and following the insights left behind by past and current Administrators, MARINA is now proud to present and share the “**Philippines: Maritime Industry Development Plan (MIDP) 2019-2028.**”

This document is a blueprint/road map geared to accelerate the integrated development of the Philippine maritime sector in order to realize its vital role to national development and global competitiveness. This formally documented MIDP, and hopefully its succeeding evolution in the years to come, embodies the maritime sector’s contribution to our country’s inspirations as a nation and a member of the international community - **ranging from linking and invigorating various island-economies of our archipelagic country** to foster greater national integration amidst physical, economic, politico-administrative and socio-cultural diversity **to insuring safety and security in maritime transport for our domestic and foreign trade, and stimulating the sector competitiveness in the global economy.**

While the journey towards the completion of this MIDP naturally started informally from MARINA’s inception, the eventual formal planning process started more than a year ago, with MARINA being joined by representatives from other government agencies and private sector organizations/entities. This MIDP is a testament and the result of the commitment, dedication, insights, expertise, and professionalism of all the men and women who became part of the journey.

The course and destination for our country’s maritime industry voyage for the next 10 years has been set and plotted. We invite everyone concerned to sail with us into greater heights, rowing and steering together as one, guided by the beacon which is the MIDP, and share in the vision and aspiration of leaving a legacy for our country’s people and its posterity.

With this MIDP, let us buckle down to work and sail full steam ahead!

**Vice Admiral Narciso A. Vingzon Jr.**  
Deputy Administrator for Planning and Officer-in-Charge

## Preface

The Maritime Industry Development Plan (MIDP) 2019-2028 is a milestone since it is the first time that this kind of a comprehensive plan was crafted to provide direction to the Philippine maritime industry in charting its path to global competitiveness and sustainable growth. The process of developing this MIDP was a significant learning experience not only for the Maritime Industry Authority (MARINA) but also for the other key stakeholders. We learned to appreciate our past achievements and take pride on the strengths of each stakeholder group. At the same time, the participatory process that we went through helped us listen to different perspectives on how we could do better collectively. Drafting the MIDP was also a transformative experience since we collaborated to critically analyze our situation, identify the industry's core problem and its causes, define priorities and strategies that will foster change in the industry, and formulate priority programs together.

The process has been a long journey but it was worth it. Through this document, we proudly share with you a plan that reflects our common vision for a highly productive and globally competitive Philippine maritime industry.

We thank all our partners from the government, private sector, academe and training centers, and civil society for providing their full support in developing the MIDP. We look forward to working with them in implementing this MIDP and in improving it to meet new and emerging challenges. With our combined strengths, I am confident that we will meet achieve the goal and objectives of this MIDP, and even surpass them.

**Engr. Emmanuel Baybayan Carpio**  
Director for Policy and Planning Service



## I. Sector Assessment: Context and Condition

### A. Introduction

As an archipelagic country, the Philippines consists of 7,641 islands<sup>1</sup> with a total coastline of 36,289 km, and stands at 7<sup>th</sup> position in the world in terms of the number of islands<sup>2</sup> and 5<sup>th</sup> in terms of the longest coastline<sup>3</sup>. Bays and coastal waters cover an aggregate area of 266,000 km<sup>2</sup>, while oceanic waters cover 1,934,000 km<sup>2</sup>, which collectively represent the maritime waters of the country. These maritime waters are over seven times larger than the country's total land area of 300,000 km<sup>2</sup>, which also includes inland waters of 1,830 km<sup>2</sup>. The extensive area of bays, and coastal and oceanic waters signifies the critical role of the maritime sector and its allied industry in the inclusive economic growth and sustainable development of the Philippines, especially in developing world class seafarers; facilitating movement of people and cargo across islands, regions and provinces; increasing fishing, shipping, tourism, shipbuilding and other related industrial activities; and ensuring effective and efficient delivery of government services throughout the country.

For centuries, the Philippine maritime waters continue to serve as the major mode of transport for domestic trade. **Figure 1** shows the domestic shipping routes in the country, consisting of the Roll-On Roll-Off Terminal System / Strong Republic Nautical Highway (RRTS-SRNH), primary routes (long haul) and secondary routes (Roll-On Roll-Off [RORO] and fastcrafts). In 2016, the shipment of domestic trade by sea reached 24.31 million tons, or an increase of about 25 percent from 19.45 million tons posted in 2015.<sup>4</sup> This water shipment accounted for over 990 percent of the total quantity of domestic trade for both years. For the same period, the number of passengers transported by sea in the country also grew by 50.9 percent from 20.48 million in 2015 to 30.90 million in 2016, largely due to the improved and expanded RRTS/SRNH routes and facilities initiated by the government in 2003, which resulted in an increase in connectivity among island and coastal provinces, cities and municipalities; and a reduction in transport cost and time.

In 2016, 64 (out of 81) provinces, 25 (out of 145) cities, and 822 (out of 1,489) municipalities in the country's 17 regions lie along the coast<sup>5</sup>, highlighting the significant role of domestic shipping routes to spur greater economic and social development in coastal provinces, cities and municipalities. While road transport

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<sup>1</sup> World Bank, 2003. *Philippines: Environment Monitor 2003*. Manila, Philippines.

<sup>2</sup> The top six countries with most islands in the world include: Sweden (221,800 islands), Finland (188,000 islands), Norway (55,000 islands), Canada (52,455 islands), Indonesia (17,508 islands) and Australia (8,222 islands) based on the World Atlas, "Environment: Which Country Has the Most Islands?". Updated 11 September 2018. Accessed on 24 September 2018 from <https://www.worldatlas.com/articles/which-country-has-the-most-islands.html>.

<sup>3</sup> The top four countries with longest coastline include: Canada (202,080 km), Norway (58,133 km), Indonesia (54,720 km) and Russia (37,652 km) based on the World Atlas, "Countries with the Longest Coastline," Updated 18 January 2018. Accessed on 24 September 2018 from <https://www.worldatlas.com/articles/countries-with-the-most-coastline.html>.

<sup>4</sup> Philippine Statistics Authority, "Highlights of Domestic Trade Statistics in the Philippines: 2016". Accessed on 24 September 2018 from <https://psa.gov.ph/content/highlights-domestic-trade-statistics-philippines-2016>

<sup>5</sup> Philippine Statistics Authority. "Provincial Summary: Number of Provinces, Cities, Municipalities and Barangays, by Region as of September 30, 2016". Retrieved January 5, 2017.

accounts for 98 percent of the passenger traffic and 58 percent of cargo traffic,<sup>6</sup> sea transport plays a crucial role in inter-island connectivity especially for remote coastal communities of the country in bringing and selling agricultural products to municipal market centers; and fulfilling other household tasks, such as; carrying children to schools, sick people to municipal health centers, and family members to picnics and swimming in nearby islands. Even in some coastal communities provided with farm-to-market roads, sea transport is also used as a coping strategy of the people to get relief, rescue, and/or rehabilitation support from their local government units (LGUs) in municipal centers in the aftermath of severe flooding and typhoon when existing roads become inaccessible.

Beyond its national borders, the maritime waters link the Philippines' commerce and trade with neighboring Asian countries (**Figure 2**) and other continents (**Figure 3**) through its strategic location in global shipping routes. **Figures 2** and **3** reflect the major maritime trade routes, the strategic importance of passages, and the average container traffic (in terms of twenty-foot equivalent unit or TEU in 2012) in certain ports. In **Figure 3**, the core shipping routes pass through Luzon Strait at the northern tip of the country, while the secondary routes traverse on both sides of Palawan province and the Pacific Ocean to link East countries of China, Japan, and South Korea to other Southeast Asian countries of Indonesia, Malaysia and Singapore; and to the rest of the world.

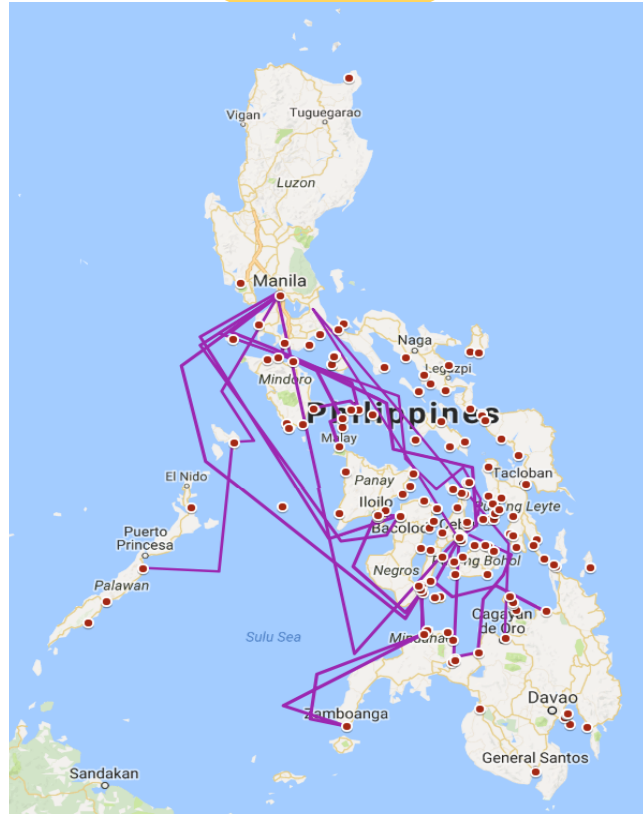
**Figure 1: Domestic Shipping Routes**

**A. Roll-On Roll-Off Terminal System  
(Strong Republic Nautical Highway)**

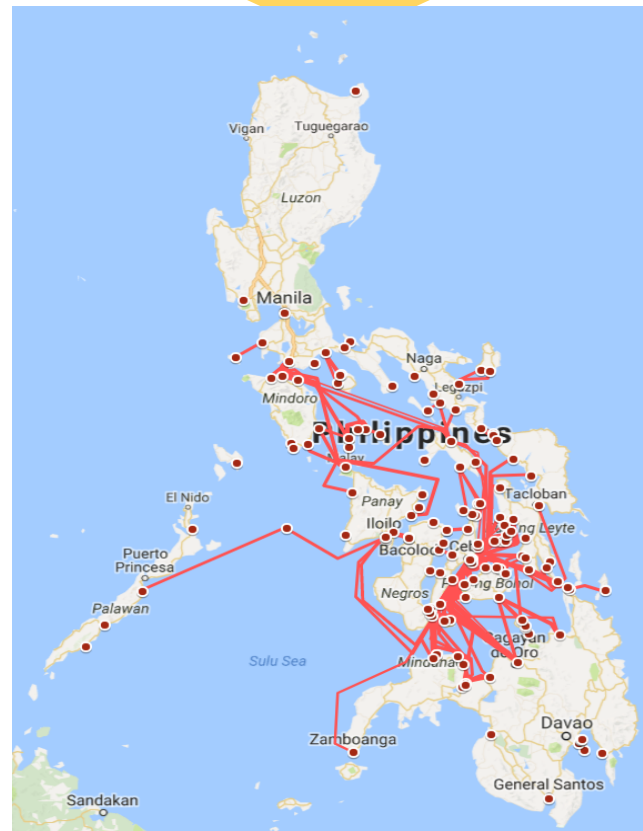


<sup>6</sup> Oxford Business Group, "Steady progress is under way in the Philippines' transport sector," This article is from the Transport and Infrastructure chapter of *The Report: The Philippines 2015*. <https://oxfordbusinessgroup.com/overview/steady-progress-under-way-philippines-transport-sector>.

**B. Primary Routes  
(Long Haul)**



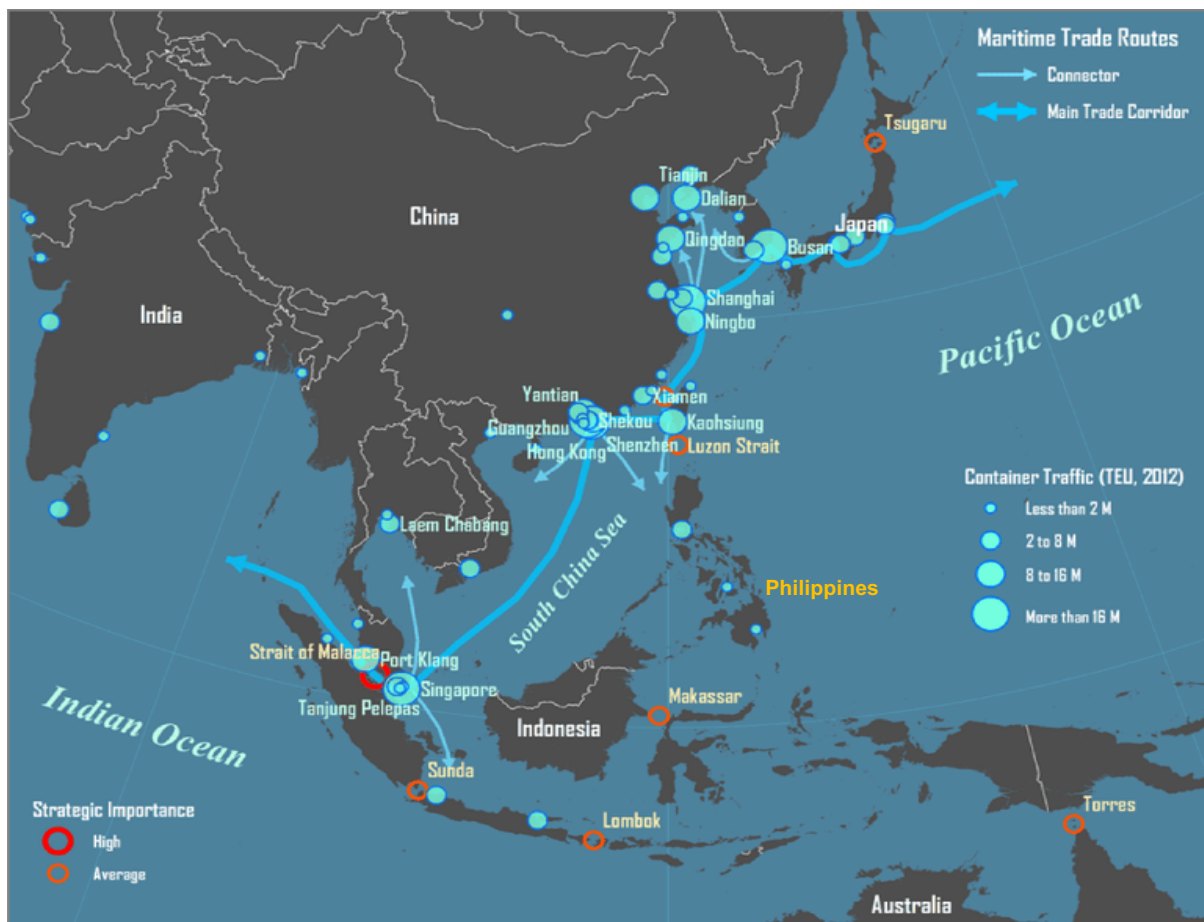
**C. Secondary Routes  
(RORO+Fastcrafts)**



Source: MARINA database

In 2004, the United Nations Conference on Trade and Development (UNCTAD) established the Liner Shipping Connectivity Index (LSCI) to capture a country's level of integration into global liner shipping networks, which also reflects its access to world markets through regular shipping services for the import and export of manufactured goods<sup>7</sup>. Since 2009, the Philippines has posted an increasing score in LSCI, earning a ranking of 61<sup>st</sup> out of 162 countries in this year, and a five notch higher than 66<sup>th</sup> out of 159 countries in 2012.<sup>8</sup> The country's LSCI ranking has been projected by UNCTAD to further go up in recognition of the growth in shipping industry over the past few years.

**Figure 2: Shipping Lanes and Strategic Passages in Pacific Asia**

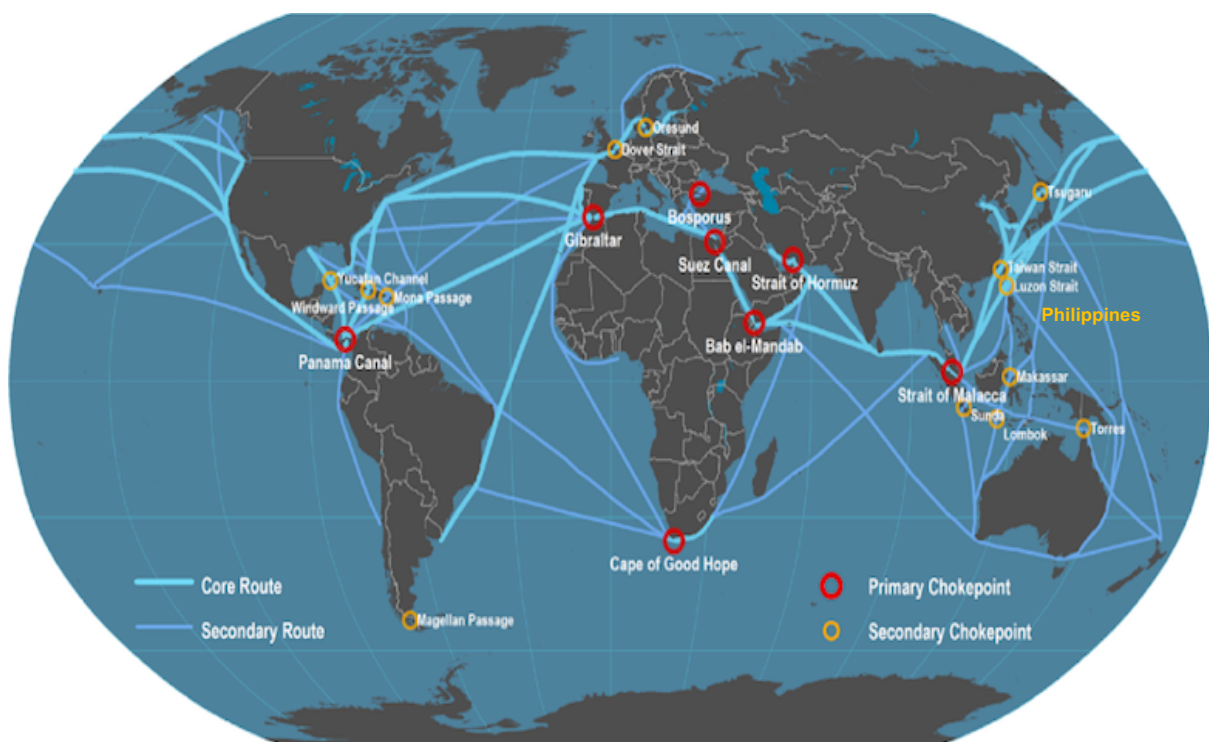


Source: Jean-Paul Rodrigue, 2017. *The Geography of Transport Systems*. Fourth Edition. New York: Routledge, 440 pages. ISBN 978-1138669574. Accessed on 24 September 2018 from [https://transportgeography.org/?page\\_id=919](https://transportgeography.org/?page_id=919).

<sup>7</sup> UNCTAD, 2017. "Factsheet: Liner Shipping Connectivity Index (LSCI)." Accessed on 24 September 2018 from [https://logistics.gatech.pa/bundles/docs/indicators/ficha\\_lsci\\_en.pdf](https://logistics.gatech.pa/bundles/docs/indicators/ficha_lsci_en.pdf). LSCI of a country is determined based on five components: number of companies; number of services provided; number of ships; their container-carrying capacity in 20-foot equivalent units (TEU); and size of the largest vessels that provide services to and from each country's seaports.

<sup>8</sup> UN ESCAP, "The Philippine Maritime Industry: Prospects and Challenges in 2013 and Beyond." Accessed on 24 September 2018 from <https://www.unescap.org/sites/default/files/0.Philippines-1.pdf>.

Figure 3: Global Shipping Routes



Source: <https://freethoughtblogs.com/singham/files/2017/08/shipping-routes.png>.

This brief account of the maritime sector's increasing role in the country's economic growth and development through shipping, fishing, tourism and allied enterprises gives a good perspective to the need and direction for a long-term development plan for this fast growing sector.

## B. The Philippine Maritime Sector

In the Philippine context, the maritime sector is classified into sea-based and land-based sub-sectors which encompass the country's core capabilities in shipping (including passenger and cargo shipping, and maritime tourism services) and fishing (both at commercial and municipal scales) operations; and support capabilities in ship building and ship repair (SBSR), port management, maritime ancillary business, maritime education and training, and maritime administration, respectively. **Figure 4** illustrates this Philippine maritime sector classification system with the arrow lines tracing information flow from the core to support capabilities and vice versa. The present situation of shipping and fishing enterprises, and their future derived demand for ships/boats and manpower resources, are the critical inputs for effective planning and operation of shipyard management, port and logistics management, maritime ancillary business, maritime education and training, and maritime administration.


In essence, **Figure 4** shows a more comprehensive and focused planning framework for maritime sector development that ensures more efficient allocation of public and private investments; and maximizes potential social, economic, and environmental benefits from these investments. This framework also provides certain flexibility in



planning for possible inclusion of new and emerging capabilities in the maritime sector, such as; offshore oil exploration and marine energy production in the future.

**Shipping and Fishing.** As the current core maritime industry capabilities, shipping and fishing companies continue to grow in number and capacity of registered ships/boats. Latest statistics show that the total number of Philippine registered vessels for the period 2011 to 2017 stands at 160,451, comprising of 79,358 merchant vessels and 81,093 fishing vessels. Of the total merchant fleet, passenger ships consist of 49,230. The recorded growth rate of ship/boat registration for shipping and fishing companies during the period is 15.3 percent and 23.3 percent, respectively. The capacity of all registered vessels for the same period is reported at about 17.69 million gross tons, of which shipping business accounts for 86 percent (15.13 million gross tons) and fishing operation, 14 percent (2.56 million gross tons). In shipping business, the largest increase in capacity is observed in passenger and cargo ships during the period 2012-2017. The surge in number of Philippine registered ships/boats is attributed to the country’s continuing implementation of mobile registration, and importation of ships.

**Figure 4: Maritime Sector Classification System**

Sea-Based Maritime Sub-Sector			Land-Based Maritime Sub-Sector					
Capability	Deployment <sup>1</sup>		Manpower <sup>2</sup>	Shipyards management (SBSR)	Port management	Maritime ancillary business <sup>3</sup>	Maritime education & training	Maritime administration <sup>4</sup>
	Domestic	Overseas						
<b>Shipping</b>								
<ul style="list-style-type: none"> <li>Passenger                             <ul style="list-style-type: none"> <li>Regular passenger</li> <li>Cruise tourism</li> </ul> </li> </ul>								
<ul style="list-style-type: none"> <li>Cargo                             <ul style="list-style-type: none"> <li>Tanker</li> <li>Dry/bulk</li> <li>Others</li> </ul> </li> </ul>								
<b>Fishing</b>								
Commercial								
Municipal								
<b>Others</b>								
Notes: 1. Refers to number and capacity of vessels to be used for shipping and fishing. 2. Refers to number and competence of manpower requirement in domestic and overseas shipping at management, operational, and support staff levels. 3. Includes SBSR raw materials/equipment suppliers, towing and pushing services, etc. 4. Includes policy guidance and regulation, law enforcement, database management and information, education, communication (IEC), technical assistance provision, etc. in ships and shipping, ship building, port/harbor management, maritime safety and security, marine environmental protection, etc.								
								

**Ship Building and Ship Repair (SBSR).** In support to the ship/boat requirements of shipping and fishing companies, SBSR business operates and maintains 118 shipyards, 89 boatyards, 75 afloat repairers and 8 shipbreakers in the country, which are registered and licensed with the Maritime Industry Authority (MARINA). Of the 118 registered shipyards, seven are categorized as Class A in terms of capacity to handle bigger ships having 130 meters or more length overall (LOA), and having requisite facilities like slipway, launching pad, graving or floating dock, and ship lift. Of the remaining shipyards, 14 are categorized as Class B and 97 as Class C, with ship-handling capacities of 80-129 meters, and less than 80 meters in length, respectively.

Both of these shipyard classes have lesser facilities. Most of the registered shipyards currently thrive on ship repair business of the domestic fleet as supported by the existence of 79 afloat repair companies, with minimal and sporadic shipbuilding projects often of small-sized ships. Only three shipyards engage mainly in shipbuilding operations, all of which are owned by foreign companies, such as: Tsuneishi Heavy Industries of Japan, Hanjin Heavy Industries, Inc. of Korea, and Austal Philippines of Australia. These shipyards cater to export-oriented shipbuilding projects, involving bulk carriers, container ships and tankers (for Tsuneishi and Hanjin) and aluminum high speed crafts (for Austal).

The 89 boatbuilders are also categorized into three classes according to their relative capacity: Class A with 39 boatbuilders, Class B with another 39, and Class C with 11, having capacities to handle boats with lengths of 30 meters or greater, 15-30 meters, and less than 15 meters, respectively. These boatbuilders mainly cater to boatbuilding and boat repair activities, in contrast to the operation of their shipyard counterparts, due to the continued predominance in number of boats in the various islands of the country for fishing and ferrying of passengers over short distances.

**Ports.** Actual shipping operations are supported by about 1,800 ports in the country (public and private ports excluding fishing ports) in 2017, which are managed and operated by various port management bodies, such as; the Philippine Ports Authority (PPA), independent port authorities (i.e., Cebu Port Authority (CPA), Subic Bay Metropolitan Authority (SBMA), Bases Conversion Development Authority BCDA), Cagayan Economic Zone Authority (CEZA) and PHIVIDEC Industrial Authority Freeport Area of Bataan), LGUs and private companies. PPA is the largest authority managing larger-scale ports. As of August 2018, PPA manages 230 ports, consisting of 25 base ports, 83 terminal ports, and 122 other ports. There are seven major container ports in the country operated by private companies, with a combined design capacity of about 7.9 million TEUs.

Manila Port is the busiest port due to its central location in the National Capital Region (NCR) with facilities and terminals for processing maritime trade to serve primarily the Metro Manila Area and the surrounding provinces and cities. This port is the premier international shipping gateway to the country, fronting the Manila Bay. Three privately-managed container ports with largest capacities are situated in Manila Port, consisting of the Manila International Container Terminal (MITC with 2.5 million TEUs), Manila North Harbor (MNH with 2.0 million TEUs), and Manila South Harbor (MSH with 1.2 million TEUs). MITC handles primarily international container cargoes, while MNH handles mainly domestic cargoes.

Outside of the Metro Manila Area, there are four other major ports which include (in the order of capacity): Davao International Port (0.075 million TEUs) in Region 11, Subic Port (0.600 million TEUs) in Region 3, Cebu International Port (0.580 million TEUs) in Region 7, and Batangas Port (0.350 million TEUs) in Region 4A. These major ports also handle international container cargoes. There are other 233 privately-owned and managed ports throughout the country, which largely handle domestic cargoes and passenger vessels. Finally, over 1,190 municipal ports are owned and managed by LGUs to provide linkages among neighboring small islands and nearby urban centers. Municipal ports generally cater to small passenger and fishing boats.

Fishing ports also operate at the regional (8 ports) and municipal (79 ports) levels, managed either by the government or the private sector, primarily to serve the fishing business.

**Maritime Education and Training (MET).** Manpower requirements for maritime professionals in the shipping and, to a certain degree, fishing companies are educated and trained in various maritime educational institutions and training centers throughout the country. As of March 2017, there are 52 maritime higher educational institutions (MHEIs) accredited by MARINA to offer BSc in Marine Transportation (BSMT), and 43 to offer BSc in Marine Engineering (BSMarE)<sup>9</sup>. In addition, 126 accredited maritime training centers provide various training courses to maritime professionals, especially for seafarers to ensure a high level of competence and proficiency in compliance with international maritime manpower standards (e.g., the 1978 International Convention on Standards of Training, Certification and Watch-keeping for Seafarers (STCW), as amended).<sup>10</sup> Available data from the Commission on Higher Education (CHED) shows that total enrollees from these MHEIs stand at 96,103 students for BSMarE and 128,420 students for BSMT for academic year 2015-2016<sup>11</sup>, up by 57.2 percent and 54.5 percent, respectively, from total enrollees in the previous academic year. The growth rate of female enrollees for BSMarE and BSMT also shows an upward trend at 53.6 percent and 70.3 percent, respectively, in academic year 2015-2016 as compared with those enrolled in the previous academic year. However, the proportion of female to total enrollees in the two degree courses for both academic years remains low at 1.2 percent and 2.6-2.8 percent, respectively.

For five decades now, these maritime educational institutions and training centers continue to produce competent and qualified maritime professionals, particularly seafarers, for domestic and overseas shipping companies, as well as for commercial fishing activities. Despite the key challenges faced by maritime academic institutions and training centers to upgrade academic and training programs to be compliant with STCW and other International Maritime Organization (IMO) conventions, they are able to **maintain the Philippines as the leading supplier of seafarers in the world: second to China in terms of maritime officers, and first in ratings.**

**Maritime Administration and Governance.** The present institutional environment of the maritime sector in the Philippines engages various government agencies including government financing institutions with legal mandates to assume specific functions, authorities and accountabilities for the development, regulation, supervision, and/or monitoring of the maritime industry to make it more competitive and productive by complying with national and international standards.

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<sup>9</sup> MARINA-STCWO, "List of Maritime Higher Education Institutions Eligible to Accept First Year Enrollees to the BS Marine Engineering (BSMarE) Program for AY 2017-2018" and "List of Maritime Higher Education Institutions Eligible to Accept First Year Enrollees to the BS Marine Transportation (BSMT) Program for AY 2017-2018". Accessed on 24 September 2018 from <http://stcw.marina.gov.ph/wp-content/uploads/2016/02/List-of-BSMarE.pdf>, and <http://stcw.marina.gov.ph/wp-content/uploads/2016/02/List-of-BSMT.pdf>, respectively.

<sup>10</sup> MARINA STCWO, "Maritime Training Center with Valid Accreditation by Region 2015-2017," in *MARINA Statistical Report 2013-2017*.

<sup>11</sup> CHED, "Enrolment for BS Marine Engineering and BS Marine Transportation, By Gender" in *MARINA Statistical Report 2013-2017*.



The Department of Transportation (DOTr) is the primary government agency with a mandate to develop, promote and regulate a dependable and coordinated network of (water, land and air) transportation systems; and ensure fast, safe, efficient and reliable transportation services to narrow the geographical divide by connecting the country, its islands and people, and with the rest of the world. The DOTr comprises five attached agencies (MARINA, Philippine Coast Guard (PCG), PPA, CPA and Philippine Merchant Marine Academy (PMMA); and two miscellaneous agencies (Office for Transportation Security (OTS) and Office of Transportation Cooperatives (OTC)) with specific functional mandates over the maritime sector. Other government agencies, and state-run academic and owned/controlled government financing institutions (GFIs) also play major roles in maritime sector development, and form part of the sector's institutional environment in the country. These agencies and institutions include, but not limited, to the following:

- Department of Agriculture (DA): Bureau of Fisheries and Aquatic Resources (BFAR) and Philippine Fisheries Development Authority (PFDA);
- Department of Environment and Natural Resources (DENR): Environmental Management Bureau), National Mapping and Resource Information Agency (NAMRIA);
- Department of Finance (DOF): Bureau of Customs (BOC), Bureau of Immigration (BI), and Bureau of Internal Revenue (BIR);
- Department of Foreign Affairs (DFA);
- Department of Information and Communication Technology (DICT);
- Department of Interior and Local Government (DILG): Philippine National Police Maritime Group (PNPMG);
- Department of Labor and Employment (DOLE): Bureau of Labor Employment (BLE), Philippine Overseas Employment Administration (POEA), and Overseas Workers Welfare Administration (OWWA);
- Department of National Defense (DND): Philippine Navy (PN);
- Department of Science and Technology (DOST): Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD);
- Department of Trade and Industry (DTI): Board of Investments (BOI) and Bureau of International Trade Relations (BITR);
- National Economic and Development Authority (NEDA);
- CHED;
- Technical Education and Skills Development Authority (TESDA);
- Development Bank of the Philippines (DBP);
- Land Bank of the Philippines (LBP); and
- University of the Philippines Marine Science Institute (UP-MSI).

These agencies and institutions currently implement policies, plans and programs that influence the development of maritime sector as a whole, or the specific sub-sectors in particular (**Appendix 1**). Although these interventions are implemented by different agencies and institutions, an increasing effort is taking place for the establishment of inter-agency collaboration and coordination through joint memoranda of agreement (MOAs) and/or administrative circulars/order to maximize resource complementation, ensure effective and efficient operation, and achieve better development impact. However, a missing key element in the current effort is the lack of an integrated Maritime Industry Development Plan (MIDP) that will bring together all those relevant

policies, plans and programs into one document to ensure that the initiatives of the individual agencies and institutions complement and reinforce each other to produce optimum outcomes for the achievement of the long-term development goal of the maritime sector -- that is, to become globally competitive. This goal is everyone's dream in the sector, which is increasingly recognized to be critically dependent on the effective integration of key stakeholders' activities in terms of geographical/spatial, functional and institutional dimensions.

The application of Porter's concept of "clusters" in the European maritime sector is a potent example for effective integration of maritime industry members in the country. Porter defines "clusters" as follows:

"Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (for example, universities, standard agencies, and trade associations) in particular fields that compete but also cooperate."<sup>12</sup>

Altenburg and Meyer-Stamer<sup>13</sup>, and Carpinetti et. al<sup>14</sup> further elaborate the practice of clustering in industrial activities to share the following common features:

- Shared focus (of agenda and plan);
- Forward and backward linkages between firms;
- Information exchange between firms and other cluster members;
- Institutional infrastructure supporting the activities of the cluster;
- Entrepreneurship attitude, aiming at value-creation and innovation; and
- Most important is agglomeration, being, either, geographic, economic, cultural or sectoral.

In addition to geographical clustering of interconnected companies in the maritime industry, the integration can also be pursued by clustering or linking complementary firms at different stages of the maritime industry value chain. In the government sector sphere, the integration process can proceed through aligning of functional mandates, and organizational expertise, plans and resources of different agencies and institutions involved in maritime affairs toward a common development goal, and a shared focus in agenda setting and plan formulation as advocated by Altenburg and Meyer-Stamer, and Carpinetti et. al. The creation of eight inter-agency technical working groups (IA-TWGs) in 2017, with most of the government agencies and institutions identified above as members, to spearhead a series of roadmapping workshops conducted across the country as input to the preparation of the 10-Year MIDP is an initial step in the right direction to integrate key stakeholders' ideas and experiences in the formulation of a comprehensive development plan for maritime industry (**Section 3** further discusses the process of the roadmapping workshops).

Private sector participation in maritime sector development is increasingly recognized in both sea-based (i.e., shipping, fishing, and maritime tourism) and land-based (i.e.,

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<sup>12</sup> Porter, M. 1998. *On Competition*; Harvard Business School Press: Boston, MA, USA; p. 29.

<sup>13</sup> Altenburg, T. and Meyer-Stamer, J. 1999. How to promote clusters: Policy experiences from Latin America. *World Development*, 27, 1693-1713.

<sup>14</sup> Carpinetti, L.; Gerolamo, M.; and Galdámez, E. 2007. Continuous Innovation and Performance Management of SME Clusters. *Creat. Innov. Manag.* 16, 376-385.

SBSR, port management, maritime ancillary business, and maritime education and training) sub-sectors in recent years (2011-2017). Some evidences are manifested in increasing number of accredited shipping and SBSR companies/ entities, as well as number of accredited MHEIs and maritime training centers. In the maritime ancillary business, available data also show a growing number of registered firms engaged in hauling and trucking, towing and pushing, brokering and insurance, and raw materials and equipment supply value chain for SBSR, among others. Most of these companies are organized into associations and networks, and interacting increasingly with counterpart government agencies and instrumentalities to develop and implement relevant policies, plans and programs in the context of the maritime governance. Thus, representatives of these companies or their associations are part of the MIDP formulation process through their active participation in roadmapping workshops.

A rapid assessment of this institutional environment reveals that there is a large number of public and private sector stakeholders who interact in different aspects of the maritime industry development. The key issues identified in this assessment include:

- The maritime industry is a complex organization involving a series of activities, some of which fall in transport and agriculture, manufacturing, cruise tourism, maritime ancillary business as well as maritime education and training, as evidenced by a large number of the government agencies and instrumentalities involved in the development, promotion, regulation and oversight functions;
- While inter-agency collaboration and cooperation exists in the implementation of key policies, plans and programs, there is at present little ability to ensure alignment between the priorities of different government agencies and entities, and the primary development objective of the maritime sector; and
- No single government agency at present takes the “driver’s seat” to steer a single direction in the planning and implementation of an integrated maritime industry development because of the fragmented assignment of the maritime administration and governance functions in the country in the past.

### C. Sector Performance

Despite the maritime sector challenges, as discussed in the next section, the Philippines takes pride of the sector performance in complying with international maritime manpower, safety and security, and marine environmental protection standards (i.e., IMO and International Labor Organization (ILO) conventions, among others); and positioning the Philippines in the world maritime map as **the leading source of seafarers (2017), 4<sup>th</sup> largest shipbuilding nation (2017) and 10<sup>th</sup> top fish producing nation (2015)**. Based on the available data, the maritime sector is increasingly contributing to the country’s economy in terms of locally manufactured sea vessels, transported passengers, traded goods, created jobs, and generated remittances from the early 2010s to 2017, as shown in **Figure 6**.

**Shipbuilding and ship repair (SBSR).** As the 4<sup>th</sup> largest shipbuilding nation in the world, SBSR companies manufactured 2,161 sea vessels in 2017, up by over 64 percent from 1,354 vessels in 2011. Passenger, fishing and cargo vessels accounted for the largest number of locally manufactured sea vessels per year for the period

2011-2017 (**Figure 5**). These three types of vessels constituted 96.6 percent of the total locally-manufactured vessels in 2017 (with 1,381 passenger ships, 529 fishing vessels and 177 cargo vessels). The remaining vessels included tugs/dredger (26), tanker (16) and miscellaneous/special purpose ships (32). In terms of capacity (measured in gross tons), however, cargo accounted for over 89 percent of all locally-manufactured vessels in 2017, followed by passenger ships (5.4 percent) and fishing vessels (2.9 percent). The accelerated implementation of the nautical highway program by the present administration under the “Build, Build, Build” policy is expected to increase demand for passenger and passenger/cargo vessels in the next 5-10 years.

**Maritime transport and trade.** Around 99.9 percent of over 72.0 million passengers carried by sea vessels in 2017 consisted largely of domestic passengers, with only about 0.1 percent (50,725) of cruise ship passengers,<sup>15</sup> signifying the increasing inter-island movement of people with ongoing improvement of the three nautical highways linking the country’s major islands and provinces; and development or opening of new routes resulting from the construction of new ports or upgrading of existing ports in islands, provinces and municipalities not directly served by the nautical highways. This total number of passengers who took sea transport in 2017 represented an increase of 46 percent from the reported number in 2011; thus facilitating access to business and employment opportunities, and better delivery of government services for the benefit of more Filipinos across the country.

An updated report by the Department of Tourism (DOT) indicates that total cruise calls in the Philippines reached 140 in 2017 with total passengers of 195,751.<sup>16</sup> Visiting cruise ships dock at Manila, Cebu, Davao, Subic, Palawan (Puerto Princesa and Coron) and Boracay, among others. A review of 2017 Asian cruise trends further underscores that the port calls by cruise ships in the country increased by more than double the previous year’s number of calls.<sup>17</sup>

Between 2012 and 2017, domestic and foreign trade by sea recorded significant increases in terms of volume of cargo throughput, as reflected in **Figure 6**. In both domestic and foreign trade, inward-bound cargoes posted much higher increases than outward-bound cargoes for the period under review. At the domestic level, this scenario indicates the increasing ability of local people and businesses to procure more goods and materials from urban areas and other cities for consumption and/or distribution/marketing in their cities and municipalities. The development of inter-island connectivity resulting from the establishment and improvement of the nautical highways, including the consequent reduction in transport cost and time, created more incentives and motivations for local businesses to expand, diversify and/or innovate in their operations. In foreign trade, the significant increase in imported cargoes, particularly in the last two years, reflected largely the high demand for construction materials in support of different public infrastructure programs under the government’s

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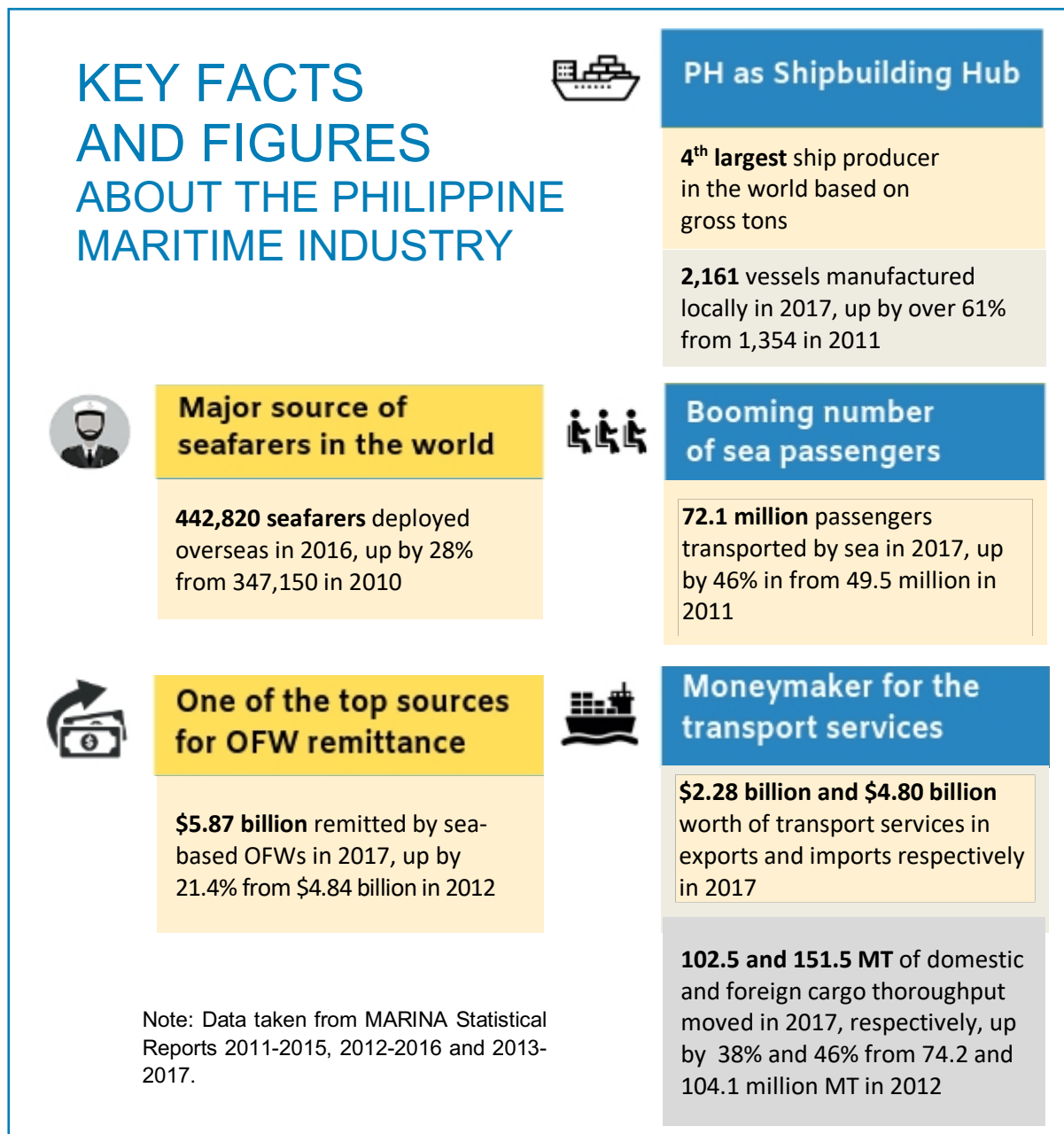
<sup>15</sup> Data are taken from PPA as reported in *MARINA Statistical Report 2013-2017*.

<sup>16</sup> Marasigan, L.S., “Marina to boost cruise-ship tourism,” in *Business Mirror*. 29 August 2018. Accessed on 24 September 2018 from <https://businessmirror.com.ph/marina-to-boost-cruise-ship-tourism/>.

<sup>17</sup> Cruise Lines International Association, 2017. *Asia Cruise Trends: 2017 Edition*. Washington, D.C., USA. <https://cruising.org/docs/default-source/research/clia-2017-asia-cruise-trends-report.pdf?sfvrsn=0>.

“Build, Build, Build” policy; the importation of other industrial and commercial goods; and partly the importation of agricultural products, such as; rice and fish.

**Figure 5: Major Contributions of the Maritime Industry to the Philippine Economy**



**Maritime employment.** Current data on total employment in the maritime sector is not readily available, partly due to the absence of a centralized database system that stores, processes and publishes relevant information for easy access and use in planning, policy development, and decision making. Hence, the number of seafarers deployed overseas based on the record of the Philippine Overseas Employment Administration (POEA) has often been used as key indicator for maritime employment. As noted in **Figure 5**, the Philippines continues to serve as leading supplier of seafarers in the world over the past five decades. However, China has overtaken the



country as lead supplier of maritime officers for overseas deployment in recent years. In 2017, the country deployed 442,820 seafarers to various parts of the world onboard sea vessels owned and managed by shipping companies of different nationalities. In addition, MARINA reports the number of workers employed by licensed SBSR companies at 15,435 in 2017, down by 3 percent from previous year's number of employment recorded. If the level of employment in domestic shipping and maritime ancillary business can be gathered, the number of maritime employment in the country will certainly be larger.

In fishing operations, over 1.6 million people were employed in 2015, 85 percent of whom were from municipal fisheries, 1 percent from commercial fisheries, and 14 percent from aquaculture.<sup>18</sup> This represented a growth rate of about 7 percent from about 1.5 million people employed by fishing operators in 2010.<sup>19</sup> For many of these people, however, fishing is not only a source of employment but, more importantly, of livelihood to meet their daily family food needs. Most municipal fishers operate on a small-scale, artisanal fishing on coastal and inland waters. In commercial fishing, most fishers work on motorized bancas/boats with a capacity of over 3.0 gross tons, often owned by licensed fishing companies or other family-based entities.

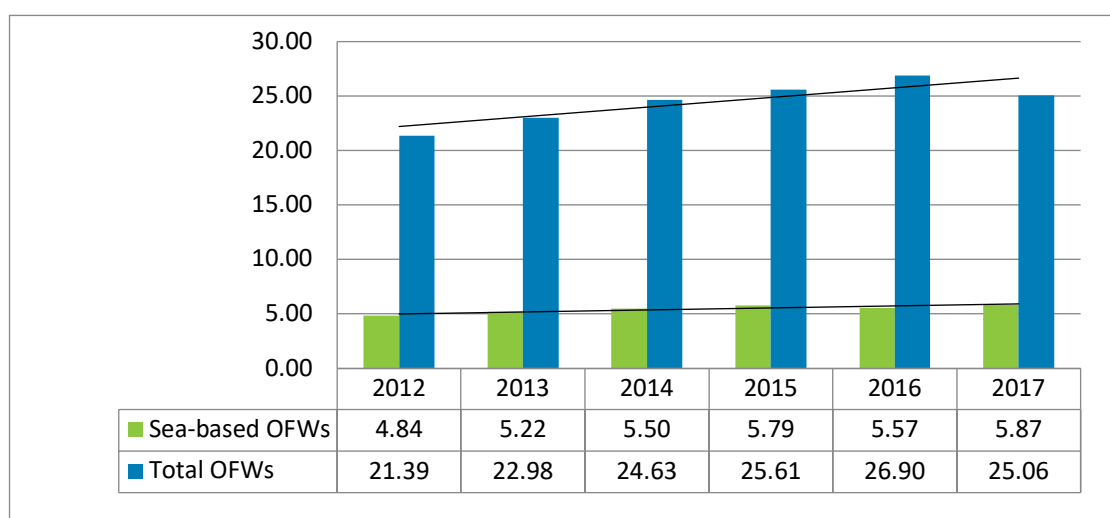
**Remittances.** The increasing remittances from sea-based Overseas Filipino Workers (OFWs) are a major source of income for their families in the country, and also revenue for the national government. During the period 2012-2017, sea-based OFWs remitted an annual average of over US\$5.0 billion, making up more than one-fourth of total remittances (**Figure 6**). The remittances showed an upward trend at an annual growth rate of 3.3 percent during this period. In 2017, remittances declined by over US\$1.1 billion, reflecting the effect of a travel ban for land-based OFWs in certain conflict-affected countries for security reasons. In recent years, a growing number of sea-based OFWs is working on board not only the world's merchant fleet but also in the various departments of the increasing cruise fleet (i.e., cruise staff, deck and technical, entertainment, food and beverage administration and operation, housekeeping, information technology, human resources, medical services, photography and video services, production technology, finance, stewarding and youth, among others). The National Cruise Tourism Development Strategy and Action Plan (NCTDSAP) 2016-2022 of the Department of Tourism (DOT) recognizes that "Filipinos constitute the largest single nationality employed on board the world's cruise fleet. This is not related directly to cruise ship calls, of course, but is another reason why the cruise industry is valuable to the Philippine economy."<sup>20</sup> The fast-pace of cruise tourism development and operations in the country and other parts of Asia, Europe, and North America generates more business and employment opportunities for the maritime industry in the country.

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<sup>18</sup> Lamarca, N.S.J., 2018. "Fisheries Country Profile: Philippines". Accessed on 24 September 2018 from SEAFDEC website: <http://www.seafdec.org/fisheries-country-profile-philippines/>.

<sup>19</sup> Fishery and Aquaculture Country Profiles. Philippines (2014). Country Profile Fact Sheets. In: FAO Fisheries and Aquaculture Department [online]. Rome. Updated 2014. [Cited 8 October 2018]. <http://www.fao.org/fishery/>.

<sup>20</sup> DOT and USAID, 2016. *National Cruise Tourism Development Strategy and Action Plan 2016-2022*. Accessed on 24 September 2018 from [http://e-services.tourism.gov.ph:8080/didcs/Static%20Documents/DOT\\_National%20Cruise%20Tourism%20Development%20Strategy%20and%20Action%20Plan%202016-2022.pdf](http://e-services.tourism.gov.ph:8080/didcs/Static%20Documents/DOT_National%20Cruise%20Tourism%20Development%20Strategy%20and%20Action%20Plan%202016-2022.pdf).

**Figure 6: Remittances of Sea-Based OFWs, 2012-2017**

Source: Data taken from MARINA Statistical Reports 2011-2016 and 2013-2017.

## D. Sector Problems and Opportunities

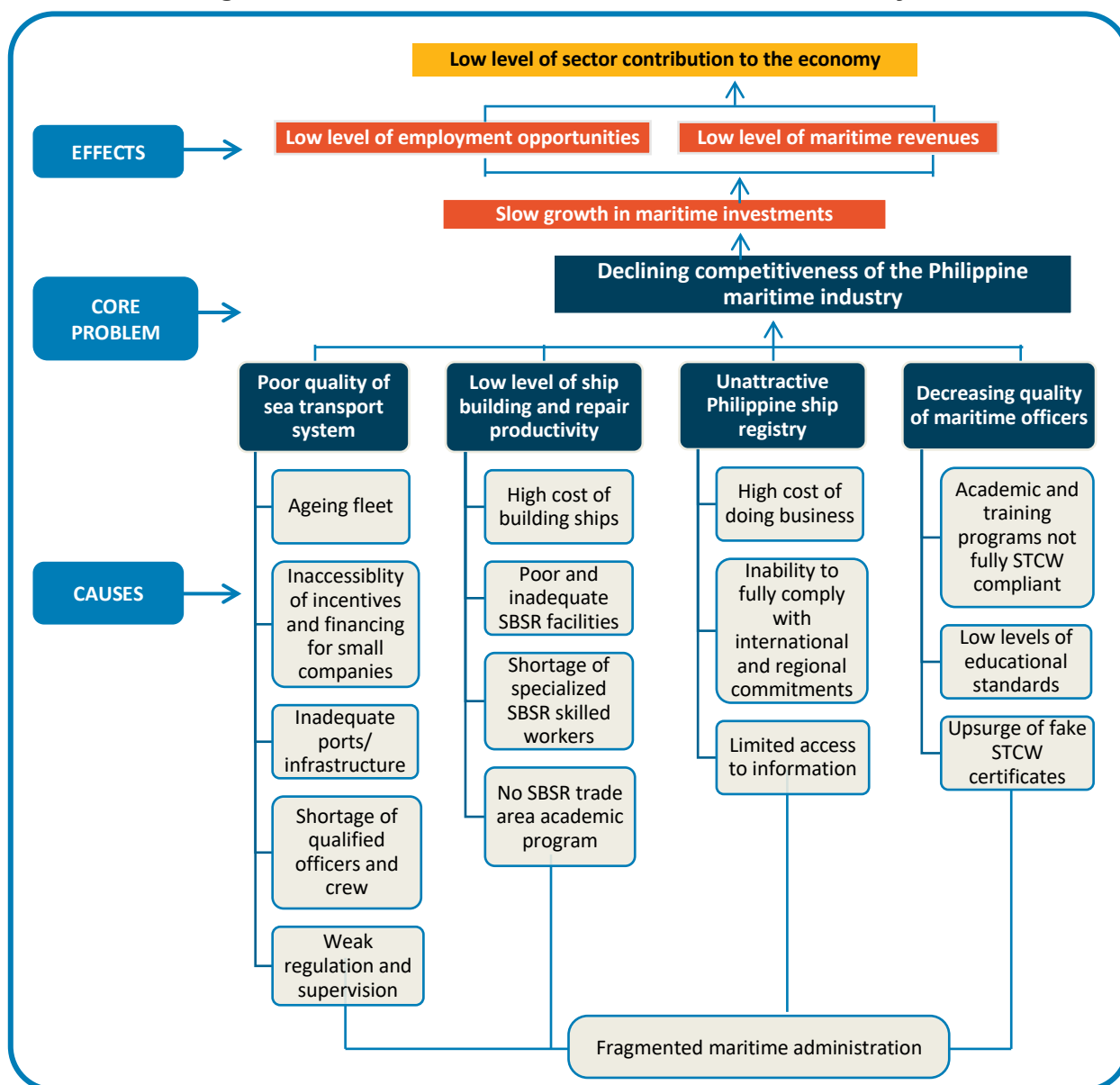
### Problems and Challenges

The roadmapping workshops and subsequent detailed sector analysis carried out by MARINA for the MIDP formulation from January 2017<sup>21</sup> to July 2018, together with IA-TWGs formed for this purpose, indicate that despite the significant performance of the maritime sector, **the Philippines is faced with a declining competitiveness of its maritime industry based on a consensus reached by key stakeholders** (i.e., government agencies, industry associations, academic institutions and training centers, and civil society groups) who participated in those workshops. This declining competitiveness results in the reduction of the level of investment, employment, revenues, and the sector's contribution to the economy. Hence, the root cause of the above problems - i.e., what hinders the Philippines from accelerating growth in maritime investment, employment and revenues - is the declining competitiveness of the country's maritime industry, which is essentially the industry's core problem.

MARINA and other key industry stakeholders trace the causes of this core problem to four major factors: (i) poor quality of sea transport system; (ii) low level of ship-building and ship repair productivity; (iii) unattractiveness of the Philippine ship registry; and (iv) decreasing quality of maritime officers. **Figure 7** gives the "problem tree" for the maritime sector in the country as identified by the key stakeholders who participated in the roadmapping and sector analysis workshops, linking the major factors to the core problem and the resulting effects through cause-and-effect relationships. The diagram also identifies the underlying circumstances of each of the causes to the core problem, as discussed at length during the aforementioned workshops.

<sup>21</sup> While the official launch of the MIDP formulation was done in June 2017, some services/offices of MARINA started consultations with sectoral stakeholders in January 2017.

Figure 7: The Problem Tree for the Maritime Industry



The five key contributing factors for **the poor quality of sea transport system** are:

- (i) ageing ships, mostly imported secondhand from other countries, which pose a high risk to human life at sea due to the conversion of some old cargoes to passenger ships;
- (ii) inadequacy of ports and facilities, with the poor condition of some ports under different management arrangements (i.e., managed by PPA, LGUs, and private sector);
- (iii) shortage of qualified officers and crew for both domestic shipping and fishing enterprises;
- (iv) inaccessibility of affordable financing and attractive incentive packages, most particularly for small- and medium-sized domestic shipping companies; and
- (v) weak regulation and supervision of shipping, fishing, and other maritime-related enterprises and activities including law enforcement.

**The low level of SBSR capacity** is largely attributed to the: (i) high manufacturing



cost associated with limited supply of raw materials, most of which are imported (e.g., hot rolled plates, steel pipes); (ii) inaccessibility of affordable financing and attractive incentive packages particularly for local shipyard/SBSR operators; (iii) shortage of specialized skilled workers (e.g., naval engineers, designers and information technology specialists) because of the absence of trade area academic programs; and (iv) poor and inadequate shipyard facilities. Building a workforce of Filipino skilled workers for SBSR operations is considered as a key driver for the competitiveness of the country's maritime industry in the future.

**Unattractiveness of the Philippine ship registry** arises from: (i) high cost of doing business (i.e., cumbersome procedures, numerous documentary requirements, and long processing time); (ii) outdated ship registration policies and regulations including lack of incentives; and (iii) the government's inability to fully comply with relevant IMO conventions, among others. These underlying causes are deemed culprit to the declining number of Philippine-registered foreign fleet from 2011 to 2017.

In recent years, **the decreasing quality of Filipino maritime officers** is observed as a major consequence of the inability of some academic institutions and training centers to continuously upgrade their programs in full compliance with IMO's STCW requirements to enable them to compete and qualify for high-level employment in overseas shipping companies worldwide. In addition, the low level of educational standards provided by some schools and the increasing production of fake STCW certificates in the market also contribute to the deteriorating quality of officers.

Underlying the four major causes of the core problem is the widely recognized **fragmentation in maritime administration** with several national government agencies (NGAs) mandated to perform certain functions for the development, promotion, regulation and supervision and/or monitoring and evaluation (M&E) of the maritime sector, including its allied enterprises and organizations in both sea- and land-based maritime sub-sectors, as noted in **Figure 5** above. This fragmentation arises from unclear delineation of mandates and functions defined in the relevant laws and policies that govern the establishment and operations of these concerned agencies.

The key challenge to the MIDP preparation to effectively address the core problem of the maritime sector and its underlying causes is the need for: (i) the adoption of an integrated approach to development -- by pooling together the expertise and resources of all concerned government agencies, the private sector and civil society toward a common goal for the maritime sector; and (ii) the prioritization of programs and projects aligned to *Ambisyon Natin 2040*, Philippine Development Plan (PDP) 2017-2022, UN Sustainable Development Goals (SDG) 2030, and the country's international commitments on the maritime sector -- by focusing on major ongoing maritime related initiatives of the government. These two approaches call for more focused design of programs and projects, shared allocation of resources, and well-articulated definition of responsibilities and accountabilities among key stakeholders who will directly take part in the MIDP implementation to achieve greater benefits and inclusive growth for the country. As a result of the roadmapping and sector analysis workshops, there is also a need to undertake key strategic actions that will strengthen the capacity of MARINA in maritime administration and governance in the first two years of the MIDP implementation to put in place a functioning database management system for the

maritime industry based on the Philippine Standard Industrial Classification (PSIC) system; a user-friendly reference of codified maritime laws, policies, circulars, guidelines and other administrative issuances; and a manual of operations containing the streamlined guidelines and procedures for certification, registration and/or licensing of ships/ boats, shipyards and seafarers, among others.

## Opportunities and Trends

While the problems and challenges confronting the maritime sector are daunting, there are also more opportunities and positive trends for different enterprises in the sector. Seafaring, shipbuilding and fishing are the sector's current strengths as these enterprises hold distinctive positions in market shares of their respective industry groups in the world, while maritime tourism and maritime ancillary business are the emerging future growth enterprises. Filipino maritime professionals will continue to be the main provider of seafarers in the world with the projected increasing demand for officers and ratings from 2015 to 2025<sup>22</sup>. For instance, there is projected shortage of 92,000 officers in 2020 and 147,500 in 2025.<sup>23</sup> Overall, the market for seafarers' employment on board cruise and merchant ships is projected to continuously grow worldwide. Demand for waterborne maritime businesses (i.e., shipping and cruise tourism) is also projected to increase in the future due to the following global trends:

- Continuing population growth and increasing urbanization;
- Increasing difficulties in providing adequate amounts and quality of food and water for the growing population and urbanization across cities, regions, and islands;
- Increasing expectations with regard to health, safety, security, and marine environmental protection;
- Increasing economic growth of developing countries;
- Continuing growth of energy consumption; and
- Growing volume of trade with changing patterns toward the Asian region.<sup>24</sup>

As the 4<sup>th</sup> largest shipbuilding country in the world, SBSR companies are expected to continue its share in the global market for bulk carriers and container ships. In the local market, the growing demand for passenger ships and fishing vessels will likely be sustained in the near future as a result of the ongoing improvement and expansion of the nautical highways. New and future ships are increasingly bigger and longer in size (with capacity of over 120,000 gross tons) and climate resilient or low-carbon emission for scale economies and clean blue environment, respectively, indicating the need for additional investments in new ship and port designs, as well as in new container- and cargo-handling technology.

Cruise tourism is emerging as the new growth business in the Philippines, which is projected to attract more visitor arrivals in the future. The DOT expects an increase in

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<sup>22</sup> BIMCO and ICS, Manpower Report: The Global Supply and Demand for Seafarers in 2015, Executive Summary. Accessed from <http://www.ics-shipping.org/docs/default-source/resources/safety-security-and-operations/manpower-report-2015-executive-summary.pdf?sfvrsn=16>.

<sup>23</sup> Ibid.

<sup>24</sup> European Technology Platform Waterborne, 2016. *Global Trends Driving Maritime Innovation*. CESA, Brussels, Belgium. Accessed from <https://www.waterborne.eu/media/20004/global-trends-driving-maritime-innovation-brochure-august-2016.pdf>.

visitor arrivals via cruises to reach 456,164 passengers with 402 port calls by 2022, up by over 866 percent in number of passengers (or 47,098) and over 617 percent (or 56) in port calls registered in 2016.<sup>25</sup> A prospective new growth area in the maritime sector is the development of coastal and inland waterways to lessen urban traffic congestion and pollution in highly metropolitan and urbanized areas, and offer alternative cost- and energy-efficient mode of transport. Initial attempts to operate the Pasig River ferry system as the first inland waterway transport (IWT) system in the Philippines have not prospered as planned due to market viability and environmental protection issues.<sup>26</sup>

But, as public pressures mount to decongest traffic in highly urbanized areas (i.e., Metro Manila, Metro Cebu, Metro Davao) and highly crowded transport routes (i.e., San Fernando, La Union-Dagupan City and Alaminos City, Pangasinan, or the Tri-City; Manila-Subic; Manila-Batangas; and Manila-Capacity City, Oriental Mindoro) in the country, there are opportunities for reviving and expanding the IWT to plan and implement a coastal and inland waterway transport (CIWT) development to extend the route distance to the potential maximum destination possible in order to serve more people and places along coastal and inland waters. A good case for this CIWT is the possible expansion of the Pasig River ferry system to the north up to Laguna Lake and the south along coastal cities and/or municipalities of Bataan and Cavite provinces.

At the domestic level, shipping and fishing enterprises are the sector's mainstays for maritime transport and trade; and fish, seaweeds and aquaculture production, respectively. Prospects for further development of these enterprises are high due to the country's vast water resources suited for more shipping operation and fish production; the strong domestic market for shipping services, and fish and fish products; and the continuing population growth and urbanization in many parts of the country.

The expected future growth in shipping, fishing, maritime tourism and SBSR operations in the Philippines will generate more demand for qualified maritime professionals, and materials and services from maritime ancillary businesses. The government's plan to promote the country as a maritime hub for competent and qualified seafarers; and integrated shipping, cruise tourism, SBSR, bunkering, and other allied services, including the development of innovative ship designs and technologies, will provide existing and potential ancillary business operators to locate their operations closer to the target clients, particularly the cruise and merchant ships with projected increases in port calls in the country.

A comprehensive understanding of the degree of these problems and opportunities, and the determination of priorities to meet users' demands are critical to the MIDP formulation to clearly spell out the relevant development objectives, implementation strategies, and specific programs to make the Philippine maritime industry more

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<sup>25</sup> DOT and USAID, 2016. *National Cruise Tourism Development Strategy and Action Plan 2016-2022*. Accessed on 24 September 2018 from <http://e-services.tourism.gov.ph:8080/didcs/Static%20Documents/DOTNational%20Cruise%20Tourism%20Development%20Strategy%20and%20Action%20Plan%202016-2022.pdf>.

<sup>26</sup> ADB. 2013. Second High Level Workshop on Inland Waterway Transport: Workshop Proceedings. 15-16 May 2013, Manila, Philippines. Accessed from <https://www.adb.org/sites/default/files/publication/30413/second-iwt-workshop-proceedings.pdf>.

globally competitive (i.e., have higher share of the world market), as well as nationally integrated (i.e., expanded and strengthened links between sea and land modes of transport through the nautical highways, and established links between land, major rivers and coastal waters through the CIWT networks to decongest urban traffic. The strategies will influence the development of appropriate physical and social infrastructure, legal and regulatory framework, and institutional arrangements, and financing schemes for the MIDP implementation.

## II. Sector Strategy

### A. Introduction

This section reviews the existing policy environment relevant to the maritime sector in the Philippines. It refers to the national policies sets out in the country's long-term development vision stipulated in *AmBisyon Natin 2040*, the medium-term PDP 2017-2022, and other national government agencies' plans and strategies that have direct and indirect impact on the maritime sector. It also includes the SDG 2030 and international maritime conventions, of which the Philippines is a member country or signatory. The key strategic thrusts of these policy instruments, which in some way may have an impact on the country's maritime sector are identified to guide the identification of the key thematic areas of the MIDP for the period 2019-2028.

### B. *AmBisyon Natin 2040*

*AmBisyon* is a long-term vision of the Filipino people for the kind of life they want to have for themselves and the Philippines in the next 22 years (until 2040), and serves as an anchor for development planning of all public and private sectors in the country. To achieve this vision, all sectors must work to become competitive in terms of the quality of goods and services, but at the same time make them available at affordable prices. In this endeavor, the government's steering role is to encourage and support investments in priority sectors by:

- improving market linkages,
- simplifying government procedures,
- facilitating access to finance, and
- complementing these strategies with relevant human capital development, science, technology and innovation.

The priority sectors identified to have direct impact on *AmBisyon* include:

- **Agriculture:** Food production, commercial and industrial crop, agricultural biotechnology, etc.;
- **Education services:** Formal education and re-tooling services;
- **Health and wellness services:** Primary, secondary, and tertiary care, pharmaceuticals, wellness facilities, sports and fitness facilities, etc.;
- **Housing and urban development:** Construction, construction-related manufacturing, house development-related manufacturing, and utilities (electricity, gas, and water);
- **Manufacturing:** Food processing, housing related, construction-related, transport manufacturing, and other manufacturing;
- **Connectivity:** Roads and bridges, ports, airports, vehicles, transport systems, and communication;
- **Tourism and allied services:** Resort, rest-recreation hotels, accommodation, travel and tour cultural shows, heritage sites, etc.; and

- **Financial services:** Consumer financing, enterprise financing, and insurance savings mobilization.

An inclusive economic growth is the primary goal of the government in encouraging investments in these priority sectors to ensure that its benefits are more equitably shared across sectors and regions; that all new products and processes are cleaner, safer and healthier; and that majority of the Filipinos are able to maintain a good work-life balance with more affordable, clean and safe options for rest and recreation, like open spaces, nature parks, and public sports and fitness facilities. Such investments are projected to result in a sustained growth that advances the country into a middle class society where no one is poor in 2040.

#### Relevance to the MIDP Formulation:

- In order to grow the national economy at projected level and rate, and ensure equitable distribution of its benefits across sectors and regions, investment in infrastructure and human capital as well as transport routes and systems that build and strengthen inter-modal and inter-island connectivity is critical -- which has a direct bearing on the maritime sector;
- Investment in tourism and allied services to promote and support a work-life balance for the working Filipinos, especially those employed in metropolis and highly urbanized areas confronted with daily urban traffic congestion, demands integration of land-water transport systems with development of nature parks and recreational facilities --- which have bearing on the capacity and safety of exiting cruise ships, the effectiveness of existing land-water transport networks, and the functionality of coastal and inland waterways and its natural environment as alternate mode of transport system and recreation area; and
- Investment in agriculture to increase and sustain fish production, as well as to protect the fishing crew and vessels requires upgrading of fishing vessels, delineating boundaries of fishing grounds, developing and/or strengthening of the regulatory framework for safety and security of crew and vessels at sea, and sustainability of marine resources --- which are critical elements of this investment package.

### C. PDP 2017-2022

PDP 2017-2022 is the country's first medium-term plan anchored on *Ambisyon Natin 2040*. Its main aim is to establish a stronger foundation for inclusive growth, a high-trust society, and a globally-competitive economy toward realizing the vision by 2040. By the end of 2022, PDP promises that more Filipinos will be closer to achieving their *AmBisyon* with the following key targets:

- becoming an **upper middle income country by 2022**, by achieving a GDP growth rate of 7-8 percent in real terms, and increasing per capita income from US\$ 3,550 in 2015 to at least US\$ 5,000 in 2022;
- making **growth more inclusive** by reducing poverty incidence in rural areas from 30.0 percent in 2015 to 20 percent in 2022; and overall poverty rate from

21.6 percent to 14 percent (equivalent to about 6 million Filipinos lifted out of poverty) for the same period;

- generating **more quality jobs** (i.e., 950,000 to 1.1 million new jobs will be generated per year) by reducing unemployment rate from 5.5 percent in 2016 to 3-5 percent in 2022; and underemployment to 16-18 percent for the same period;
- encouraging **more Filipinos to have greater drive for innovation** by gaining knowledge, skills and expertise, particularly among the youth, through quality education, training and employment. The country aims to raise its rank in the Global Innovation Index from being in the top 60 percentile (74 out of 128 economies) in 2016 to the top one-third by 2022;
- ensuring **a high level of human development by 2022** through improvements in education and health outcomes, and significant increases in incomes, as indicated above;
- helping **individuals and communities to become more resilient** by reducing exposure to hazards, mitigating the impact of the risks, and accelerating recovery if and when the risk materializes; and
- gaining **Filipinos' greater trust in government and in society** by delivering the above targets by 2022 using the indicators to be developed and measured by the Philippine Statistics Authority for 2017 and 2022.

PDP identifies and describes nine key strategies to achieve the above targets which fall under the three major pillars of “*malasakit*,” “*pagbabago*,” and “*patuloy na pag-unlad*.” These key strategies include:

**“Malasakit” (Enhancing the social fabric):**

- Ensure people-centered, clean and efficient governance;
- Pursue swift and fair administration of justice; and
- Promote Philippine culture and values.

**“Pagbabago” (Inequality reducing transformation)**

- Expand economic opportunities, and increase access to these opportunities;
- Implement strategic trade and fiscal policy, maintain microeconomic stability, and promote competition;
- Accelerate human capital development; and
- Reduce vulnerability of individuals.

**“Patuloy na Pag-unlad” (Increasing growth potential)**

- Promote technology adoption, and stimulate innovate; and
- Maximize demographic dividend.

In addition, four cross-cutting strategies will be implemented to support the other interventions, and provide a solid bedrock for all the key strategies to work. These cross-cutting strategies are:

- Ensure peace and security;
- Accelerate strategic infrastructure development;



- Ensure safety and build resilience; and
- Ensure ecological integrity, and clean and healthy environment.

#### Relevance to the MIDP Formulation:

- Under the pillar of inequality-reducing transformation, each economic sector will create more opportunities for growth of output and income to ensure that sub-sectors and economic groups that used to lag behind, like fishers and micro-, small- and medium-sized (MSME) enterprises, will benefit from these opportunities. In agriculture, these opportunities will be done by fostering linkages with industry and service sectors for more efficient value-adding processes and structures through increasing productivity; improving governance framework for fisheries management; strictly enforcing measures against illegal, unreported and unregulated fishing; regulating fishery structures; and improving transport and distribution systems. These have direct implications on the development of the maritime sector in linking agricultural products to respective markets, strengthening safety and security in fishing vessel operations, and protecting the marine environment and its resources against destructive and illegal fishing methods.
- Industry and service sectors will strengthen economic ties with other countries to become more globally competitive by encouraging domestic producers and supplies, including MSMEs, to maximize benefits from existing free trade agreements and other cooperative arrangements; and increasing presence in global market by strengthening forward and backward linkages with the production of competent manpower, adequate technology and dependable supply of raw materials. These have bearing on the capacity of existing shipyards/SBSR facilities, and the Philippine-registered shipping companies to support greater, faster and safer trade at sea.
- Restrictions on foreign investments will be eased, bureaucratic processes for both local and foreign investors will be streamlined, and tax system including its administration will be made simpler, fairer, more equitable and internationally competitive. These have direct bearing on the present and future plans of shipping and SBSR companies, and the efficiency of government agencies to speed up processing and releasing of business registration and licensing.
- Under the pillar of increasing potential growth, science, technology and innovation (STI) in agriculture, industry and service sectors will be promoted and even accelerated by developing and implementing policies and programs that facilitate knowledge flows and protect intellectual property rights; nurturing a culture of creativity beginning with the very young students in basic education; and establishing innovation hubs as venues to nurture creativity and innovation. These have bearing on the existing maritime sector's SBSR and shipping technology and innovation to adequately, effectively and sustainably support this particular pillar.



## D. United Nations' Sustainable Development Goals (SDG) 2030

SDG embodies 17 goals and 169 targets designed to address, in a balanced and integrated manner, the three dimensions of each country's sustainable development, namely: economic, social and environmental. The goals and targets will be pursued and implemented by all U.N. member states and governments within a period of 15 years from its adoption on 27 September 2017. It aims to stimulate action on the following areas of critical importance for humanity and the planet geared towards the attainment of the above objectives:

1. **People:** End poverty and hunger in all their forms and dimensions, and ensure all human beings can fulfil their potential in dignity and equality and in a healthy environment;
2. **Planet:** Protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations;
3. **Prosperity:** Ensure that all human beings can enjoy prosperous and fulfilling lives and that economic, social and technological progress occurs in harmony with nature; and
4. **Peace:** Foster peaceful, just and inclusive societies which are free from fear and violence. There can be no sustainable development without peace and no peace without sustainable development.

The 17 SDGs are:

1. End poverty in all its forms everywhere (NO POVERTY);
2. End hunger, achieve food security, and improve nutrition and promote sustainable agriculture (ZERO HUNGER);
3. Ensure healthy lives and promote well-being for all at all ages (GOOD HEALTH AND WELL-BEING FOR PEOPLE);
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (QUALITY EDUCATION);
5. Achieve gender equality and empower all women and girls (GENDER EQUALITY);
6. Ensure availability and sustainable management of water and sanitation for all (CLEAN WATER AND SANITATION);
7. Ensure access to affordable, reliable, sustainable and modern energy for all (AFFORDABLE AND CLEAN ENERGY);
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (DECENT WORK AND ECONOMIC GROWTH);
9. Build resilient infrastructure (INDUSTRY, INNOVATION AND INFRASTRUCTURE);
10. Reduce inequality within and among countries (REDUCING INEQUALITY);
11. Make cities and human settlements inclusive, safe, resilient and sustainable (SUSTAINABLE CITIES AND COMMUNITIES);
12. Ensure sustainable consumption and production patterns (RESPONSIBLE CONSUMPTION AND PRODUCTION);

13. Take urgent action to combat climate change and its impacts (CLIMATE ACTION);
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development (LIFE BELOW WATER);
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss. (LIFE ON LAND);
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels (PEACE, JUSTICE AND STRONG INSTITUTIONS); and
17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development (PARTNERSHIP FOR THE GOALS).

Each U.N. member state and government will incorporate SDGs in their respective national development plans, complemented and supported by a revitalized Global Partnership for Sustainable Development, based on a spirit of strengthened global solidarity, focused in particular on the needs of the poorest and most vulnerable and with the participation of all countries, all stakeholders and all people. Its implementation will involve governments, as well as parliaments, the U.N. system and other international institutions, local authorities, indigenous peoples, civil society, business and private sector, the scientific and academic community - and all people.

#### Relevance to the MIDP Formulation:

The MIDP, in one way or another, can help contribute, directly or indirectly, to the attainment of the SDGs.

- Through the MIDP, forging the sustainable development of the country's maritime sector will result in increased investments leading to greater employment opportunities, especially for smaller operators/stakeholders (i.e., banca operators, boatbuilders, ecotourism operators, ancillary industries) and even to women (i.e., ship management, shipyards skills), thereby contributing to SDGs 1, 2, 5, 8, and 10.
- By establishing and sustaining adequate, safe, affordable and efficient water transport linkages between and among the various islands of the archipelago, especially water transport connectivity of isolated, undeveloped islands to urban centers, the MIDP will significantly contribute to:
  - Bringing needed inputs for agricultural productivity and infrastructure, as well as rural development (SDGs 1 and 2);
  - Efficient trade, farm-to-market connectivity, movement of logistics for regional development, and even assistance/ relief to disaster-stricken areas (SDGs 1, 2, 6, 9, and 10);
  - Access to primary education and hospital/health care especially for pregnant women and young people (SDGs 3,4,5, and 10); and
  - Safe and secure travel for all, leading to the physical/ economic/ socio-cultural integration of the country (Goals 7,8,9,10,11, and 16).

- By forging the modernization of the maritime sector and giving due attention to marine environmental protection in terms of shipping and shipyard operations through lesser pollution, reduced harmful emission, etc., within the framework of international conventions and national standards, the MIDP will also be contributing to SDGs 7, 11, 13, and 14.

## E. Philippine Transport Plan and Strategy

The National Transport Plan (NTP) identifies key issues and challenges facing the transport sector, as follows:

1. Lack of integrated and coordinated transport network;
2. Overlapping and conflicting functions of transport agencies;
3. Transport safety and security concerns; and
4. Inadequate transport facilities particularly in conflict-affected and under-developed areas.

In order to address the issues, the government in the PDP 2017-2022 recognizes the need to formulate and adopt a comprehensive NTP; adopt and implement policy reforms which can be administratively undertaken; and formulate the implementing rules and regulations to operationalize the policy thrusts embodied in the NTP.

Strategic infrastructures in transport sector will be implemented to enhance the efficiency of this sector by providing adequate, accessible, reliable, and safe access for people and goods.

### Relevance to the MIDP Formulation:

The NTP aims to put in place an improved road-based transport to address traffic congestion through “engineering, enforcement, and education,” and upgrade road network to the highest quality standards; encourage a shift from private to public transport, especially on mass transport; improve operational efficiency of airports and address constraints to optimal capacity utilization; and **improve port facilities to ensure that inter-island shipping, including a stronger RORO network** will remain a cost-efficient option for transporting more people and cargoes across islands, provinces and regions of the country.

## F. National Cruise Tourism Development Strategy and Action Plan 2016-2022

The NCTDSAP 2016-2022 was prepared by DOT and the United States Agency for International Development (USAID) under the Advancing Philippine Competitiveness Project. The aim of the Strategy is to provide direction to both government and the private sector to achieve the targeted number of cruise ship calls to ports and islands of the country, create excellent guest experiences, earn greater economic benefits, and promote sustainable tourism in the country. The objective of the Action Plan is to benefit the Philippine economy and its people by creating a compelling proposition to the cruise lines and their guests. The Strategy also focuses on the development of the

Philippines as a destination for the world's cruise lines, and hence capture benefits from the extraordinary growth of the industry in the region with a view to positioning the Philippines as "a must-see destination" in Asia.

### Relevance to the MIDP Formulation:

The Strategy adopts a phased and targeted approach that strongly emphasizes on how to score some early wins by doing a few things well and soon rather than tackling too much at once. The Strategy focuses on three strategic elements: the types of cruise lines to target, the destinations on which to focus, and the priority investments to support them.

By 2022, the Philippines will already be positioned as offering (i) a set of attractive and diverse destinations for cruise lines operating from major homeports in Asia, especially Shanghai, Hong Kong, Taiwan and Singapore, offering high levels of customer satisfaction and cost-effective deployments for large ships, and (ii) at least one homeport, turn-around destination based on a superior cruise port in Manila for cruises between the Philippines and other Asian nations and, eventually, cruises wholly within the Philippines

Over the medium- to the long-term, the strategic options include: (i) positioning the Philippines as hub for expedition and small-ship cruises especially covering: (a) the Coral Triangle of Philippines, Micronesia, Palau, Guam and Papua New Guinea; and (b) Southeast Asia being the Philippines, Vietnam, East Malaysia and East Indonesia; and (ii) developing the Philippines as a major regional cruise center – serving as homeport and eventually a center for cruise crew training, maintenance services and ship building in the long-term.

## **G. Comprehensive National Fisheries Industry Development Plan (CNFIDP) 2016-2020**

The fishery sector at present faces 9 key and interlinked problems/issues as stated in the CNFIDP 2016-2020. These problems/issues are the following:

- Depleted fishery resources largely brought about by excessive fishing effort and open access regimes;
- Degraded fishery habitats due to destructive fishing methods, conversion of fishery habitats into economic uses and negative impacts from land-based activities;
- Intensified resource use competition and conflict, among fisher groups and other economic sectors;
- Unrealized full potential of aquaculture and commercial fisheries, as there are still underutilized areas for industry development;
- Uncompetitive products due to inferior quality and safety standards;
- Post-harvest losses in terms of physical, nutritional and value losses;
- Limited institutional capabilities from the local up to the national levels of governance;
- Inadequate/inconsistent fisheries policies that promote conducive environment

- for sustainable development;
- Weak institutional partnership among government agencies, civil society organizations and private sector; and
- Lack of recognition of the roles and contribution of women fishers in fisheries development.

In view of these, the CNFIDP establishes a comprehensive framework for promoting the optimal development and long-term sustainability of benefits that could be derived by the country from fisheries. Forty-one projects are developed under the CNFIDP for implementation to directly address the above key problems/issues.

#### Relevance to the MIDP Formulation:

Of these 10 key problems/issues, two are related to the maritime industry. CNFIDP identifies and develops the following plans and programs to address these problems/issues:

- **Uncompetitive product:** Rationalization of fishing vessel designs and fish handling system; and
- **Limited institutional capacities:** Provision of a comprehensive education program for Fisheries and Aquatic Resource Management Council (FARMC) at all levels, and fisher organizations; and enhancement of fishery law enforcement and information, education and communication (IEC) for commercial fishers and fishing vessel operators.

## H. MARINA's Maritime Strategy and Plan

Pursuant to a series of legislations over the years (P.D. No. 474; E.O. No. 1011; E.O. No. 125/125-A; and R.A. No. 9295), MARINA is given the mandate of being the country's maritime administration vis-a-vis the international community. MARINA is the Flag State Administration owing to its mandated functions on registration and licensing of ships, and enforcing ships' compliance with national and international standards on maritime safety, maritime security and marine environmental protection.

Despite the extensive scope of mandated maritime-related concerns, and in recognition of the subsequent legislations vesting jurisdiction of other maritime sub-sectors (i.e., ports, fishing, tourism, etc.) to other agencies of government, MARINA's administration of the country's maritime sector focused on domestic shipping, overseas shipping, shipbuilding/ship repair, and maritime manpower development;

In formulating and implementing the country's maritime strategy and plan over the years, MARINA always proceeded from the declared policy of the State in Sec. 2 of P.D. No. 474 on accelerating the integrated development of the maritime industry of the Philippines to attain the objectives of increased production/productivity of island-economies through effective sea linkage; providing safe, economical, adequate and efficient shipment of raw materials, products, commodities and people; enhancing the competitive position of the Philippine flag vessels in the carriage of foreign trade; strengthening the balance of payment position of the country by minimizing the outflow

of foreign exchange and increasing dollar earnings; and generating new and more job opportunities.

For the most part, MARINA's plans for the maritime sector were done annually, serving as input to the national development plan, except for the Maritime Industry Development Program (1982-1987) and MARINA Strategy for the Philippine Maritime Industry (2011-2016) utilizing the performance governance system (PGS) approach to planning. Unfortunately, the latter only reached as far as the 1<sup>st</sup> stage of the process (Initiation), not having been subsequently continued towards the remaining stages of Compliant, Proficient and Institutionalization; and MARINA has reverted back to its annual planning process thereafter.

The initiated MARINA Strategy for the Philippine Maritime Industry (2011-2016) has envisaged MARINA to become a premiere maritime administration to effectively administer an integrated, sustainable and globally competitive maritime industry. The Strategy sets the following objectives, with a sampling of the corresponding projects/activities for each:

- **Attractive Philippine Ship Registry:** Liberalized foreign equity participation; Marketing Initiatives;
- **The Philippines as a Major Center for Shipbuilding and Ship Repair:** Upgrading/ Modernization of Local Shipyards; Enhancing/ Sustaining a pool of skilled/ technical manpower);
- **Sustained development of globally competitive seafarers:** Seafarers' Welfare Programs; Seminars and Trainings; and
- **Modern and vibrant domestic merchant fleet as part of a seamless transport system:** Vessel Retirement/Replacement Program; Safety Enhancement Measures; and Strengthening of the Maritime Administration.

#### **Relevance to the MIDP Formulation:**

The MARINA Strategy can serve as a reference for the MIDP formulation to build and improve on the ongoing projects and activities for further improvement and expansion in light of the emerging challenges concerning the country's maritime industry and global developments.

### **III. Planning Process**

#### **A. Introduction**

The planning process makes use of participatory methodologies to better understand the present conditions, challenges and opportunities of the Philippine maritime sector, and draw up a more-focused MIDP (i.e., in response to the priority policies and plans of the national government relative to the sector) that lays the foundation for the achievement of an accelerated nationally-integrated and globally-competitive maritime industry by 2028. Sector assessment and planning methodologies used in MIDP formulation include desk review of relevant policies, plans and programs that influence the sector; a series of roadmapping workshops with key stakeholders; key informant interviews; focus group discussions with maritime education and training institutions; and participatory planning workshops with MARINA's technical working groups (TWGs) and other key stakeholders. The outputs obtained from these sector assessments serve as the basis for the formulation of this MIDP 2019-2028.

#### **B. MIDP Roadmapping Workshops**

A total of 22 roadmapping workshops, involving about 2,000 key stakeholders from national government agencies (mostly members of the IA-TWGs, LGUs, industry companies and associations, and academic and training institutions, were organized by MARINA in major urban areas and regional centers across the country from September 2017 to June 2018 aimed at: (i) identifying key concerns and issues facing the maritime sector in general, and the sub-sectors in domestic shipping, overseas shipping, ship building and ship repair, fishing, and maritime manpower in particular; (ii) understanding the background or context of the concerns and issues; and (iii) formulating appropriate solutions to those problems and issues. The combined knowledge and experience of different key stakeholders have helped to uncover significant areas of concern of each sub-sector. The outputs of these workshops were consolidated into major findings, and served as key inputs to more detailed sector analysis and planning workshops.

#### **C. Participatory Sector Analysis and Planning Workshops**

As noted above, sector analysis involved desk review of relevant policies, plans and programs of the government; key informant interviews (KIIs); focus group discussions (FGDs); and MIDP roadmapping outputs integrative validation workshop with MARINA and IA-TWG member-agencies. This analysis spanned a period of three months from July to September 2018. The validation workshop served as a venue to present and confirm some of the findings of the desk review, KIIs, FGDs and MIDP roadmapping workshops, particularly the Problem and Objective Trees for the maritime industry. This workshop also enabled key stakeholders to identify and describe an initial list of priority programs that will address the causes of the core problem of the maritime industry and, consequently, achieve the development goal of the MIDP from 2019-2028.



Two participatory planning workshops with concerned MARINA's services including STCW Office were organized on 24-26 September and 16-17 October 2018 to develop the detailed priority program proposals, and the corresponding Results Frameworks as bases for progress and performance monitoring and evaluation. These workshops also covered the identification of appropriate policy and institutional environment for effective and efficient implementation of MIDP's priority programs. At the end of these workshops, the first draft MIDP was produced for stakeholders' validation.

#### **D. MIDP Validation Workshops**

MARINA organized internal and external validation workshops for the review and refinement of the draft MIDP, and obtain stakeholders' participation and support for MIDP implementation. The main purpose of these validation workshops was to ensure that MIDP's priority programs and projects as well as its implementation strategies and arrangements are consistent with and supportive of the Philippine government's policies, plans and programs; SDG 2030; and international conventions related to the maritime sector, as noted in Section 2 above.

The internal validation workshop, held on 22-23 November 2018, involved MARINA's management and concerned services including STCW Office to validate and approve the form and substance of the draft MIDP in terms of relevance, effectiveness, efficiency and sustainability of the proposed priority programs, as well as the anticipated benefits. This internal validation also ensured that the draft MIDP is consistent with MARINA's ongoing efforts and future priorities in compliance with its legal mandates and international commitments, and with national government development vision and plan.

The external validation workshop, held on 11 December 2018, included the IA-TWG member-agencies and industry representatives who were generally involved in the sector review and analysis through a series of MIDP roadmapping workshops. Part of this workshop also aimed at securing collaboration and support from all relevant external stakeholders. They were also expected to commit expertise, technology and other resources to MIDP and its priority programs; and make recommendations to further improve MIDP's overall focus and strategy.

#### **E. Capacity Building of MARINA's Technical Working Groups (TWGs) on Strategic Planning and Results Framework Development**

The process of MIDP formulation also involved capacity building of MARINA's TWG members who participated throughout the sector analysis and planning workshops, with emphasis on strategic planning using the results framework approach. All sector analysis and planning workshops were designed to capacitate and engage MARINA's TWGs in the application of situation analysis tools, such as; stakeholders' analysis, problem analysis, objectives analysis, and alternatives analysis; and planning tools like the development of results framework for MIDP. This effort has equipped and prepared them to spearhead the annual review and updating of MIDP within MARINA in accordance with Section 5 of PD 474. In addition, they engaged in the preparation

of proposals for the priority programs based on the format required by the National Economic and Development Authority (NEDA) for possible official development assistance (ODA) in order to prepare them for submission of future program/project proposals for development partner financing in support of this MIDP

## IV. Maritime Industry Development Plan (MIDP)

### A. MIDP Objectives and Strategies

This **MIDP 2019-2028** is the first comprehensive effort to understand and address the core problem of the Philippine maritime sector, and the underlying causes of the core problem, in order to plan and implement more responsive programs that meet demand of the maritime industry to successfully address key challenges and seize opportunities both at the domestic and global arena, as cited in Section 1. Hence, the sector analysis and MIDP formulation process took time and commitment from MARINA and other stakeholders in defining MIDP objectives and strategies, and planning priority programs to meet demand of the maritime industry, and align with development priorities and commitments of the Philippine government.

#### Long-Term Goal of the MIDP

to accelerate the achievement of nationally-integrated and globally-competitive maritime industry by developing and sustaining an organizational culture and practice of **leading maritime education, innovation, technology and sustainability** anchored on *Ambisyon Natin 2040*, PDP 2017-2022, SDG 2030, other national development plans and international conventions.

In this MIDP, the concept of “nationally-integrated maritime industry” is viewed as the “effective integration of all key stakeholders’ policies, plans, programs, operations and resources in terms of geographical/spatial, functional and institutional dimensions,” as briefly discussed in **Section 1**. The national goal of achieving global competitiveness of the maritime industry will concentrate on the key elements of competitiveness, such as; increasing capacity, efficiency, safety and security of all Philippine-registered sea vessels including shipyards and maritime ancillary services. MIDP will complement this effort through the development, improvement and/or expansion of domestic shipping routes, tourist destination areas, and coastal and inland waterways; and enhancement of enabling policies and institutions.

#### Specific Objectives of the MIDP

In the next ten years, from 2019 to 2028, MIDP will achieve the following specific objectives:

1. Increase domestic production capacity in shipbuilding and ship repair based on global and domestic demand for shipping, fishing and maritime tourism;
2. Upgrade maritime technologies, and support localization of the supply chain;

3. Develop and expand shipping and maritime tourism routes and destinations in support of the national government's priority programs;
4. Continuously upgrade higher maritime education and training program consistent with STCW conventions;
5. Develop, implement and/or support best practices in maritime safety and security; and
6. Strengthen inter-agency and multi-sectoral collaboration, and public participation in MIDP implementation.

The collective aspiration for a nationally-integrated maritime industry evolves from an increasing recognition of the vital role of all key stakeholders – government, industry, educators and civil society organizations - “working together” by sharing expertise, information, technology and other resources; and aligning policies and strategies to each other aimed at realizing MIDP's goal of making the Philippine maritime industry nationally integrated and globally competitive in the next 10-20 years by putting in place the necessary foundations during the implementation of this MIDP.

Three cross-cutting strategies will be implemented to support the priority programs toward achieving the above goal and objectives of MIDP:

1. Increase awareness of MIDP's priority programs and projects, and promote sustained industry and civil society engagement in MIDP implementation;
2. Educate and train Filipinos for maritime careers, and develop and provide training program for and with K+12 educators and training service providers to prepare high school students, as well as college students, for career path development in the maritime sector, and high opportunities for highly skilled and well-paid occupations in the sector; and
3. Improve government and other key stakeholders' capacities for an integrated and multi-stakeholder maritime sector development.

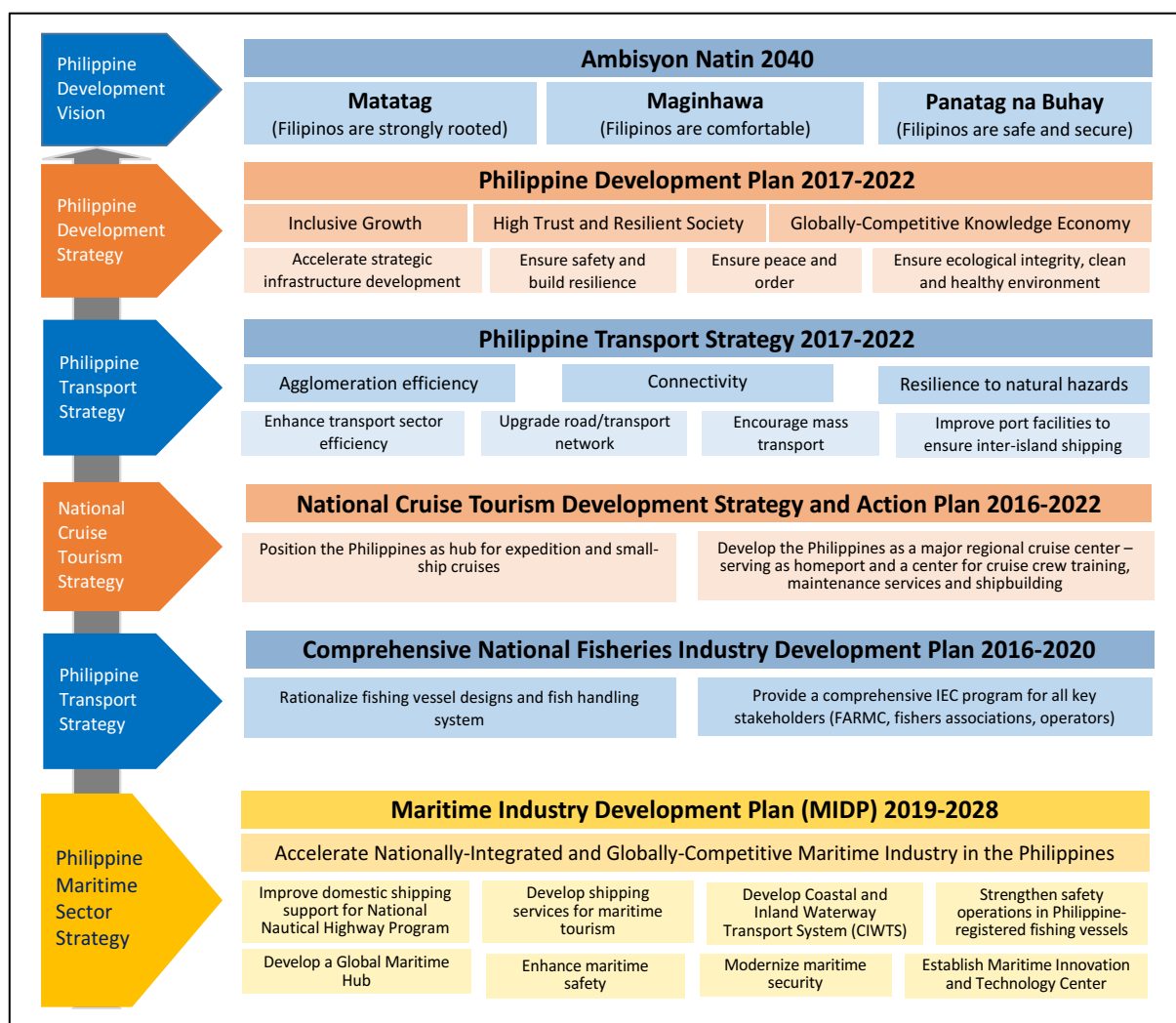
## **B. Linkages Between MIDP and Philippine Development Vision and Plan**

As depicted in **Figure 8**, the formulation of MIDP is anchored on the long-term collective vision of the Filipinos to achieve a “*Matatag, Maginhawa and Panatag na Buhay*” by 2040 as described in *AmBisyon Natin 2040* and PDP 2017-2022 to establish the foundation for inclusive growth, a high-trust and resilient society and globally-competitive knowledge economy by accelerating infrastructure development; ensuring safety and building resilience; ensuring peace and order; and ensuring ecological integrity, and clean and healthy environment. In these development vision and plan, MIDP will directly contribute to achieving the three basic objectives of PDP and, in effect, the long-term goals of *AmBisyon Natin* through the acceleration of national integration and global competitiveness of the Philippine maritime industry by the end of 2028.

National-level integration of the maritime industry will be achieved by:

- (i) improving the capacity, efficiency, safety and security of shipping and SBSR services to support the government’s Nautical Highway Development Program, Maritime Tourism Program, and National Fishery Industry Development Program;
- (ii) developing a global maritime hub for SBRS and related ancillary businesses with a world class research and training center in the country to bring together all maritime related companies in one eco-maritime industrial park in order to provide more comprehensive services to international passenger, cruise and cargo ships plying the Philippine waters for maintenance and other related services, as well as for crew training;
- (iii) developing CIWT system to reduce urban traffic congestion and pollution, increase intermodal transport network, and create new business opportunities; and
- (iv) establishing a Maritime Innovation and Knowledge Center (MIKC) to develop common industry classification coding standards consistent with the International Standard Industrial Classification (ISIS) and the PSIC for improved quality of information for planning, policy-making and implementation.

**Figure 8: Strategic Links of MIDP with National Development Vision and Plans**



The improvements in maritime infrastructure and services will upgrade the capacity of the country's sea- and land-based maritime sub-sectors and the allied businesses and companies to become more globally competitive in maritime education, shipping and cruise tourism, ship management, SBSR and related ancillary services, among others. The priority programs are all directed towards achieving MIDP's long-term goal and objectives outlined above, which support the other national development plans and strategies stated in **Figure 9**, namely: Philippine Transport Strategy 2017-2022, National Cruise Tourism Development Strategy and Action Plan 2016-2022, and Comprehensive National Fisheries Industry Development Plan 2016-2020.

MIDP is also aligned with United Nation's SDG 2030 in terms of poverty eradication; zero hunger; decent work and economic growth; reducing inequality; gender equality and social inclusion; industry, innovation and infrastructure; life below water; and multi-stakeholder partnerships. These eight SDGs will be addressed by the different program activities. MARINA and other government agencies and stakeholders who participated in the roadmapping workshops, and succeeding planning and validation workshops are well aware of these SDGs, as well as other international and regional commitments of the Philippine government, in the preparation of MIDP including its priority programs.

### C. Priority Programs

Eight priority programs are identified and developed for implementation under **MIDP 2019-2028**, of which six will directly support the existing maritime related programs of the national government to functionally and spatially link the maritime industry at the national level by improving connectivity, efficiency, safety and sustainability of the industry members' operations, namely:

- Upgrading of Domestic Shipping in Support of the Philippine Nautical Highway Development;
- Development of Shipping Services for Maritime Tourism;
- Strengthening of Safety Standards of Fishing Vessel Operations;
- Philippine Maritime Safety Enhancement;
- Maritime Security Modernization; and
- Establishment of MIKC.

The other two programs are designed to boost the country's goal of accelerating a nationally-integrated and globally-competitive maritime industry while, at the same time, reducing urban traffic congestion, providing cost- and energy-efficient mode of transport, and expanding shipping and cruise routes to serve more people and places across the country and the rest of the world. These two programs include:

- Development of a Global Maritime Hub; and
- Development of CIWT System.

Each of these programs is presented in detail in **Appendix 2**, and briefly described below.



## Program 1: Upgrading of Domestic Shipping in Support of the Philippine Nautical Highway Development

### RATIONALE

With the country divided into 7,641 islands, the development of the 919 km national nautical highway in 2003 is critical to the inter-island transport of people and goods, and dispersion of investments and employments to different provinces, cities and municipalities outside of metropolitan and highly urbanized areas like Metro Manila, Metro Cebu and Metro Davao. From 2011 to 2017, the number of domestic shipping passengers increased from about 49.49 to 72.05 million, or an average annual growth rate of 6.5 percent. Domestic cargoes also increased by an average annual growth rate of 5.5 percent from 74.17 million MT in 2011 to 102.53 million MT in 2017. As the country's population and economic activities continue to grow, both the number of passengers and volume of cargoes are expected to increase in the future.

Inter-island shipping in an archipelagic country like the Philippines is an important element in expanding market linkages and connecting/linking one island to another in particular and for economic development in general. It facilitates 98% of domestic inter-island trade - averaging 89 million metric tons of cargoes annually for the last five years. It also facilitates the movement of more than 72 million Filipinos as well as foreign tourists in CY 2017. Thus, the national government is currently expanding and upgrading the National Nautical Highway networks and facilities to meet this expected increase in demand for more economical, efficient, safe and secure domestic shipping services to facilitate the movement of people and goods across the country. However, this effort depends on the efficiency, safety and security of domestic merchant fleet.

### OBJECTIVES

Under PD 474 and RA 9295, MARINA is mandated to provide an effective sea linkage in various islands and regions of the country. Hence, the agency supports the national government's program particularly the Nautical Highway Development by modernizing and upgrading the existing domestic merchant fleet, establishing new ship routes, and promoting private sector participation in domestic shipping facility development and operation.

The Program impact will be more efficient and safe sea transport for passengers and cargoes to be measured through reduced transport cost and time; reduced maritime accidents, and higher passengers' satisfaction. The outcomes of the Program will be increased number of passengers, volume of cargoes and number of ship calls; developed new routes/links, and increased investments in shipping and shipbuilding businesses. These impact and outcomes will be achieved by delivering the following outputs:

- (i) Modernized/upgraded domestic vessels;
- (ii) Increased amount of investments in shipping and shipbuilding;
- (iii) Increased number of trained Deck and Engine cadets;
- (iv) Expanded/improved existing roads, port infrastructures and facilities;
- (v) Developed/constructed new port infrastructures and facilities;
- (vi) Reduced number of motor-bancas/ motorboats and wooden-hulled ships; and



(vii) Retired/replaced old, obsolescent and/or uneconomic vessels.

The Program impact, outcomes and outputs are presented in the results framework (without means of verification and assumptions columns) below, which will be monitored regularly, and evaluated at mid-term and end-of-program implementation. As the lead implementing agency, MARINA will be responsible for monthly, quarterly and yearly internal performance monitoring in collaboration with cooperating/partner agencies based on an agreed results-based monitoring and evaluation (RbME) system to be developed and operated by MARINA and partner agencies. An external evaluation will be contracted by MARINA to a reputable service provider for the midterm review and end-of-program evaluation.

### SPATIAL CONTEXT

This Program will cover all merchant fleet operating in existing and future seaports/terminals, roads, and navigational areas/waters covered by the nautical highway in the country.

### PROGRAM COMPONENTS

The key Program components will include:

- Modernization and upgrading of domestic vessels;
- Capacity building for deck and engine cadets;
- Improvement of ports/terminals and road infrastructure;
- Phasing-out of wooden-hulled ships (WHS); and
- Vessel Retirement Program (VRP) of unclassified and obsolescent ships.

### IMPLEMENTATION SCHEDULE

This Program is designed for 10 years (see **Appendix 3**).

### IMPLEMENTATION ARRANGEMENTS

As the lead implementing agency, MARINA will assume full responsibility in the Program administration and management. An inter-agency National MIDP Steering Committee (NSC-MIDP) will be established to provide overall policy guidance chaired by the DOTr Secretary. A National Project Coordination Office (NPCO) will also be set up at MARINA Central Office to be lodged with the Domestic Shipping Service (DSS). MARINA will work with and/or support PCG, PPA, CPA and other port authorities (including LGUs) for establishment of sea routes; the improvement of terminals, ports and other port facilities; and the conduct of IEC activities.

MARINA will coordinate with DOF and DTI/BOI for the development of appropriate incentive packages/programs, and with government and private sector financing institutions (i.e., DBP, LBP, etc.) for the development of a comprehensive financing program for domestic shipping companies to enable the latter to actively participate in, and benefit from, this Program. MARINA will also work with CDA and OTC for the organization of domestic shipping companies, most especially those small and medium-sized companies, to be organized into cooperatives to increase their financial

capacity to avail of the financing program. In addition, MARINA will collaborate with DOST and University of the Philippines (UP) for the development of the Route Capacity Measurement (RCM) System for maritime transportation system/software, and the conduct training for Deck and Engine Cadets, among others. The Program's implementation arrangements are summarized in **Appendix 2-1**.

### **PROGRAM COST**

The Program is estimated to cost PhP45.155 billion pesos for a 10-year period of implementation.



## Program 2: Development of Shipping Services for Maritime Tourism

### RATIONALE

NCTDSAP 2016-2022 sets out strategic actions to develop the competitiveness of the country's cruise shipping business with a long-term goal of promoting the Philippines as a regional cruise center in Asia -- serving as a home port for international cruise ships<sup>27</sup>, and eventually a regional center for cruise crew training, cruise line business outsourcing, and cruise ship maintenance services. NCTDSAP provides directions to both government and industry for increasing the number of cruise ship calls to ports and islands of the country, creating excellent tourist experiences, promoting sustainable tourism, and earning greater economic benefits for the country.

NCTDSAP aims to engage cruise ship industry more aggressively in cruise tourism, especially in the Asian Cruise Tourism Market, and attract more visitors from China, South Korea, Japan, India, Taiwan, Malaysia, Australia, United States and Europe, to travel to the Philippines. In 2017, nearly 3.1 Million Asians took a cruise, with 94 percent reportedly staying within the Asian region, and about 6.3 percent (195,751 passengers) visited the Philippines in 140 port calls<sup>28</sup>. These cruise ship passengers are expected to reach 329,000 with 190 port calls in 2018, and 456,164 with 402 port calls in 2022. There are potentially 15 destinations/port calls in the country, such as; Manila, Puerto Princesa, Busuanga (Coron), Malcapuya Island, Culion, El Nido, Boracay, Bohol, Bantayan Island, Cebu, Kalanggaman Island, Aparri - Ilocos Norte, Currimao - Ilocos Norte, Hundred Islands, and Lingayen Gulf, but not all are visited each year.

In its 2018 Asia Cruise Trends report, the Cruise Lines International Association (CLIA) advises that the Asian region will experience a greater number of cruises in 2018 with 6 Mega (3,500+ passengers) and 19 large (2,500-3,500 passenger) Cruise Ships, and the Asian trend will be shorter sailings, consisting of 2-3 nights (26 percent), 4-6 nights (66 percent) and 7-13 nights (8 percent) due to the preference of tourists, mostly from China, for shorter vacations. The Philippines intends to capture part of this expected increases in number of Asian cruise ship port calls and passengers, and the growing number of Filipinos who are taking cruise ships for holiday vacations. NCTDSAP includes the plan to build new and larger ports to accommodate larger cruise liners, as well as additional port calls/destinations and cruise lines for longer holiday vacations.

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<sup>27</sup> The SuperStar Virgo is the first international cruise ship to homeport -- while a ship only visits a port of call, it picks up and drops off passengers at a home port -- in the Philippines. In 2017, two Genting Cruise Lines brands (i.e., Star Cruises and Dream Cruises) began to homeport in Manila. The bulk of passengers came from Metro Manila although passengers also came from major cities like Cebu and Davao through fly-cruise programs. Accessed from <https://www.philstar.com/lifestyle/travel-and-tourism/2018/04/01/1801829/smooth-sailing-seen-asias-cruise-tourism-industry#QsCe8i4usEwSgc WF.99>.

<sup>28</sup> Cruise Lines International Association (CLIA), 2017. *Asia Cruise Trends 2017 Edition*. Washington, D.C., 20004. Accessed from <https://cruising.org/docs/default-source/research/clia-2017-asia-cruise-trends-report.pdf?sfvrsn=0>.

International cruise call for Philippine ports is expected to reach 190 calls for 2018, bringing in 329,000 passengers, or 35.7 percent over total cruise calls of 140 in 2017 with 195,751 passengers.<sup>29</sup> NCTDSAP targets visitor arrivals via cruises to reach 456,164 passengers with 402 port calls in the Philippines by the end of its implementation in 2022. This target represents an average annual growth rate of 20.6 percent in port calls and 8.5 percent in passengers for the period 2018-2022.

## OBJECTIVES

To support NCTDSAP to achieve its goal of promoting the Philippines as a regional cruise center in Asia -- serving as a Home Port for international cruise ships, and the target to increase the number of port calls and passengers in 2022 and beyond -- this Program aims to develop and upgrade design and operational safety standards for cruise ships, promote local construction of cruise ships, and develop new cruise routes in order to provide more efficient and safe cruise ship services.

The Program impact will be increased revenue in maritime tourism, and maintained zero accident of tourist boats and pleasure crafts. The outcomes of the Program will be increased number of upgraded boats serving tourist destination areas (TDAs), number of Philippine registered tourist boats and pleasure crafts, number of new jobs generated by local shipyards in construction of boats/pleasure crafts, number of crew / personnel employed in foreign-flag cruise ships, and amount of remittances in dollars of foreign-flag cruise ship crew and personnel. These impact and outcomes will be achieved by delivering the following Program outputs:

- (i) Improved cruise ship designs and safety standards,
- (ii) Developed cruise routes with improved infrastructure support in identified TDAs,
- (iii) Developed/constructed ports in identified TDAs,
- (iv) Locally constructed cruise ships/boats/yachts, and
- (v) Trained cruise ship crew and other personnel.

These impact, outcomes and outputs are reflected in the Program results framework below, which will be monitored regularly, and evaluated at mid-term and end-of-program implementation. As the lead implementing agency, MARINA will be responsible for spearheading the monthly, quarterly and yearly internal performance monitoring in collaboration with cooperating/partner agencies based on an agreed results-based monitoring and evaluation (RbME) system which will be developed and operated by MARINA and partner agencies. An external evaluation will be contracted by MARINA with reputable service provider for the mid-term and end-of-program evaluation.

## SPATIAL CONTEXT

This Program will cover all Philippine-registered cruise ships operating in existing and potential port calls/destinations in the country as specified in NCTDSAP. Areas with ready ports will be initially covered by the Program to accommodate cruise ships, such

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<sup>29</sup> In 2017, this actual total cruise calls exceeded the country's projection of 105 port calls with 117,000 passengers, by 63 percent. Visiting cruise ships docked at Manila, Subic, Puerto Princesa, Coron, and Boracay, among others.

as, the “Turquoise Triangle” (Manila; Boracay, Caticlan, Aklan; and Puerto Princesa, Palawan) where all existing ports are accessible due to geography and inter-port distances. The cruise destinations in “Turquoise Triangle” are grouped in the three apexes, namely:

- **Manila** and Subic Bay;
- **Boracay** and Iloilo and Romblon; and
- **Puerto Princesa** and El Nido and Coron.

The other potential Philippine cruise destinations to be covered by the Program are:

- Aparri;
- Batanes;
- Currimaao/Salomague, Ilocos Norte;
- Cebu, Cebu Province
- Tagbilaran City, Bohol;
- Cagayan de Oro, Misamis Oriental; and
- Davao City.

## PROGRAM COMPONENTS

The key Program components will include:

- (i) Creation of a Maritime Tourism Committee (MTC);
- (ii) Design and safety standards for construction and operation of cruise ships, boats and pleasure crafts;
- (iii) Facilitating investments in maritime tourism (Ease of Doing Business);
- (iv) Capacity building of cruise shipbuilding manpower and cruise ship crew;
- (v) Promotion of maritime tourism to global travel industry/ cruise tourism market; and
- (vi) Program management, monitoring and evaluation support.

## IMPLEMENTATION SCHEDULE

This program is designed for 10 years (see **Appendix 3**).

## IMPLEMENTATION ARRANGEMENTS

This Program will be implemented by MARINA in collaboration with other agencies under the DOTr like the PCG and PPA and other mandated agencies, such as; DOT, DENR, Department of Public Works and Highways (DPWH), Department of Trade and Industry/Board of Investments (DTI/BOI), DOF/BOC, Department of Justice/Bureau of Immigration (DOJ/BI), LGUs, financial institutions and the private sector. The Program’s implementation arrangements are summarized in **Appendix 2-2**

## PROGRAM COST

The Program is estimated to cost PhP147.4 billion pesos for a 10-year period of implementation.



## Program 3: Development of Coastal and Inland Waterways Transport System (CIWTS)

### RATIONALE

Coastal and inland waterways are important part of the Philippine economic development, particularly in the past where traded commodities were shipped by water from the coast or ocean through rivers and lakes to reach the final destination areas. Until recently, many of the country's rivers (i.e., Pasig River, Cagayan River, Pampanga River, Agusan River, Mindanao River, etc.) serve as watercourses to transport agricultural products from upstream communities to central markets, including local people to reach workplaces, schools and other service centers. The Philippines consists of 421 rivers, of which 50 are considered biologically dead due to pollution, siltation and other environmental problems. The other rivers (and lakes) are potential inland waters for the development of CIWTS. Based on available data, the country's 38 bays and coasts cover an area of 266,000 km<sup>2</sup>, while inland waters cover 1,830 km<sup>2</sup>.

In the country, the **Pasig River Ferry Service** is the only water-based inland waterways transport system in Metro Manila that cruises the Pasig River from Pinagbuhatan in Pasig City to Intramuros in Manila City. This ferry system was originally operated by a private shipping company in 1990 which lasted for only one year, and reopened in 1996 under another private shipping company but also closed after three years of operation. In both cases, ferry service's short-lived operation was attributed to the proliferation of informal settlers, presence of water lilies, and various environmental problems which posed severe risks to health and life passengers, and safety of ferry boats. The latest ferry service, reactivated in 2014, was placed under the management of the Metro Manila Development Authority (MMDA). As designed, the main purpose of this ferry system was to decongest urban traffic in Metro Manila, estimated with a possible reduction of traffic volume by 30 percent at full operation.

Pasig River is 27 km in length and 3.2 km longer than EDSA, the primary north-south land transport corridor in Metro Manila, where travelers spend two or longer hours each day especially during "rush periods". Reviving the Pasig River ferry cruise service with water-front development will significantly ease urban road density and traffic, resulting in shorter transport cost and time, and reduction in air pollution in addition to the other benefits identified below. Further expansion of the Pasig River ferry cruise to connect coastal cities and municipalities of Bataan and Cavite provinces offers potential significant reduction in traffic loads and car accidents along North and South Luzon Expressways (NLEX and SLEX), respectively, and provides options to vehicle owners and travelers heading for provinces north and south not to pass through EDSA and other Metro Manila's road networks.

In Region 1 (Northern Luzon), the Regional Development Council (RDC) has planned to establish a **Tri-City Ferry System** that links the cities of Dagupan and Alaminos in Pangasinan, and San Fernando in La Union in order to reduce the heavy flow of road traffic in the three cities and, at the same time, provide a faster and more convenient



alternative mode of transport for tourists and local travelers. However, this plan will have to undergo detailed feasibility study to determine economic and financial viability, social acceptability and environmental sustainability.

Until 1980, urban population accounted for nearly 37.5 percent of total population in the Philippines. Thirty years later, the country witnessed a rapid urbanization characterized by significant migration of rural population to major cities and highly urbanized areas. As a result, urban population increased to 45.3 percent of total population in 2010 and 46.5 percent in 2017. Based on the latest population projections made by the Philippine Statistics Authority (PSA), urban population will further grow to 47.2 percent of total population in 2030 and 52.6 percent in 2040. This means that over 50 percent of total population will be living in urban areas in the next 22 years.

Hence, the development of CIWT system is a significant and timely initiative to develop an alternative mode of transport other than land route in the next 10 years to reduce traffic and urban congestion, create new development opportunities, raise property values along riverbanks, and promote healthy human activities through walkways and bike lanes along riverbanks. The development of CIWTS also prevents the country's highly urbanized cities to be ranked among the top 25 most congested cities in the world based on the TomTom Traffic Index published by the Dutch's navigation company TomTom.<sup>30</sup>

Heavy traffic has become a major concern of the government, private sector and urban settlers not only in Metro Manila but in the other metropolitan and highly urbanized areas in the country. One of the solutions being looked into by the government is the development of ferry system in the coastal and inland waterways. This alternative mode of transport is more economical, efficient, safe and less pollutant to environment than land transport system.

## OBJECTIVES

The development of CIWT system aims to increase the efficiency, safety and utility of transport system in the country's metropolitan and highly urbanized areas by reducing traffic congestion, improving connectivity between these areas, upgrading ferry boat designs and safety standards, enhancing navigability and quality of coastal and inland waterways, and providing access channel for sealift emergency operation during disasters and other related cases. As a pioneering effort, the Program will be carried out in two phases: (i) inland waterways transport (IWT) system development during the period 2019-2024; and (ii) expansion of IWT to cover coastal areas (CIWT) during the period 2025-2029).

The Program impact will be an efficient, safe and environmentally-sustainable CIWT system to be measured by the reduced cost and time of transport, and increased passengers' satisfaction with CIWT system. The outcomes of this Program will be

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<sup>30</sup> Shead, S., 2017. "The 25 most congested cities in the world," in U.K. Business Insider. Accessed from <http://uk.Businessinsider.com/most-congested-cities-tomtom-traffic-index-2017-2>.



increased movement of people and goods, and generated investments in CIWT boat and facility operation. The impact and outcomes will be achieved by the following outputs:

- (i) Development of design and ecological standards for CIW;
- (ii) Installation/improvement of CIWT system markings/navigational aids'
- (iii) Design, construction and O&M standards for CIWT boats and ports/terminals/facilities;
- (iv) CIWT information system (CIWT-IS) establishment; and
- (v) Capacity building of CIWT personnel.

### SPATIAL CONTEXT

This Program will cover the metropolitan and highly urbanized areas with coastal/inland waters, such as but not limited to: Metro Manila through the Pasig River Ferry System; San Fernando City, La Union - Dagupan City and Alaminos City, Pangasinan through the Tri-City Ferry System; Metro Cebu; Metro Davao; Manila - Subic; Manila - Batangas; and Manila - Calapan City, Oriental Mindoro routes where water transport can serve as an alternative mode of transport.

### PROGRAM COMPONENTS

The key Program components will include:

- (i) Waterways development and maintenance;
- (ii) Ports/landings/terminals construction, and operation and maintenance (O&M);
- (iii) Boat building and O&M;
- (iv) CIWT information system (CIWT-IS) establishment and operation;
- (v) Capacity building on CIWT boat and system design and safety standard;
- (vi) Development and implementation of information, education and communication (IEC) plan; and
- (vii) Program management, monitoring and evaluation support.

### IMPLEMENTATION SCHEDULE

This Program will be implemented for 10 years (see **Appendix 3**).

### IMPLEMENTATION ARRANGEMENTS

MARINA will take the lead role in implementing CIWTS Program with PPA and PCG, all of which are under DOTr; DPWH, DENR/NAMRIA, other concerned government entities, and all LGUs along coastal and inland waterways to be covered by the Program as cooperating partners. The Program's implementation arrangements are summarized in **Appendix 2-3**.

### PROGRAM COST

The Program is estimated to cost PhP2.64 billion pesos for a 10-year implementation period



## Program 4: Strengthening of Safety Standards of Registered Fishing Vessels

### RATIONALE

In the agriculture industry, fisheries is the second most important subsector - next to crops - in the Philippines. In 2015, fisheries contributed 1.5 percent and 1.7 percent at current and constant prices, respectively, to gross domestic products (GDP) of the country, providing employment and livelihood to over 1.6 million Filipinos, 85 percent of whom were from municipal fisheries and 1 percent from commercial fisheries, while aquaculture employed 14 percent<sup>31</sup>. The contribution of fisheries to total GDP contracted to 1.3 percent in 2016<sup>32</sup>. This reflected the continuing decline in fisheries production from 4.97 million MT in 2011 to 4.36 million MT in 2016<sup>33</sup>.

However, the food consumption requirements from fisheries of the growing population, despite a slowing down in population growth rate, has also increased pressures on the subsector and the fisheries resources in the country. In 2017, total population reached to about 103 million, and mean per capita consumption of fish and fishery products reported at 40 kg/year or 109 grams/day, which accounted for 12.8 percent of total intake.

The Philippines ranked 7<sup>th</sup> among the world's top 10 fish producing countries in 2013, then dropped to 10<sup>th</sup> position in 2015, and eventually lost its place in 2016 up to 2018 due to overfishing; and illegal, unreported and unregulated fishing (IUUF) practices. Moreover, the rights granted by the government to foreign investors in fishing operations in the country have also increased stress on marine resources and ecosystems, and contributed to steady decline in the country's fish stocks. Some of the key fishing groups have been reported to be approaching, have exceeded, the point of maximum exploitation levels.

Across the country, coastal fishers now have to venture farther and farther out to sea to catch fish; and have to increasingly rely on motorized vessels, instead of the traditional non-motorized bancas, thus entailing higher operational costs associated with fuel and engines, among others, than the traditional method. Accompanying this new order in fishing operations -- "farther and farther out to sea" -- has been the reportedly increasing fishing accidents, involving the death of fishing crew and/or damage or loss of fishing boats due to bad weather conditions, hazardous waters, high sea waves, and ignition of illegal fishing devices (i.e., dynamites). At present, there is no systematic data recording, compilation, analysis and reporting of fishing accidents in the country; hence, most information only appears in daily newspapers. Scientific study on factors contributing to these fishing accidents in the Philippines also does not

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<sup>31</sup> Lamarca, N. S. J., 2018. Fisheries Country Profile: Philippines. Southeast Asian Fisheries Development Center (SEAFDEC) website. Accessed from <http://www.seafdec.org/fisheries-country-profile-philippines/>.

<sup>32</sup> Bureau of Fisheries and Aquatic Resources. Fish Contribution to the Economy 2016. Accessed from <https://www.bfar.da.gov.ph/profile?id=18#post>.

<sup>33</sup> PSA, 2017. Fisheries Statistics of the Philippines. Accessed from <https://psa.gov.ph/sites/default/files/FStatPhil14-16docx%282%29.pdf>.

exist to date. These increasing fishing accidents raise new questions about the safety of fishing crew and fleet, as well as the general working conditions for fishing crew (most particularly the millions of small coastal fishers), in light of the growing fisheries' commercialization and competition in the country.

The International Maritime Organization (IMO) identifies four (4) pillars for fishing vessel safety for fishing and fishers, which include the following mandatory agreements/ conventions:

1. **IMO's 2012 Cape Town Agreement (CTA)** - Not yet in force. It aims to facilitate better control of fishing vessel safety by flag, port and coastal States; and contribute to the fight against IUUF<sup>34</sup>. It also includes mandatory international requirements for stability, construction and associated seaworthiness of fishing vessels of 24 meters in length and over, as well as requirements for life-saving appliances, communications equipment and fire protection.
2. **IMO's STCW-F Convention on Training of Fishers** - It entered into force in 2012. It seeks to promote the safety of life at sea and the protection of the marine environment, taking into account the unique nature of the fishing industry and the fishing working environment.
3. **ILO's Work in Fishing Convention 2007 (Convention No. 188)** - It entered into force in 2017. It sets minimum requirements for work on board including hours of rest, food, minimum age and repatriation.
4. **FAO's Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (PSMA), 2009** - It entered into force in 2016. It seeks to prevent, deter and eliminate IUUF through adoption and implementation of effective port State measures.

IMO has also worked to address fishing vessel safety for many decades, in collaboration with the Food and Agriculture Organization of the United Nations (FAO) and the ILO on non-mandatory instruments which address the design, construction and equipment of fishing vessels, as follows:

- Code of Safety for Fishermen and Fishing Vessels, 2005;
- Revised Voluntary Guidelines for design, construction and equipment of small fishing vessels, 2005;
- Safety Recommendations for Decked Fishing Vessels of Less Than 12 Meters in Length and Undecked Fishing Vessels; and
- Implementation Guidelines on Part B of the Code of Safety, the Voluntary Guidelines, and the Safety Recommendations (Implementation Guidelines).

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<sup>34</sup> FAO describes illegal, unreported and unregulated fishing (IUUF) to include: (i) fishing and fishing-related activities conducted in contravention of national, regional and international laws; (ii) non-reporting, misreporting or under-reporting of information on fishing operations and their catches; (iii) fishing by "Stateless" vessels; (iv) fishing in convention areas of Regional Fisheries Management Organizations (RFMOs) by non-party vessels; and fishing activities which are not regulated by States and cannot be easily monitored and accounted for. [Accessed from http://www.fao.org/iuu-fishing/en/](http://www.fao.org/iuu-fishing/en/).

The Program intends to strengthen the safety standards for fishers and fishing vessels in all Philippine-registered fishing vessels to support a safer and sustainable fishing industry.

## OBJECTIVES

The main objective of this Program is to increase the efficiency and safety of all Philippine-registered fishing vessel operations, both in commercial and municipal fisheries, through improved regulatory framework for fishing vessel design and operational safety standards; improved database on fishing accidents, and preventive and response actions; upgraded fishing crew competency; increased level of awareness on fishing safety standards by DA/BFAR and LGU personnel and fishers associations; and reduced high-risk fishing vessels and fishing accidents.

The Program impact will be more efficient and safe fishing vessel operations in the country with the implementation of IMO and ILO conventions on safety of life at sea and fishing vessels, onboard welfare of fishing crew, and prevention of IUUF practices through the development of national policy on fishing vessel operations safety standards. This impact will be measured by the reduced fishing vessels operation cost, and maritime accidents involving fishing vessels. The outcomes of the Program will be reduced IUUF practices and increased number of fishing vessels registered with Fishing Vessel Safety Certificates (FVSC). These Program impact and outcomes will be achieved by delivering the following outputs:

- (i) developed and implemented new fishing vessels safety rules and regulations;
- (ii) trained trainers, operators and seafarers on fishing vessels safety;
- (iii) developed and implemented safety designs in fishing vessels;
- (iv) developed and disseminated IEC materials to fishing key stakeholders; and
- (v) developed and maintained a database on fishing vessels and crew.

## SPATIAL CONTEXT

This Program will be implemented nationwide, covering all Philippine-registered fishing vessels operating in the Philippine and international waters.

## PROGRAM COMPONENTS

The Program components will include:

- (i) Development and implementation of Fishing Vessels Safety Rules and Regulations (FVSRR) to include adoption of CTA and STCW-F;
- (ii) Development and Implementation of Capacity Building Program for Trainers, Operators and Seafarers on Safety in Fishing Vessels Operations;
- (iii) Development and Promotion of Safety Designs in Fishing Vessels;
- (iv) Development and Dissemination of User-Friendly Fishing Safety Guides as Information, Education and Communication (IEC) Materials;
- (v) Development of a Database of Fishing Vessels (Municipal and Commercial Fishing Vessels) and Crew (Officers and Ratings); and
- (vi) Program Management Support.

### **IMPLEMENTATION SCHEDULE**

This Program will be implemented for a period of 10 years (see **Appendix 3**).

### **IMPLEMENTATION ARRANGEMENTS**

This Program will be implemented by MARINA in close collaboration with DA/BFAR, DOTr/PCG, LGUs, and fishing operators and associations for the development, training, IEC and implementation of FVSRR to attain the desired. The Program's implementation arrangements are summarized in **Appendix 2-4**.

### **PROGRAM COST**

The Program is estimated to cost PhP74.80 million pesos for a 10-year period of implementation.



## Program 5: Development of a Global Maritime Hub

### RATIONALE

The Philippines is strategically situated along the international sea lanes of commercial ships catering to world trade. Complemented by the country's potentials on maritime manpower, maritime services and shipbuilding/ship repair, such comparative advantage can be galvanized to transform the Philippines into a global maritime hub.

In order for the Philippines to attract commercial ships to call on the Philippine ports, avail of logistics, supplies, services and needed maintenance/repairs, and eventually become a central point for the accumulation and distribution of cargoes for worldwide trade (transshipment hub) - the Program includes five interlinked development projects which are critical components of the maritime sector to realize this goal.

### OBJECTIVES

Merchant ships servicing the world trade often make some port calls in their long voyages between the ports of origin/loading and destination/unloading to refuel, replenish supplies and logistics, have repair works on ships' parts/machineries, and attend to administrative/technical requirements related to their commercial undertaking or on ships' or crew's documentation. Thus, the five projects under the Program will have the following Outputs, with their corresponding Outcomes and Impacts:

#### 1. An Attractive Philippine Ship Registry

Outcomes from this Project will be increased number of Philippine-registered ocean-going ships, increased taxes and revenues for the government, and increased employment for Filipino seafarers. The impact will be increased contribution of the maritime sector to the country's gross domestic product (GDP).

#### 2. World Class Bunkering Facility and Major Ports Development for Regional Transshipment in Southeast Asia

Outcomes from this Project will be increased calls of foreign ships, increased productivity of related maritime industries (e.g., ports, ship agency/husbandry, cargo handling, ancillary industries; etc.), and increased employment opportunities. Again, the impact will be increased contribution of the maritime sector to the country's GDP.

#### 3. Globally Competitive Shipyards Development for Meeting Foreign demand for Shipbuilding/Ship Repair/Ship Recycling

Outcomes from this Project will be increased number of local shipyards capable of building/ repairing ships of 2,000 GT and above, increased investments for shipyard expansion and modernization, increased productivity of shipyards, and

increased employment opportunities. Similarly, the impact will be increased contribution of the maritime sector to the country's GDP.

**4. Eco-Industrial Maritime Park Establishment for Clustering and Consolidation of all Maritime-Related Services (i.e., shipbuilding, ship repair, technical and legal services, manning, flag registry; etc.)**

Outcomes from this Project will be increased investments, productivity and employment, with the corresponding impact of increased contribution of the maritime sector to the country's GDP.

**5. Maritime Training and Research Center Establishment for Meeting Manpower Requirements for the Entire Maritime Industry Locally and Internationally, as well as Technology-Based/ Policy-Related Studies.**

Outcomes from this Project will be increased number of competent and qualified maritime manpower complying with international best standards, and increased employment and investments. The impact will be increased contribution of the maritime sector to the country's GDP.

## **SPATIAL CONTEXT**

Two projects under the Program will have national scope of coverage, while the other three will involve localized locations which are to be eventually identified under each project.

## **PROGRAM COMPONENTS**

The key components of the five projects under the Program will include:

**1. Promotion of the Philippine Flag Registry**

- Strengthening of regional and international cooperation (Association of Southeast Asian Nations (ASEAN), Bilateral Agreements) to support the competitive position of Philippine Flag Vessels;
- Strengthening of shipping services for Philippine export and import trade transportation;
- Development and promotion of ship financing schemes, and incentives for ship owning and shipping industry;
- Review and improvement of bareboat chartering program and ship mortgage law;
- Strengthening of ship management, ship brokerage, ship chandling and ship insurance services; and
- Strengthening of the maritime administration administration through ratification and implementation of international maritime instruments and restructuring of MARINA.



2. **Development of the Philippines as a Transshipment and Bunkering Hub in the Southeast Asian region**
  - Feasibility study and detailed engineering design on bunkering terminal development;
  - Establishment of bunkering terminal/station;
  - Upgrading of existing major ports into international ports/terminals;
  - Development of maritime-related businesses and services; and
  - Marketing of bunkering facility to domestic and international markets.
3. **Upgrading and Expansion of Local Shipyards**
  - Strengthening of SBSR services in the Philippines through development and promotion of incentives, joint ventures, and investments;
  - Design and production of modern, safe and environmentally-friendly Philippine ships to achieve global competitiveness;
  - Full implementation of laws/policies on vessel retirement and progressive restriction of vessel importation, and existing program on the Philippine Navy Modernization, etc.) to create greater opportunities for SBSR projects;
  - Shipyard manpower development and upgrading; and
  - Marketing of shipyard facilities in international markets.
4. **Establishment of an Eco-Industrial Maritime Park**
  - Feasibility study and detailed engineering design of an Eco-Industrial Maritime Park;
  - Development and operation of the Eco-Industrial Maritime Park; and
  - Marketing of the Eco-Industrial Maritime Park for locators such as shipyards, ancillary industries, technical/ legal/logistics services, both at domestic and global markets.
5. **Establishment of a Maritime Training and Research Center**
  - Feasibility study and detailed engineering design of Maritime Training and Research Center;
  - Development, operation and maintenance of Maritime Training and Research Center;
  - Establishment of institutional arrangement with business locators for purposes of the Center's operation and maintenance; and
  - Marketing of the Center to national and international markets.

## **IMPLEMENTATION SCHEDULE**

This Program will be implemented for a period of 10 years (see **Appendix 3**).

## **IMPLEMENTATION ARRANGEMENTS**

The implementation arrangements for the five projects under this Program described **Appendix 2-5**.

## **PROGRAM COST**

The entire Program is estimated to cost PhP 45.73 billion, broken down by project as follows:

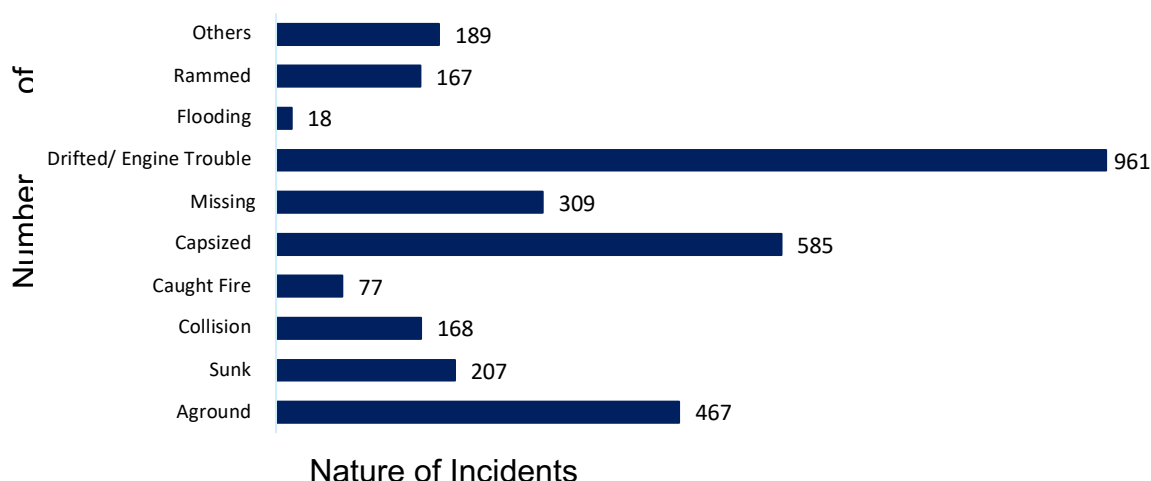
## Program 6: Enhancement of Maritime Safety in the Philippines

### RATIONALE

In the Philippines, as in many other maritime countries in the world, fishing, seafaring and other sea-and land-based related activities are as much a way of life as a profession. Families and communities of fishers, seafarers and other workforces depend on the maritime sector for employment, livelihood and even subsistence. Hence, any accident at sea causes severe problems within their families and the communities. With the growing global maritime industry in terms of numbers, capacities and sizes of merchant and cruise ships, and even fishing vessels, as well as the increasing density of shipping routes and strategic passages, maritime safety becomes a critical aspect of the “health of seafarers” and the competitiveness and sustainability of the industry.

There are many types of maritime incidents. In the Philippines, the most common types of maritime incidents for the last six years (2011-2016) is engine trouble (961 incidents), followed by capsizing (585 incidents) and grounding (467 incidents) as shown in **Figure 9**. The other notable types include sinking, collision, ramming and fire. Most of these incidents can be attributed to crew error, in addition to engine and other mechanical troubles, and natural disasters.

**Figure 9: Types of Maritime Incidents Per Vessel Type, 2011-2016**

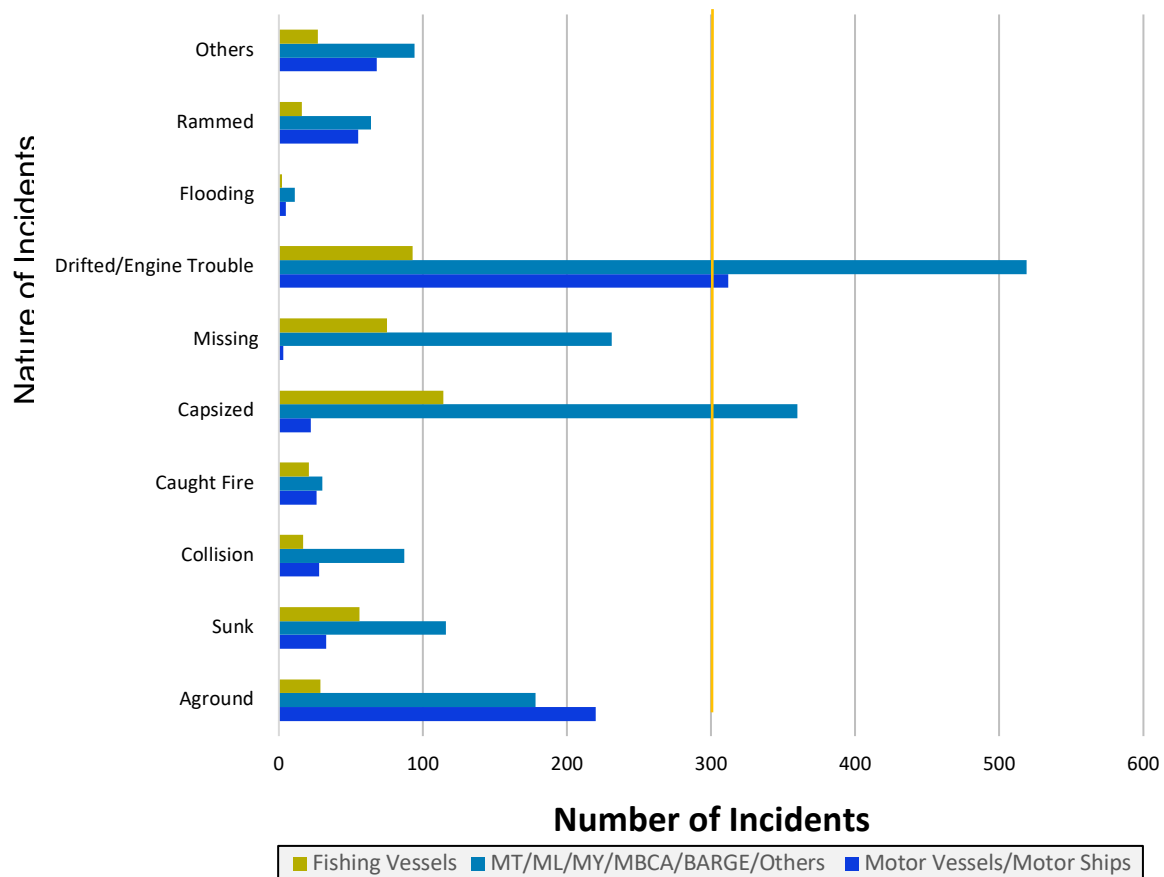


Source: Data taken from Philippine Coast Guard (PCG).

For the period 2011-2016, the two most common maritime incidents by type of vessel are engine trouble and capsizing for passenger or cargo vessels; engine trouble and grounding for motorized vehicles; and capsizing and engine trouble for fishing vessels (**Figure 10**). An average of 526 incidents per year occurred during this period, involving around 99 casualties and 152 missing persons per year. In many instances, some passengers and crew members who died or could not be found during incidents

were unreported because they were not recorded in passengers' manifests of boats/ships involved in such incidents. Cargo ships that leaked or spilt oil and chemicals at sea or shore also caused damages to the marine environment<sup>35</sup>, which can be attributed to failure of safety standards in ship operations, but this type of incident is not presently recorded systematically as the above ship-focused incidents.

**Figure 10: Incidents Per Vessel Type, 2011-2016**



Source: Data taken from Philippine Coast Guard (PCG).

Raw and scanty information on the possible causes of these incidents, indicates that most capsizing incidents happened during adverse weather conditions, particularly typhoon occurrences with high waves and strong winds. The other causes include crew error, poorly designed and constructed boats/ ships, inadequate/inappropriate navigational aids, and lack of adequate facilities (e.g., properly built sea wall, anchorage of sufficient depth, berths for tying boats to, and slipways for hauling or launching boats) for shelter or protection, most especially of fishing boats, against destructive waves and strong winds. Most municipal ports are generally provided by a

<sup>35</sup> Dimailig, O. S., Jeong, J-Y. and Kim, C-S., 2011. Marine Transportation in the Philippines: The Maritime Accidents and their Causes. *Journal of Navigation and Port Research International Edition* Vol.35, No.4 pp. 289-297 (ISSN-1598-5725). Accessed from [https://www.researchgate.net/profile/Orlando\\_Dimailig/publication/264016565\\_Marine\\_Transportation\\_in\\_the\\_Philippines\\_The\\_Maritime\\_Accidents\\_and\\_their\\_Causes/links/5a6126120f7e9b6b8fd3ecac/Marine-Transportation-in-the-Philippines-The-Maritime-Accidents-and-theirCauses.pdf?origin=publication\\_detail](https://www.researchgate.net/profile/Orlando_Dimailig/publication/264016565_Marine_Transportation_in_the_Philippines_The_Maritime_Accidents_and_their_Causes/links/5a6126120f7e9b6b8fd3ecac/Marine-Transportation-in-the-Philippines-The-Maritime-Accidents-and-theirCauses.pdf?origin=publication_detail).

single jetty or pier mainly for the purpose of fish landing, but without a safe and well protected harbor. Most of these causes of maritime incidents in the country can be traced to problems of understanding and compliance of safety standards on the part of fishing, cruising and/or shipping crew and operators, as well as of supervision and compliance monitoring on the part of the government agencies responsible for this task. Effective and consistent enforcement of safety standards is evidently wanting in continued occurrences of different maritime incidents in recent years.

Low public awareness and lack of crew training/competency on safety standards for fishing, cruising and shipping operations are also critical elements of maritime safety, but these do not seem to have received priority attention in the enforcement of safety standards. Hence, overloading of passenger ships or fishing boats has sometimes been reported as a cause of ships/boats which capsized even during normal weather conditions. Search and rescue (S&R) activity is another important maritime safety element, and available records show that an average of 245 S&R missions were carried out by PCG and other maritime authorities during the period 2011-2016, resulting in the rescue of an average of 17,121 boat/ship passengers and crew members per year. Lack of adequate S&R equipment and components is identified as the key constraint in effective S&R operations.

As noted above, the lack of accurate, complete and updated database on physical configurations and safety components of all Philippine-registered vessels that are operating within the national water territories including the country's ports and harbors; the qualification profiles of all crew members (i.e., officers and ratings) of those vessels; the nature and extent of IEC activities relative to dissemination of safety standards; and essential information about maritime incidents also appears as a major constraint to effective planning and implementation of maritime safety strategy and action plan for so a long a time in the country.

## **OBJECTIVES**

The Program impact will be enhanced efficiency and safety of all Philippine-registered vessels operating within the national water territories by developing and implementing a comprehensive safety plan that encompasses the six fundamental elements of maritime safety: (i) standards, (ii) IEC, (iii) enforcement, (iv) M&E, (v) S&R, and (vi) database to ensure passengers to reach destinations in the country safely and timely. This impact will be measured by the reduced transport time and maritime accidents, and increased passengers' satisfaction with maritime safety standards. The outcomes of the Program will be more compliant ship operators and crew to safety standards with certified maritime personnel, and increased number of technical manpower certified professional safety standards inspectors and auditors.

The Program impact and outcomes will be achieved by delivering the following outputs:

- (i) developed and implemented a manual of maritime safety standards consistent with IMO standards;
- (ii) designed and conducted IEC activities for greater awareness on, and compliance to, maritime safety standards;
- (iii) upgraded enforcement, and search and rescue capacity through closer collaboration and joint operation among maritime related government agencies,

and with maritime industry and civil society organizations; and (iv) improved maritime safety administration through database and M&E establishment and operation for improved policy making, plan development, and implementation.

## SPATIAL CONTEXT

This Program will cover all Philippine-registered vessels, such as regular passenger and cargo ships, fishing vessels, and cruise ships, yachts and related recreational crafts.

## PROGRAM COMPONENTS

The Program components will include:

- (i) Review, amend or develop, and implement policies and guidelines on maritime safety for all Philippine-registered vessels;
- (ii) Develop and pass a national legislation mandating all Philippine-registered ships to be compliant with international safety conventions;
- (iii) Develop and implement a standard Maritime Safety Strategy and Action Plan, and specific versions for each region in the country;
- (iv) Develop and implement IEC plan to increase public awareness on maritime safety and marine environmental protection standards;
- (v) Develop and implement training modules/courses on maritime safety and marine environmental protection standards;
- (vi) Develop and implement Maritime Safety Enforcement and Search and Rescue (S&R) Plan;
- (vii) Establish database and M&E system on maritime safety and marine environmental protection; and
- (viii) Program management support.

## IMPLEMENTATION SCHEDULE

This Program will be implemented for a period of 10 years (see **Appendix 3**).

## IMPLEMENTATION ARRANGEMENTS

This Program will be implemented by MARINA in partnership with PCG, PPA and other port authorities, and in collaboration with other concerned government agencies, LGUs, shipowners, shipbuilders, maritime professionals, academic and training institutions, media and other key stakeholders, as defined in the table below. The Program intends to establish a National Maritime Safety Council (NMSC) to perform the following functions:

1. To provide advice to MARINA Administrator on priority action that will improve the implementation of maritime safety;
2. To suggest options on the recommendations resulting from maritime accident investigations to reduce or to lessen loss of life, damage to property, and marine environmental protection and maritime security;
3. To recommend to relevant agencies appropriate actions that should be taken to implement maritime safety measures; and

4. To coordinate and monitor the implementation of maritime safety measures vis-à-vis with other government agencies involved in maritime sector.

The composition of NMSC will be defined during the initial year of the Program implementation in coordination with the concerned government agencies and other key stakeholders. The Program's implementation arrangements are summarized in **Appendix 2-6**.

### **Program Cost**

The Program is estimated to cost PhP 148.5 million for a 10-year implementation period, broken down by component as follows:



## Program 7: Modernization of Maritime Security in the Philippines

### RATIONALE

The Experts' Dialogue on Maritime Security Governance in the Philippine conducted in 2016 provides a comprehensive description of the nature and scope of the country's maritime security concerns, as follows<sup>36</sup>:

- **Maritime security is complex and multi-dimensional.** The character and typology of maritime threats are constantly evolving, adapting with technology and the tactics, techniques, and procedures (TTPs) used by maritime law enforcement agencies. It is therefore important that a venue to exchange information not readily available to other maritime law enforcement agencies other than the PN and the PCG be made collaboratively to address these threats. To understand maritime security, one must closely look into the situation on land and its interplay with sea and people. Aside from the complex and multi-dimensional nature of maritime security, it was noted in several instances during the dialogue that crimes at sea are hatched on land. Maritime issues trace their cause from the situation on land and their interplay with sea and people. Yet, most of the time, the general law and sea law enforcements are disjointed, and create a sense of a great divide. Thus, it is desirable to transform the disjointed efforts into complementary efforts that constitute the whole-of-nation approach. Also, the country can be pro-active and target land supply chains to prevent their access to the maritime domain.
- Existing international and regional frameworks for cooperation on maritime security governance is at present insufficient to address evolving maritime security concerns. Existing cooperation frameworks should undergo periodic reviews and recalibrations to effectively address present challenges. At the international level, the United Nations Convention on the Law of the Sea (UNCLOS) remains the cornerstone of international legal instrument on maritime cooperation. At the regional level, ASEAN has played a central role in devising cooperative mechanisms. Constant review on the effectiveness and relevance of UNCLOS could provide topics for future discussions. Alternatively, ASEAN can continue to take the lead in inter-agency cooperation across the region.
- **Strong national institutions, policies, and capabilities should underpin Philippine contribution to regional maritime security.** The Philippines should continually equip itself in order to explore the possibilities of regional cooperation in maritime security governance, such as that of alignment of laws and policies, and comprehensive information sharing. Aside from capability development of our law enforcement agencies, there should be a strict implementation of our protocols and a comprehensive plan to communicate our activities and initiatives, which may

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<sup>36</sup> This information was extracted from the article "Experts' Dialogue on Maritime Security Governance 2016" published by the Maritime Review. The Online Edition of the Maritime League's Maritime Review Magazine. Accessed from <http://maritimereview.ph/2017/01/30/experts-dialogue-on-maritime-security-governance-2016/>.

add to the country's credible deterrent factor against crimes-at-sea. This could be achieved by improving physical infrastructure of the country, most important of which are: (i) the information and communications technology (ICT) framework, and (ii) the port security measures. Further, the personnel aspect should also be well considered, as this will reinforce an enabling policy environment.

- **Maritime security governance could be best articulated within the economic development paradigm.** ..., combating crimes at sea is viewed as having direct impact on the government and businesses. The shadow economy created by revenues from overfishing, poaching, and other crimes at sea undermines the legitimate economy. This perspective has aided ... to reduce the gaps by targeting regional transnational crime logistics chains.
- Strengthening inter-agency coordination and information sharing in both official and unofficial mechanisms is necessary to improve maritime security governance. Aside from participation of different agencies in addressing interrelated issues, another key element in maritime security governance is the clear delineation of the agencies' functions. Inter-agency rivalry and unilateral actions should be eliminated and be replaced with joint efforts and strong support systems.

Maritime security, primarily from seajacking/hijacking and piracy/armed robbery persists to be a significant risk and threat to the maritime industry in the Philippines, as in other maritime nations. While total worldwide incidents of piracy and armed robbery against ships dropped from 191 in 2016 to 180 in 2017, these incidents increased in the country's national territorial waters from 10 in 2016 to 22 in 2017, with the latest foiled seajacking attempt taking place on 18 February 2018 off the coast of Basilan in the vicinity of Coco and Sibago islands, involving the Philippine-registered cargo ship MV Kudos.

Even in international waters, especially off the coast of Somalia which became the concentration of piracy attacks peaking up in 2010, Philippine-registered ships and even seafarers have been among those victimized. MARINA's role in addressing these problems will be more of providing technical support to the Philippine Navy (PN) and Philippine Coast Guard (PCG) through their Naval Fleet Modernization Programs, as well as close coordination with international and regional entities on anti-piracy, like International Maritime Bureau (IMB), European Union Naval Force (EU NAVFOR), and Anti-Piracy Task Forces of Malaysia and Indonesia.

Another important facet of the maritime security problem, which receives less attention until recently, is the security of the country's domestic ships and ports from terrorist and criminal threats. While the International Ship and Port Facility Security Code (ISPS Code) of the IMO has been implemented for ocean-going ships, domestic ships and ports have no such system of maritime security precautions to speak of, which makes this Program more urgent and useful.

## OBJECTIVES

With the formulation and full implementation of the NSPS Code as a major output, the Program outcomes will be increased level of ship crew's knowledge on maritime security requirements, measures, threats and risks; increased frequency of maritime security inspection; and reduced number of violations of security rules by shipping, fishing and maritime tourism by companies. The Program impacts will be reduced maritime incidents caused by criminality and terrorism, and cargo pilferage; and increased passengers' satisfaction on maritime security measures and standards in the country.

## SPATIAL CONTEXT

This Program will cover all domestic ships and ports operating throughout the country.

## PROGRAM COMPONENTS

The NSPS Code will require all domestic ships and ports to have their respective Vessel Security Plan (VSP) and Port Facility Security Plan (PFSP) based on an assessment of expected security threats in their nature and area of operation, with the Plans providing mechanisms, measures and responses to avoid and address such identified threats.

The key Program components will include:

- (i) Formulation of NSPS;
- (ii) Training on NSPS policy/regulations for both government and private stakeholders;
- (iii) Development and implementation of IEC plan;
- (iv) Implementation/enforcement of NSPS including VSP and PFSP;
- (v) Development and operation of RbME system including compliance monitoring;
- (vi) Development and implementation of emergency response mechanisms; and
- (vii) Establishment and operation of a database and M&E system.

## IMPLEMENTATION SCHEDULE

This Program will be implemented in 10 years (2019-2028), with the initial year devoted to setting up the necessary institutional arrangements (structures and processes) among government agencies involved in maritime security, including the formulation of NSPS, development of IEC plan and SRR protocols and training of key government and private sector stakeholders (see **Appendix 3**). The subsequent years of implementation will include enforcement of NSPS policy/regulations, conduct of emergency response activities, and establishment and operation of database and RbME system.

## IMPLEMENTATION ARRANGEMENTS

This Program will be implemented by MARINA according to the institutional arrangements described in **Appendix 2-7**.

### **PROGRAM COST**

This Program is estimated to cost PhP 82.5 Million for a 10-year implementation period.



## Program 8: Establishment of Maritime Innovation and Knowledge Center (MIKC)

### RATIONALE

Nurturing innovation in the maritime industry should be a priority for the Philippines as a maritime nation. The country is ranked as the 5<sup>th</sup> biggest in shipbuilding globally. In fact, shipbuilding and ship repair brought in about \$1.5 billion revenue to the economy in 2016.<sup>37</sup> This revenue could potentially increase with investments in state-of-the-art facilities that will enhance the productivity of shipyards and resources poured into research and development of green ships. The country is also the second highest supplier of qualified officers next to China and the biggest source of rated seafarers globally.<sup>38</sup> Sea-based overseas Filipino workers (OFWs) contributed up to 23% of the country's total remittances from 2010 to 2017. Their remittances had a growth rate of 3.8% annually making them a critical factor in boosting the country's Gross Domestic Product.<sup>39</sup>

However, Filipinos face stiffer competition in the international labor market with a growing number of highly qualified officers and rated seafarers supplied by China, India, and Eastern Europe (Ukraine, Croatia, and Latvia). The Bangko Sentral ng Pilipinas (BSP) concluded that this led to the decline in remittances among sea-based workers in 2016 and 2017.<sup>40,41</sup> The industry now demands highly educated maritime professionals who are not only technically competent in handling advanced information communication technologies (ICTs) but also possess leadership qualities and soft skills.

To remain as a regional powerhouse in shipbuilding and ensure that Filipino sea-based workers will thrive, the government must invest heavily in innovation and knowledge generation. Breakthroughs such as advanced robotics, new forms of automation, new energy sources, and mobile Internet, among others, are expected to increase productivity in the maritime industry.<sup>42</sup> Energy innovations would be needed to develop more efficient vessels. In the coming years, the public will demand the private and the public sector to establish more socially and environmentally responsible practices and to address the impact of climate change.

Given this scenario, a dedicated innovation program focused on the maritime industry is vital to spur growth and sustainable development in the country. Previous studies on innovation in the Philippines have already identified the government's role, which

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<sup>37</sup> MARINA (2018). Presentation on Philippine Shipbuilding and Ship Repair Sector (Project Proposals)

<sup>38</sup> Baltic and International Maritime Council and International Chamber of Shipping (2016) "Manpower Report." <https://www.bimco.org/products/publications/other-manuals/manpower-report-2015>

<sup>39</sup> Bangko Sentral ng Pilipinas (2018). Overseas Filipinos cash remittance by country, by source. <http://www.bsp.gov.ph/statistics/keystat/ofw2.htm>

<sup>40</sup> Lopez, M (2016). September cash remittances highest for the year, so far; but growth slows. <http://www.bworldonline.com/content.php?section=TopStory&title=september-cash-remittances-highest-for-the-year-so-far-but-growth-slows&id=136447>

<sup>41</sup> Marquez, M. C. (2017) BSP: January Personal Remittances Up, Sea-based Remittance Down. <http://www.ibtimes.ph/bsp-remittances-overseas-filipinos-sea-based-remittances-land-based-remittances-6763>

<sup>42</sup> MESA FP7 (2016) Global Trends Driving Marine Innovation. <https://www.waterborne.eu/media/20004/global-trends-driving-maritime-innovation-brochure-august-2016.pdf>

are: (i) to provide meaningful and impactful support to innovators; (ii) invest in the required technology, research infrastructure, and research and development (R&D) researchers; (iii) carry out appropriate reforms in education, the investment climate, and trade; and (iv) remove barriers and bottlenecks to innovative initiatives in regulatory frameworks.<sup>43</sup>

In the next 10 years, the proposed Maritime Innovation and Knowledge Center will respond to this challenge by:

- (i) Strengthening public-private collaboration particularly with the academe and MSMEs through
  - engagement of youth in science, technology, and innovation (STI) for the maritime industry;
  - establishing smart partnership with MSMEs through dialogue and nurturing knowledge creation and STI applications to raise competitiveness; and
- (ii) Public awareness on the value of STI to the maritime industry and raising the profile of the locally and internationally
- (iii) Development of the knowledge base of the maritime industry in collaboration with other agencies and organizations.

## OBJECTIVES

The main impact of the Program will be improved capacity of MARINA and other partners to innovate and operate modern technologies, and apply or implement best practices in shipping, fishing, maritime tourism, CIWT system, SBSR/ship management, and other ancillary businesses. This impact will be measure by the increased clients'/stakeholders' satisfaction on maritime industry policies, programs and services; and positive feedback and sound suggestions on maritime administration received from clients/ stakeholders. The Program outcomes will be increased number of data searches on government websites related to maritime sector; enhanced and integrated database; developed and applied improved and new products, services and processes associated with this MIDP; and forged and strengthened partnership with local, regional and international stakeholders.

## SPATIAL CONTEXT

This Program will be implemented nationwide, covering MARINA's Central and Regional Offices and involving all local and international stakeholders.

## PROGRAM COMPONENTS

The project will include four components, namely:

- A. Promotion of the maritime industry
  - 1. **Public awareness initiatives** - communication campaigns; strengthened social media presence; regular press briefings (through TV and Facebook Live); more news stories and feature articles; videos; outreach to regional and international media partners

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<sup>43</sup> <https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps1728.pdf>

2. **Knowledge sharing and learning activities** - public fora with stakeholders including state universities, colleges, Maritime Higher Education Institutions;
  3. **External knowledge partnerships** - engaging the media, academe, maritime associations and organizations and private sector through recognizing maritime innovations (specifically in the design, construction, and repair of green ships, drone ships, etc.) and best practices.
- B. Development of knowledge products and technology solutions
1. **Deployment of enabling technologies** (hardware and software) to establish the MARINA Knowledge & Information Technology Center and to help and collect and connect knowledge within the maritime industry
  2. **Development of integrated databases** (developmental databases and application-based systems) to build internal knowledge partnerships and support the information needs of MARINA's seven technical working groups, maritime associations and organizations
  3. Integration with the **Global Integrated Shipping Information System (GISIS)**
  4. Development of knowledge products
  5. Establishment of the MARINA Library (online and physical space)
- C. Strengthening the innovation capacity of partners
1. Capacity building of MARINA staff and key stakeholders in knowledge management, information management, and communication
  2. Competence training for our seafarers to continuously achieve global competitiveness.
- D. Program monitoring and evaluation

## IMPLEMENTATION SCHEDULE

This Program is designed for 10 years (see **Appendix 3**).

## IMPLEMENTATION ARRANGEMENTS

MARINA will take the lead role in implementing the Program. Other national concerned government agencies and local government units (LGUs), maritime organizations/ associations, private sector, academe and media will serve as cooperating Program partners. The Program's implementation arrangements are summarized in **Appendix 2-8**.

## PROGRAM COST

The Program is estimated to cost PhP 599.31 million pesos for a 10-year period of implementation.



## D. Enabling Policy and Institutional Environments

The MIDP's priority programs concentrate on the critical factors for success in strengthening the competitiveness of the country's maritime industry, such as, the efficiency of shipping, fishing and cruising operations, as well as shipbuilding, ship repair and related maritime business services; the safety and security of cargoes, passengers and ships at sea; the development and promotion of a global standard maritime hub (to pull together inter-connected maritime companies, specialized input and service providers and suppliers, companies in related industries, and learning and research institutions to encourage both competition and cooperation) in one strategic area; and the establishment of demand-driven incentive and financing schemes for different companies in the maritime industry.

Another critical factor that affects the competitive advantage of these companies is the role of the government, particularly through policies and institutional arrangements which are favorable to maritime investment, innovation and learning. In the policy aspect, the MIDP will require a more aggressive but targeted use of regulation and taxation to support the competitive advantage of key companies (i.e., ship / shipyard ownership and operation, maritime business services, and learning and research institutions) in the industry. In the institutional aspect, the internal restructuring of MARINA's organizational set-up, and the establishment of an inter-agency policy and implementation coordinating committee with senior level official representations are necessary requirements to ensure the success and sustainability of the MIDP implementation.

### 1. Policy Thrusts

In the first four years of the MIDP implementation, MARINA will work in partnership with key stakeholders in the government, private sector and civil society to put necessary enabling policies in place to ensure that the desired results (impacts, outcomes and outputs) of the aforementioned priority programs are achieved as planned. The specific implementation plan and schedule of each program will provide reasonable amount of resources and time for the review, enhancement and harmonization of existing laws and policy instruments, as well as the development of new ones, to catch up or comply with international maritime standards, which are critical for strengthening of the competitiveness of the country's maritime industry.

Based on the review of existing maritime laws and policies, the MIDP identifies the following key policy areas to be pursued at the national and international levels in order to improve and maintain the competitiveness of the maritime industry:

#### National Level

- Recommend for extension of legal provisions on value-added tax (VAT) and related tax exemptions targeted at supporting the shipping, shipbuilding, ship breaking, and ship repair owners/operators, and prospective investors on these businesses as well as on development of new CIWT system, to promote the modernization of domestic maritime fleet (cargo, passenger and fishing vessels)

and retirement/phasing out of obsolescent and uneconomic vessels, and increase the private sector investments in the industry, respectively.

- Work for reduction of compliance costs of regulation and taxation which affect the maritime industry in new and existing laws and related instruments (administrative orders, memorandum circulars, etc.).
- Further work for “ease of doing business” in the maritime industry through reduction and simplification of documentation requirements, establishment of online business applications, and overall reduction in processing costs and time.
- Work for integrated incentive and financing schemes for existing shipping, fishing, cruise ship, shipbuilding, ship breaking and ship repair owners/operators; and new shipbuilding, CIWT boat, yachting, diving and other recreational activities’ owners/ operators, with emphasis on shipyards pursuing to build high value-added ships, such as; cruise ships, “green ships” and offshore vessels with modern technologies; and special consideration on small and medium enterprises for opportunities to invest and prosper in the maritime industry through the establishment of maritime transport cooperatives.
- Aggressively promote the maritime industry to the public as a whole, and the high school students in particular, to improve its appeal as a good career option, and to increase supply of land- and sea-based maritime professionals (especially officers) in various fields of the industry in the long term through the Free College Education Program in State Universities and Colleges, and development of scholarships for higher degrees (masteral and doctoral programs) offering maritime related courses in the same institutions.
- Strengthen national research and development capacity for innovation and learning to continuously upgrade efficiency and safety of ship designs and operations, and support the construction of high valued-added ships.
- Further strengthen the communication and collaboration between the government, private sector (all maritime industry members including intermediary institutions) and civil society for effective participatory governance of the maritime industry and the marine environment, including the development and implementation of public laws and self-governing regulations for the industry as a whole; and for reciprocal sharing of knowledge and information on both the demand and supply side of the maritime industry.

#### International Level

- Work initially for ratification of the 27 IMO conventions, as listed in **Appendix 4**, to ensure that the country’s maritime industry standards are at par with international best practices and standards, and that the relevant legislations are passed by Congress for all industry members to become more competitive in their operations.
- Undertake a comprehensive review of existing international conventions, regional and bilateral agreements, and other commitments entered into by the

government affecting the maritime sector, as presented in **Appendix 4**, to ensure that those agreements and commitments will contribute to and facilitate the achievement of the MIDP's primary goal and objectives.

- Strengthen the government's participation in regional and international conferences, seminars and related gatherings to acquire better innovative ideas and technologies for the continued policy, institutional, management and technical improvement for the maritime industry; and to promote the Philippines' international maritime hub for shipbuilding, ship breaking and ship repair/maintenance, ship crew training, and ancillary maritime business.

## 2. Internal Organizational Restructuring

Presently, MARINA is structured according to the four conventional classification of the maritime sub-sectors, such as; domestic shipping, overseas shipping, shipbuilding and ship repair, and maritime manpower in accordance with PD 474 of 1974. As noted earlier, the functional mandates of MARINA have expanded over the past 44 years in response to the changing developments and expanding challenges of the maritime sector, both at the national and international levels. Yet, the organizational structure of MARINA remains at its original plan with very minor readjustments in the names and functions of divisions across or within the existing offices/services of MARINA.

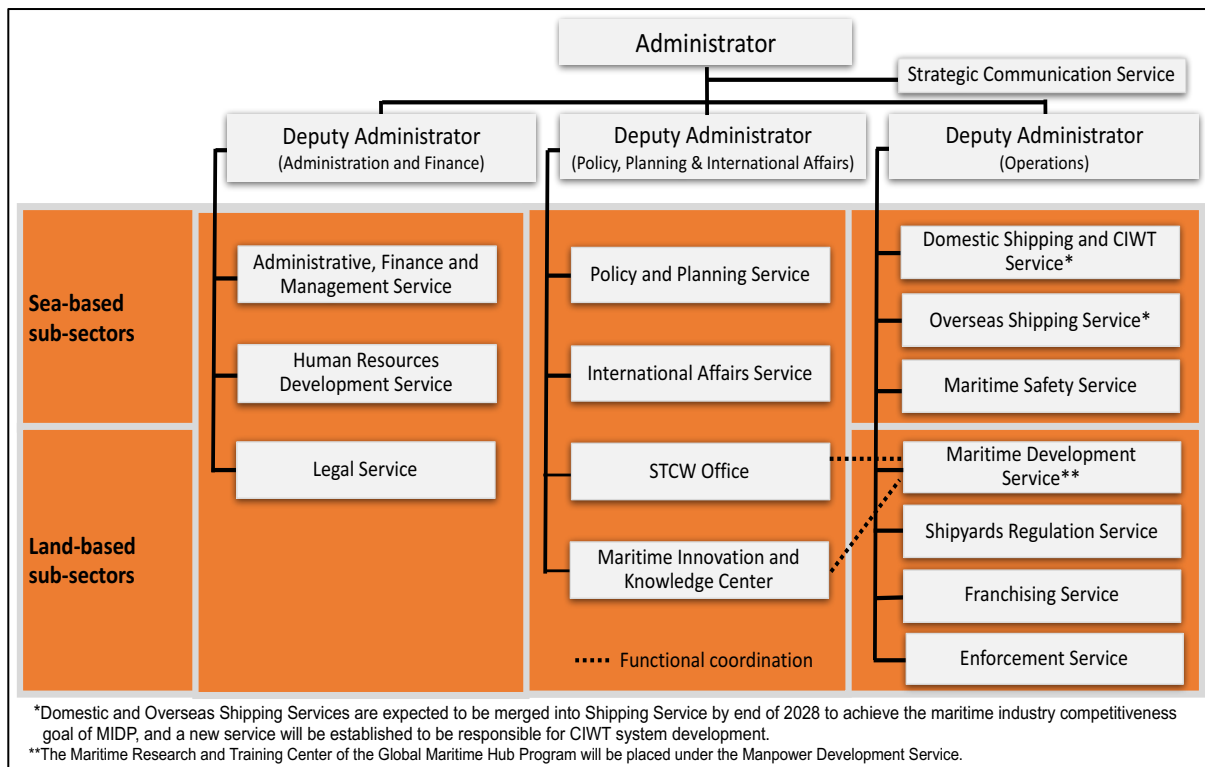
With the new and emerging activities and organizations in the maritime industry (i.e., maritime tourism, offshore oil exploration and marine energy production as highlighted in Section 1), and the global concerns for efficiency, safety and security of the shipping fleet as a whole to maintain their competitiveness in the transport sector, it is imperative for MARINA to restructure its organizational set-up as a first step to upgrading its internal organizational capacity to effectively address the challenges and, simultaneously, seize the opportunities facing the maritime sector and its industry in the next ten years and thereafter.

**Figure 11** presents the proposed new MARINA organizational structure, which reflects the expanded functional mandates of the agency under the existing laws, broadens the perspective in the maritime administration, and captures the new and emerging economic activities in the maritime sector. This proposal calls for the following changes in the current structure:

- Strengthening the internal organizational capacity of MARINA in terms of improved administrative and financial management services, better legal services, and more committed and trained personnel; and upgraded quality of training, and R&D programs which are consistent with STCW convention requirements, and responsive to the maritime industry's priority needs. This requires the establishment of a new "Office of the Deputy Administrator for Administration and Finance" to work on improvement of existing processes for a more streamlined administrative and financial management system in support of effective and efficient MIDP implementation. This office will also exercise administrative and oversight functions over the proposed establishment of the Maritime Training and Research Center (MTRC) (**Priority Program 5**) to provide better delivery of quality training services for maritime professionals in partnership with existing training centers.

- Putting together information and activities related to maritime policy, planning and international affairs into one office through expansion of the mandate of the present “Office of the Deputy Administration for Planning” and renaming this into the “Office of the Deputy Administrator for Policy, Planning and International Affairs” for more relevant and effective policies, plans and programs. This office will be responsible for the expanded mandates of MARINA under the STCW convention, the other present and future international commitments of the Philippines Government, and the proposed setting up of the MIKC (**Priority Program 8**).
- Strengthening the “Office of the Deputy Administration for Operations” to respond to the new and emerging activities of the maritime industry members; and align the developmental, regulatory and technical services of MARINA with the needs of the industry members in both the sea- and land-based maritime sub-sectors. This office will assume responsibility for the development and implementation of improved and integrated efficiency and safety standards and regulations for the shipping, fishing, CIWT and maritime tourism operations, in collaboration and partnership with, or in support of, other NGAs, LGUs, private sector and civil society. Two new services (Fishing Efficiency and Safety Regulation Service, and Maritime Tourism Efficiency and Safety Regulation Service) are proposed to be set up under this office to ensure the efficiency and safety of all maritime vessels in the country in support of MIDP implementation, particularly **Priority Programs 1, 2, 3, 4, and 6**.
- Setting up a new “Strategic Communication Service” (SCS) under the Office of the Administrator to ensure that existing maritime related policies, plans and programs, (especially all MIDP activities), including the industry performance are regularly disseminated to the public; that citizens’ feedback on the MIDP implementation is acted or responded on time; and that all key stakeholders are consulted and involved in development of future policies, plans and programs. The head of this office will also serve as the official Spokesperson of MARINA to provide timely advisory and/or information on preventive maritime safety measures during emergency situations.

**Figure 11: Proposed New MARINA Organizational Structure**



Under this proposed new MARINA structure, a culture of integrated approach to maritime industry development will be instituted and practiced throughout the organization at all levels, which is a departure from the traditional sector-based planning, programming and budgeting process. This new structure will also pave the way for development of realistic demand estimates from the sea-based maritime sub-sectors as input for planning of the target supply estimates of the industry members in the land-based maritime sub-sectors, which is a critical element for accurate, efficient and responsive development plan in the near future.

The services under the Office of the Deputy Administrator for Operations will work together to link the industry members from both the sea- and land-based maritime sub-sectors to deliver more competitive products and services. The other services under the Office of the Deputy Administrator for Administration and Finance, and the Office of the Deputy Administrator for Policy, Planning and International Affairs will provide the critical support for the competency and information requirements of the maritime industry members for continued learning and innovation.

**E. Implementation Arrangements**

The overall implementation of the MIDP will involve key stakeholders from the government, private sector and civil society; and be governed by the following institutional arrangements:

### (1) MIDP National Policy and Implementation Coordination Council (MNPICC)

An inter-agency National Policy and Implementation Coordination Council for MIDP (MNPICC) will be established through an Executive Order to be issued by the Office of the President (OP) in accordance with PD 474 of 1974, as presented in **Figure 12**, to perform the following functions:

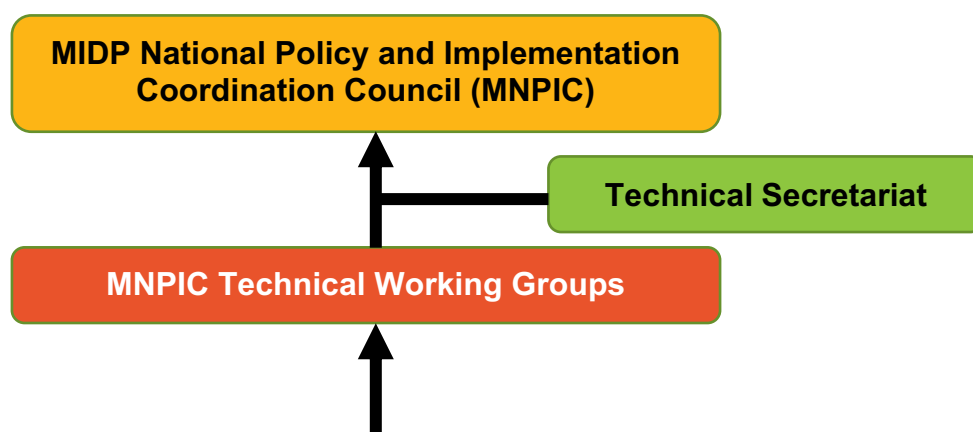
- (i) review, recommend and/or approve, and monitor the MIDP related policies and programs;
- (ii) ensure effective coordination and harmonization of national government policies and programs;
- (iii) provide policy and implementation guidance to all the lead implementing agencies for the priority programs and the key components thereof; and
- (iv) promote and protect the national interest in adhering to regional and international commitments related to maritime industry development.

The MNPICC will meet at least twice a year to provide effective guidance and support to the MIDP implementation, and render an annual progress and performance report, or other required special report, for submission to the Philippine President and Congress.

The MNPICC will be composed of the following government agencies and other key stakeholders:

Chair:	DOTr Secretary
Co-Chair:	NEDA Director-General
Members:	
	DA Secretary
	DENR Secretary
	DBM Secretary
	DFA Secretary
	DICT Secretary
	DILG Secretary
	DND Secretary
	DOF Secretary
	DOLE Secretary
	DOST Secretary
	DOT Secretary
	DTI Secretary
	CHED Commissioner
	TESDA Director-General
	MARINA Administrator
	PCG Commandant
	PPA Administrator
	OTC
	OTS
	Three maritime industry representatives
	Two academic and training institution representatives
	Two civil society representatives

Figure 12: Proposed MIDP Organizational Structure



Program 1	Program 2	Program 3	Program 4
<b>Lead:</b> MARINA, PPA, other port authorities, DOF, BOI, DPWH	<b>Lead:</b> MARINA, PPA, other port authorities, DOT, LGUs	<b>Lead:</b> MARINA, PCG, DENR, LGUs, and private sector	<b>Lead:</b> MARINA
<b>Key Partners:</b> PCG, PPA, other port authorities, OTC, DOF, DOST, CDA, UP, LGUs, MHEIs, training centers, private sectors, etc	<b>Key Partners:</b> PCG, PPA, DOT, DPWH, BI, BOC, BOQ, PAGCOR, TIEZA, BOI, DENR, financing institutions, private sector	<b>Key Partners:</b> PCG, PPA, DPWH, NAMRIA, BOI, DOF, DBP, LBP, LGUs, private sector	<b>Key Partners:</b> BFAR, DFA, PCG, LGUs, fishing operators and associations
Program 5	Program 6	Program 7	Program 8
<b>Lead:</b> MARINA	<b>Lead:</b> MARINA, PCG, PPA	<b>Lead:</b> MARINA, PCG, PPA, OTS, PN, PNPMG, SBSR and shipping companies, recognised security orgs	<b>Lead:</b> MARINA
<b>Key Partners:</b> OP, Congress, DOTR, DFA, DBM, DOF, DOES, PCG, PPA, other port Authorities, DTI/BOI, DENR, CHED, SBMA, DBP, DOST, LBP, LGUs, MHEIs, training centers, private sector	<b>Key Partners:</b> DFA, DENR/EMB, other port authorities, OTC, OTS, BFAR, PN, PNPMG, ICCRIMC members, LGUs, MHEIs, training institutions, private sector	<b>Key Partners:</b> BFAR, NCWC, PIA, PTV 4, CDRMMC, OCD, BFAR, LGUs, and other trimedia outlets, private sector	<b>Key Partners:</b> PCG, PPA, CPA, DOST, PSA, SBMPA, media, private sector, MHEIs, training institutions



Representatives from the maritime industry, academic and training institutions and civil society will be appointed by the President of the Philippines. The MARINA Administrator will serve as the Secretary of the MNPICC, and head the Technical Secretariat to be composed of three MARINA's regular personnel from the agency's Planning and Policy Service (PPS), Strategic Communications Services (SCS) and STCW Office. The Technical Secretariat will prepare and render regular meeting agenda and proceedings the MNPICC members.

MNPICC will work closely with MARINA Board for consistency and effectiveness of policy and operational guidance in relation to the MIDP implementation.

## **(2) MNPICC Technical Working Group (MNPICC-TWG)**

As the MNPICC Chair, the DOTr Secretary will form an IA-TWG to:

- (i) review and record evidence, draft policy and implementation guidelines, and provide recommendations for best approaches;
- (ii) prepare progress and performance reports for review and information of the MNPICC; and
- (iii) perform other functions as may be assigned by the MNPICC. The MNPICC-TWG will meet every quarter, or as frequent as necessary, to discuss and resolve implementation issues in a prompt manner for the effective and efficient implementation of MIDP's priority programs.

The MNPICC-TWG will be composed of the following government agencies:

Chair: MARINA Administrator  
Co-Chairs: PCG Commandant and PPA Administrator  
Members:  
BFAR Director  
PFDA Administrator  
EMB Director  
NAMRIA Administrator  
POEA Administrator  
OWWA Administrator  
BLE Director  
BOC Commissioner  
MFDO Executive Director  
BWC Director  
PCIEERD Executive Director  
DOT  
BOI Managing Head  
OCD-NDRRMC Executive Director  
PNPMG Director  
PN Commodore  
OTC Director  
OTS Director

The MNPICC-TWG will be supported by a Technical Secretariat to be headed by the PPS Director of MARINA and composed of three PPS personnel. This Technical Secretariat will coordinate and work with the MNPICC Technical Secretariat to ensure

consistent and timely development and implementation of policies and guidelines for the guidance of all the lead and cooperating/partner agencies and organizations which will be involved in MIDP implementation; and preparation of integrated progress and performance reports for submission to the OP and Congress, and dissemination to other key stakeholders and the general public.

### **(3) MIDP National Coordinating Office (MIDP-NCO)**

As the lead implementing agency, MARINA will establish, operate and maintain an MIDP National Coordinating Office (MIDP-NCO) to be lodged at the PPS with the PPS Director acting as the MIDP-NCO Executive Officer on a concurrent capacity, and reporting to the MARINA Administrator and the MNPICC-TWG Chair. This MIDP-NCO will be responsible for the:

- (i) overall coordination and synchronization of MIDP implementation;
- (ii) regular monitoring and periodic performance evaluation of priority programs; and
- (iii) preparation, packaging, and dissemination of integrated progress and performance reports with various lead and cooperating/partner agencies/organizations in support of the MNPICC and TWG Technical Secretariats, among others.

The MIDP-NCO will also coordinate and facilitate the engagement of consultants, if and when necessary, for the different priority programs to ensure that in-house capacity of the lead and cooperating/partner agencies/organizations is developed/strengthened over the MIDP implementation period for the sustainability of program operations and benefits. At the MIDP-NCO, the support staff will consist of three (3) professional planners, two (2) economists, two (2) marine engineers, and two (2) administrative officers, who will all undergo an intensive training on program management and implementation including RbME at the initial year of the MIDP implementation, to effectively discharge the functions of the MIDP-NCO.

## **F. Implementation Schedule**

The MIDP implementation will cover a ten-year period from 2019 to 2028. **Appendix 3** shows the schedule for each of the eight priority programs, which will utilize the initial years of implementation for the establishment of institutional mechanisms; review and refinement of existing key laws and policies, and/or development of new instruments; development and conduct of communication activities for the public; design and conduct training for trainers from the government and targeted maritime industry members; setting up of database system; the conduct of feasibility studies and detailed engineering designs; and development of efficient and safe ship, boat, yacht and fishing vessel designs, including the development of inland waterways for the priority CIWT systems.

Infrastructure development for Priority Programs 1, 3, 5 and 8 is scheduled to start with procurement on the second year of implementation, and construction on the third year. Improvement and expansion of existing ports infrastructure/facilities, including connecting roads; upgrading of local shipyards; and development of inland waterways and new shipping routes, among others, are planned to be completed within the first

five years of implementation. Current effort on the development of new ports infrastructure/facilities will continue with the anticipated intensive implementation from the sixth year to support the new domestic shipping routes and the growing maritime tourism activities.

As the two banner programs of this MIDP, Priority Programs 3 and 5 are expected to fully operationalize the first CIWT system, and the production of new ships, boats and yachts, respectively, starting on the third and fourth year of MIDP implementation.

All the schedules for the priority programs, as presented in **Appendix 3**, will be finalized at the initial year of the MIDP implementation by the lead implementing government agencies together with the partner agencies and other key stakeholders.

## **G. Communication Plan**

The Communication Plan is a document that guides the implementation and evaluation of communication activities for the MIDP. It is firmly anchored on the MIDP's management objectives and its overall aim is not just to raise awareness but to build the stakeholders' long-term commitment. This is important since the MIDP is a massive, complex, and long-term undertaking which needs a high level of communication support especially from lead agencies.

For example, innovative programs such as the Development of a Global Maritime Hub (Program 5) and the Development of Coastal and Inland Waterways Transport (CIWT) System (Program 3) have a strong media appeal and would need guidance in conducting media outreach and marketing. Other programs such as the Upgrading of Domestic Shipping in Support of the Philippine Nautical Highway Development (Program 1) require a high level of community participation to get the buy-in of the owners of motorbanca/motorboats and wooden-hulled ships and their families. On the other hand, programs like the Maritime Security Modernization have the potential to be highly controversial since they deal with issues such as seajacking/hijacking and piracy/armed robbery and may involve other countries. The communication plan would need to identify potential communication risks and suggest ways to mitigate them.

The proposed strategies were based on the results of the communication needs assessment conducted in July 2018 as well as the series of the MIDP workshops. They are designed to help implementers listen to feedback, respond to problems, and encourage dialogue and participation among stakeholders. Since the communication plan is a guide, it is an evolving document that needs to be refined and updated by lead agencies so that it can effectively address emerging needs, opportunities, and unique challenges presented by each program.

### **Objectives**

The MIDP communication plan has three objectives, namely:

1. Increased stakeholder awareness about the benefits, the roles and responsibilities, and the support system for the MIDP;
2. Strengthened capacity of lead agencies to share the outputs and outcomes of the MIDP to the industry; and

3. Increased level of participation among key stakeholders in implementing and evaluating the MIDP.

The communication plan will adhere to the following principles to achieve its objectives:

1. **Two-way communication** – The plan seeks to actively engage government, private sector, academe, and civil society in the whole process – from designing and implementing to evaluating communication activities. The strategies indicated here will not be limited to informing key audiences or persuading them to shift their attitude or behavior about the MIDP. It will recommend a dialogic process that will help stakeholders analyze their situation, define priorities that will lead to change, and develop solutions together. This will help ensure mutual understanding and empower them as they contribute in transforming the maritime industry.
2. **Interdisciplinary approach** – The strategies included in the communication plan will embrace principles from other related disciplines such as sociology, adult education, and marketing, etc. Effective communication requires a broad understanding of methods that will help implementers analyze the context of their audience.

## Outcomes

The MIDP communication plan aims to achieve two major outcomes:

1. Stakeholders who are highly knowledgeable about MIDP's benefits to their group and to the industry and
2. High degree of ownership of MIDP which will be evidenced by broad-based participation in implementing the program.

## Overall Approach

The communication plan will follow a phased approach. **Phase 1** (macro level) will focus on developing the capacity of lead agencies and key partners starting with MARINA and building strong partnerships so they will be equipped with the skills and knowledge to engage other stakeholders. **Phase 2** (micro level) will concentrate on intensive cascading to local partners and their respective constituencies and reaching out to the public. **Table 1** shows the Communication Strategy Matrix for the MIDP.

**Table 1: Communication Strategy Matrix<sup>1</sup>****MANAGEMENT OBJECTIVE**

The long-term goal of MIDP is to accelerate the achievement of nationally-integrated and globally-competitive maritime industry by developing and sustaining an organizational culture and practice of leading maritime education, innovation, technology and sustainability. Specifically, communication initiatives should strengthen inter-agency and multi-sectoral collaboration and public participation in MIDP implementation.

STRATEGIC ELEMENTS						WORKPLAN			EVALUATION
Communication Objective	Key Communication Risks	Audience	Current Behavior / Desired Change	Message / Information Needs	Channel / Activity	Time	In-charge	Resources Needed	Expected Outcomes
Increased stakeholder awareness about the benefits and support system for MIDP and acceptance of roles and responsibilities	<p><b>External:</b> Negative feedback and complaints would delay approval and implementation</p> <p>Overlapping or conflicting programs / agenda of other agencies would confuse audience</p>	Lead agencies	low awareness of MIDP / high awareness of MIDP	Complete and updated information about each program particularly baseline data, targets, and budget	<p><b>Face-to-Face:</b></p> <ul style="list-style-type: none"> <li>Intensive MIDP orientation / training of trainers for MARINA Central Office and regional offices</li> <li>Inter-agency meetings and workshops to harmonize , coordinate , and evaluate</li> </ul>	Q1-Q3 of Year 1	MARINA	<p>Consulting services for the MIDP briefing materials (presentation deck, primer, program brochure)</p> <p>Consulting services for survey and focus group discussions</p> <p>Photography and printing services</p> <p>Workshop / meeting costs</p>	Stakeholders have acquired the basic knowledge about MIDP and developed a positive attitude toward their group's role in achieving the plan as measured by annual survey and focus group discussions

STRATEGIC ELEMENTS						WORKPLAN			EVALUATION
Communication Objective	Key Communication Risks	Audience	Current Behavior / Desired Change	Message / Information Needs	Channel / Activity	Time	In-charge	Resources Needed	Expected Outcomes
	Poor connectivity, difficulty in reaching remote areas, and the lack of readily available and high-quality communication materials about the programs would slow down knowledge sharing	Key partners Private Sector Media – International and national outlets relevant to shipping Academe – MHEIs and training centers		Easy to understand information on the rationale, benefits of each program, roles and responsibilities	<b>Face-to-Face:</b> <ul style="list-style-type: none"> <li>Dialogue with maritime associations, academe, private sector per program</li> <li>Usapang STCW</li> <li>Media relations, press tours, etc.</li> </ul> <b>Digital:</b> <ul style="list-style-type: none"> <li>Video on MIDP Accomplishments</li> <li>Annual Report with section on MIDP</li> <li>News updates via website</li> </ul>	Quarterly  Monthly  Annual  Annual  Per activity	MARINA	Consulting services for the development of MIDP Press kit <sup>2</sup>  Publishing, video, and printing services  MIDP microsite or new web pages dedicated to MIDP  Resources for Press tours, in-house media monitoring or media monitoring service	Positive and media coverage for MIDP as evidenced by results from media monitoring <sup>3</sup>

STRATEGIC ELEMENTS						WORKPLAN			EVALUATION
Communication Objective	Key Communication Risks	Audience	Current Behavior / Desired Change	Message / Information Needs	Channel / Activity	Time	In-charge	Resources Needed	Expected Outcomes
		Academe – SUCs and K10-12  Media – community-based, other local international media outlets  Community-based associations  Families of seafarers  Fishing communities	low awareness of MIDP / high awareness of MIDP	Clear information on the rationale, benefits, and opportunities offered by each program	<b>Face-to-Face:</b> Special events e.g., national / regional launch  Information caravan per region  Program presentations during relevant national celebrations – e.g. Maritime Week, Fish Conservation Week, National Science and Technology Week, National Tourism Week, Climate Change Consciousness	As needed  Bi monthly on Year 2-3  Annual	MARINA Regional offices	Consulting services for communication campaign, events management,  Resources for special events, local and international presentations, media relations  Printing, publishing, video, photography services	



STRATEGIC ELEMENTS						WORKPLAN			EVALUATION
Communication Objective	Key Communication Risks	Audience	Current Behavior / Desired Change	Message / Information Needs	Channel / Activity	Time	In-charge	Resources Needed	Expected Outcomes
					Participation in relevant local and international expos, congress, conferences  Mass media coverage  Communication campaign, social media campaign	Per activity  Year 2			
Strengthened capacity of lead agencies to share the outputs and outcomes of the MIDP to the industry	<b>Internal:</b> <ul style="list-style-type: none"> <li>Knowledge silos among agencies would hamper data sharing</li> <li>Time needed to organize and develop MIDP champions up to the</li> </ul>	Lead agencies	Low willingness to share information / openness to share knowledge among sectors and agencies	Basic KM concepts, principles, core activities Knowledge sharing strategies appropriate to each MIDP program	Face-to-face workshops on: Knowledge management <sup>4</sup> Knowledge sharing tools and strategies Knowledge products development  Development of modules for inclusion in online library	Quarterly		Consulting services needed for resource persons, workshop documentation  Workshop costs (venue, materials, travel, accommodation)	Key decision-makers from lead agencies are committed to share knowledge and promote a learning culture as evidenced by development of incentives for knowledge sharing  MIDP champions equipped with
		MARINA	Poor ability to work with media /	How to build relationship / partnership	Face-to-face workshops on:	Quarterly	MARINA		

STRATEGIC ELEMENTS						WORKPLAN			EVALUATION
Communication Objective	Key Communication Risks	Audience	Current Behavior / Desired Change	Message / Information Needs	Channel / Activity	Time	In-charge	Resources Needed	Expected Outcomes
	<p>local level might take longer than planned causing delays</p> <ul style="list-style-type: none"> <li>Limited number of trained organic staff to do the training can cause it to be de-prioritized or be poorly conducted</li> <li>Additional staff that need to be hired and technology that needs to be procured might not catch up with the demand</li> </ul>		Spokespersons can clearly and accurately communicate messages, objectives, and goals to various audiences specifically to media	<p>with the media, pitch stories, harness social media</p> <p>Principles in effective communication and presentation</p>	<p>Basic public relations, media management</p> <p>Effective communication</p> <p>Presentation skills</p> <p>Writing for social media</p> <p>Crisis communication</p> <p>Development of modules for inclusion in online library</p>				<p>basic communication skills to effectively share MDP to program constituents as evidenced by increased audience / client satisfaction survey/score sheets</p>

STRATEGIC ELEMENTS						WORKPLAN			EVALUATION
Communication Objective	Key Communication Risks	Audience	Current Behavior / Desired Change	Message / Information Needs	Channel / Activity	Time	In-charge	Resources Needed	Expected Outcomes
Increased level of participation among key stakeholders in implementing and evaluating the MIDP	<b>External</b> <ul style="list-style-type: none"> <li>Change in heads of agencies and LGUs due to elections might decrease support to some programs</li> <li>Remote communities would be harder and more expensive to mobilize and monitor</li> </ul>	Key partners	Increase in stakeholder attendance and improved quality of participation during activities (stakeholders suggest solutions to problems, improvements in program design implementation)	Key issues per program  Learning, good practices, and accomplishments for sharing	Regular dialogue with coordinating bodies in charge of each program  Usapang STCW  Evaluation workshops  MIDP learning/knowledge sharing events	Monthly  Annual  Twice a year		Meeting costs	Develop ownership of MIDP as evidenced by the development of complementary activities to support MIDP
		Local constituents  Netizens	Active feedback from stakeholders	Latest information about the progress, accomplishments of each program  Standard responses for FAQs  Communication protocols in	Systematic harvesting of client feedback through social media, survey embedded in website, email, phone, SMS, mass media (e.g. phone-in questions via radio)  Development of FAQs for	Daily / Consolidated monthly		Resources to hire dedicated staff to monitor and respond to queries and to prepare reports	

STRATEGIC ELEMENTS						WORKPLAN			EVALUATION
Communication Objective	Key Communication Risks	Audience	Current Behavior / Desired Change	Message / Information Needs	Channel / Activity	Time	In-charge	Resources Needed	Expected Outcomes
				responding to MIDP queries	posting on the website	Updated quarterly			

**Note:**

<sup>1</sup>Each TWG can further refine the communication plan based on their program's unique needs and challenges.

<sup>2</sup>**Press Kit** - The goal of a press kit is to provide background information that can help reporters develop their stories. Press kits should contain up to ten documents, including one or two press releases, a fact sheet, and biographies of spokespersons or featured speakers, among other pieces. Among the recommended components of a press kit are the following: backgrounder/overview, fact sheet, media advisory, press release, feature/human interest story, highlights of upcoming events, biographies of spokespersons, photos, quotable quotes, speeches, letters of community support.<sup>44</sup>

<sup>3</sup>**Media monitoring** - the process of reading, watching or listening to the editorial content of media sources on a continuing basis, and then, identifying, saving and analyzing content that contains specific keywords or topics. It helps organizations track the success of their news releases, manage corporate or brand reputation, gather industry intelligence, better understand the strengths and weaknesses of corporate communications, etc. It can be done in-house using Excel spreadsheets to calculate how many media impressions were garnered and analyzing which media outlets gave the organizations the most effective media impressions. It may also be outsourced to a media monitoring service.<sup>45</sup>

<sup>4</sup>**Knowledge management** - The explicit and systematic management of processes enabling vital individual and collective knowledge re- sources to be identified, created, stored, shared, and used for benefit. Its practical expression is the fusion of information management and organizational learning.

44 Centre for Disease Control and Prevention. (N.d.) Media Outreach Guide: A primer on using the media to raise awareness about preventing child injury by protecting the ones you love. Retrieved from [https://www.cdc.gov/SafeChild/images/SafeChild\\_MEDIA%20GUIDE-a.pdf](https://www.cdc.gov/SafeChild/images/SafeChild_MEDIA%20GUIDE-a.pdf)

45 Comcowich W. (2010) Media Monitoring: The Complete Guide. Retrieved from [http://www.cyberalert.com/downloads/media\\_monitoring\\_whitepaper.pdf](http://www.cyberalert.com/downloads/media_monitoring_whitepaper.pdf)

## H. Results-based Monitoring and Evaluation (RbME) System

The MIDP will build on the results frameworks of the priority programs to establish an overall RbME system as a management tool for measuring and assessing the progress and performance of these programs at the individual and collective levels. This RbME system will focus attention on assessing how outputs and outcomes are achieved over time, and to what extent they are likely to reach desired impacts. Regular monitoring of programs using the respective results indicators will: (i) provide timely information to managers and staff as a means of identifying and taking actions to address implementation issues and weaknesses; (ii) promote program credibility and public confidence by reporting results of individual programs; and (iii) facilitate formulation and justification of annual budget requests for the sustainability of program implementation by providing credible and timely progress and performance reports.

The RbME system compiles a set of results indicators from the priority programs to be used to monitor not only their individual performances but also their collective outcomes in order to assess the different aspects of maritime industry competitiveness (**Table 2**). In other words, the indicators will measure either the performance of the maritime industry as a whole or a particular aspect of competitiveness of the industry. Considering that this is the first opportunity for the maritime industry to adopt an RbME system, and recognizing the dearth of quality time series data on this industry, MIDP selects key indicators where information is readily available and regularly updated, or is collectible using data gathering and analysis methods as integral part of the RbME system which can be easily learned by the program personnel.

At the plan (MIDP) level, the results indicators will focus on the competitiveness metrics for the maritime industry. The expected impact will be increased gross value added (GVA) of the maritime industry and its percentage contribution to the national economy. The outcomes will be increased employment generated by the industry, from both domestic and overseas deployment of maritime professionals; increased volume and value of exports and imports of goods shipped by sea for the Philippines; increased number and value of passengers transported by sea within the Philippine territorial waters; reduced regulatory burden (documentary requirements, cost and time of business processing) faced by maritime industry members; and increased remittances by overseas seafarers.

Theoretically, there are many ways of measuring performance and competitiveness, but the MIDP for the next ten years will initially measure key indicators that can be reasonably collected and analyzed by the program personnel, as noted above, as they develop their capability on quantitative and qualitative research methods. **Table 2** presents these key results indicators at the plan (MIDP) and individual program levels, and the implications of the indicators on the competitiveness of the industry as a whole, and the industry members in particular.

**Table 2: A Simplified MIDP Results Framework**

Plan/ Program No.	Indicators	Information Sources	Competitiveness Implications
Plan Level	<p><b>Impact</b> Gross value added (GVA) of maritime industry</p> <p><b>Outcomes</b> Employment generated by maritime industry (both domestic and overseas deployment)</p> <p>Volume and value of exports and imports of goods shipped by sea for the Philippines</p> <p>Number and value of total passengers transported by sea</p> <p>Change in domestic regulatory burden (documentary requirements, time and cost of business processing)</p> <p>Amount of remittances contributed by overseas seafarers</p>	<p>Annual Business Survey - Maritime Industry</p> <p>Annual Business Survey - Maritime Industry; POEA and BLE Annual Labor/ Employment Reports.</p> <p>DTI and PSA Annual Export and Import Data/Reports; World Bank/IMF Annual Trade Statistics</p> <p>PPA/Other Port Authorities' Annual Reports</p> <p>Annual Business Survey - Maritime Industry; MARINA's Regulatory Instruments and Reports</p> <p>BSP Annual Reports</p>	<p>The contribution of maritime industry to the national economy is a metric for measuring the industry performance over time. Presently, this is produced on an ad hoc basis, but can be estimated annually with the proposed information sources.</p> <p>The contribution of maritime industry to total employment created by all industries in the country.</p> <p>Trade is a key driver of demand, directly and indirectly, across maritime industry, particularly for shipping, and shipbuilding and ship repair services.</p> <p>Passengers are a key driver of demand for efficient and safe shipping/boat services.</p> <p>Reduction in regulatory burden faced by maritime industry members is a key driver of competitiveness, particularly for shipping and cruise tourism.</p> <p>Remittances are a key driver of competitiveness of Filipino seafarers overseas.</p>
Program 1	<p><b>Impacts</b> Passengers' satisfaction on the efficiency, safety and quality of domestic shipping increased by 80% by EO 2028 from baseline</p> <p>Transport time by sea reduced by 20% by EO 2028 from baseline</p> <p>Maritime accidents reduced by 80% by EO 2028 from baseline</p> <p><b>Outcomes</b> Passenger traffic increased by 50% by EO 2028 from baseline</p> <p>Cargo throughput increased by 50% by EO 2028 from baseline</p> <p>Ship calls increased by 50% by EO 2028 from baseline</p>	<p>Quarterly Progress Reports and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports; MARINA, PPP and BSP Annual Reports</p> <p>Quarterly Progress Reports and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports; Annual Business Survey - Maritime Industry</p> <p>Plus: PPA Annual Reports</p>	<p>More efficient, safe and better quality shipping services, as articulated by passengers and ship owners/operators, are a key driver of competitiveness for domestic shipping fleet (and ports).</p> <p>Any reduction in transport time and maritime accidents represents an improved efficiency in port and shipping services.</p> <p>Increase in passenger traffic, cargo throughput and ship calls are evidences of the competitiveness of domestic shipping services.</p>

Plan/ Program No.	Indicators	Information Sources	Competitiveness Implications
Program 2	<p><b>Impacts</b> Maritime tourism revenue increased by 50%</p> <p>Number of cruise ships accident maintained at 0 by EO 2028 from baseline</p> <p>Amount of remittances in dollars of foreign-flag cruise ship crew and personnel increased by 273% by EO 2028 from baseline</p> <p><b>Outcomes</b> Number of upgraded boats serving tourist destination areas (TDAs) increased by 80% by EO 2028 from baseline</p> <p>Construction of boats in local shipyards generated 18,096 new jobs by EO 2028 from baseline</p> <p>Number of crew and personnel employed in foreign-flag cruise ships increased by 273% by EO 2028 from baseline</p>	<p>Plus: PCG Annual Reports</p> <p>Quarterly Progress Reports and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports; Annual Business Survey - Maritime Industry</p> <p>Plus: PPA Annual Reports</p> <p>Plus: BSP Annual Reports</p> <p>Quarterly Progress Reports and Annual Reports of the Program; MARINA Annual Reports</p> <p>Plus: BLE Annual Reports</p> <p>Plus: POEA Annual Reports</p>	<p>Revenue is a key driver of competitiveness of maritime tourism companies.</p> <p>Prevention of maritime accident is a key driver of cruise shipping competitiveness.</p> <p>Remittances are a key driver of competitiveness of Filipino maritime professionals.</p> <p>More upgraded boats serving TDAs indicate the growing competitiveness of Philippine tourist destinations.</p> <p>Employment generated by local shipyards and foreign-flag cruise ships is a key driver of competitiveness for Filipino maritime professionals, as well as for shipbuilding and cruise ship companies.</p>
Program 3	<p><b>Impacts</b> Efficient and safe CIWT system reduced time and cost of transport in urban and coastal areas by 30% by EO 2028 from baseline</p> <p>Passengers' satisfaction with CIWT system increased by 85% by EO 2028 from baseline</p> <p><b>Outcomes</b> Number of passengers transported by CIWT system increased by 90% by EO 2028 from baseline</p> <p>Volume and value of cargoes transported by CIWT system increased by 80% by EO 2028 from baseline</p> <p>Amount of investments in CIWT ship and facility operation (in million pesos) generated PhP 1.9 billion by EO 2028</p>	<p>Quarterly Progress Reports and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports; Annual Business Survey - Maritime Industry</p> <p>Quarterly Progress Reports and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports; Annual Business Survey - Maritime Industry</p> <p>Plus: DTI Annual Reports</p>	<p>Reduction in transport time and cost by CIWT system is a key driver of competitiveness of this system.</p> <p>Increase in passengers' satisfaction with CIWT system is a confirmation of the system's competitiveness.</p> <p>Increase in number of CIWT passengers and volume of cargoes indicates the competitiveness of this system.</p> <p>Increase in investment for CIWT ship and/or facility operations is an indication of the growing business interest for this system.</p>

Plan/ Program No.	Indicators	Information Sources	Competitiveness Implications
Program 4	<p><b>Impacts</b> Fishing vessels operation cost reduced by 10% by EO 0f 2028 from baseline</p> <p>Maritime accidents/incidents involving fishing vessels reduced by 50% by EO 2028 from baseline</p> <p><b>Outcomes</b> Operation of illegal, unregulated and unreported fishing (IUUF) practices reduced by 10% per year from baseline</p> <p>Fishing vessels registered with Fishing Vessel Safety Certificates (FVSC) increased by 10% per year up to EO 2028 from baseline</p>	<p>Quarterly Progress Reports and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports; Annual Business Survey - Maritime Industry; BFAR Annual Reports</p> <p>Plus: PCG Annual Reports</p> <p>Quarterly Progress Reports and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports; Annual Business Survey - Maritime Industry; BFAR Annual Reports</p>	
Program 5	<p><b>Impact</b> Maritime industry's contribution to total GDP increased by 100% by EO 2028 from baseline</p> <p><b>Outcomes</b> Industry's total revenue increased by 50% by EO 2028 from baseline</p> <p>Volume of traded goods via Philippine-registered merchant fleet increased by 50% by EO 2028 from baseline</p> <p>Value of traded goods increased by 50% by EO 2028 from baseline</p> <p>500f new ancillary businesses established by EO 2028</p> <p>PhP 10 billion ancillary business investment generated by EO 2028</p> <p>Number of generated new maritime employment increased by 50% by EO 2028 from baseline</p>	<p>Annual Business Survey - Maritime Industry</p> <p>Annual Business Survey - Maritime Industry</p> <p>Quarterly Progress Reports and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports; Annual Business Survey - Maritime Industry; DTI Annual Reports</p> <p>Plus: BLE Annual Reports</p>	<p>This impact indicator measures the competitiveness of maritime industry, particularly all the companies in the hub, against other non-maritime industries in the country.</p> <p>All these outcome indicators provide evidences of the competitiveness of maritime industry as a whole, and the maritime hub in particular.</p>



Plan/ Program No.	Indicators	Information Sources	Competitiveness Implications
Program 6	<p><b>Impacts</b> Transport time by sea reduced by 20% by EO 2028 from baseline</p> <p>Maritime accidents/incidents reduced 50% by EO 2028 from baseline</p> <p>Passengers satisfaction on the Philippine maritime safety increased by 50% by EO 2028 from baseline</p> <p><b>Outcomes</b> Number of ships compliant with national and international safety standards increased by 30% by EO 2028 from baseline</p> <p>Number of new/younger ships compliant with national and international safety standards increased by 40% by EO 2028 from baseline</p> <p>Number of technical manpower certified professional safety standards inspectors and auditors increased by 80% by EO 2028 from baseline</p>	<p>Quarterly Progress Reports and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports; Annual Business Survey - Maritime Industry; PCG Annual Reports</p> <p>Quarterly Progress Reports and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports</p>	<p>All these three impact indicators measure the efficiency and safety of Philippine-registered ships, and hence the competitiveness of the shipping companies.</p> <p>These outcome indicators show improvement in the quality of maritime professionals and passenger and cargo ships in terms of ensuring the application of or compliance to international safety standards.</p>
Program 7	<p><b>Impacts</b> Maritime incidents caused by criminality and terrorism reduced to 0 by 2028</p> <p>Incidents of cargo pilferage reduced by 80% by EO 2028 from baseline</p> <p>Passengers' satisfaction on Philippine maritime security increased by 100% by EO 2028 from baseline</p> <p><b>Outcomes</b> Level of ship crew's knowledge on maritime security requirements, measures, threats and risks increased by 90% by EO 2028 from baseline</p> <p>Frequency of maritime security inspection increased by 85% by EO 2028 from baseline</p> <p>Number of violations of security rules by shipping, fishing and maritime tourism by companies reduced by 90%</p>	<p>Quarterly and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports; Annual Business Survey - Maritime Industry; BOI Annual Reports</p> <p>Plus PCG and PN Annual Reports</p>	<p>Prevention/reduction in maritime incidents of criminality, terrorism and other illegal activities is a key driver of competitiveness for port and shipping companies.</p> <p>This indicator increases security reputation of the maritime industry in the country.</p> <p>These indicators measure the improved security in both ports and ships in the country.</p>

Plan/ Program No.	Indicators	Information Sources	Competitiveness Implications
Program 8	<p><b>Impacts</b> Green shipping/ship building design and operation standards developed and implemented by EO 2028</p> <p>Clients/stakeholders' satisfaction on maritime industry policies, programs and services increased by 85% by EO 2028 from baseline</p> <p>Positive feedback and sound suggestions received from clients/stakeholders increased by 90% by EO 2028 from baseline</p> <p><b>Outcomes</b> Number of data searches on government's websites related to maritime sector development increased by 100% by EO 2028</p> <p>Database enhanced and integrated by EO 2022</p> <p>Improved and new products, services and processes associated with this MIDP developed and applied by EO 2028</p> <p>Partnerships with key stakeholders that promote and support competitiveness of the Philippine maritime sector forged and strengthened by EO 2028</p>	<p>Quarterly and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports</p> <p>Quarterly and Annual Reports of the Program; Mid-Term and EOP Evaluation Reports</p>	<p>Green ship design and operation standards are a proxy for innovation activity of the MIKC in collaboration with Program 5.</p> <p>These two impact indicators measure the effectiveness and responsiveness of MIKC operations in terms of promoting MIDP's programs to inform the public and elicit support, and attract private participation/investments in different MIDP's programs.</p> <p>Indicator of stakeholders' interest in the maritime sector related activities.</p> <p>Indicator of improvement of data/information for planning and policy making.</p> <p>Indicator of improvement of products, services and processes for the maritime industry to become more competitive.</p> <p>Indicator of improvement of knowledge sharing and resource mobilization for the maritime industry through partnership building with key stakeholders, both at the national and global levels.</p>

MIDP, through the proposed National Coordinating Office (MIDP-NCO), will establish the RbME system at the initial year of implementation by developing a user-friendly manual containing the following:

- **Final list of outcomes and impacts**, based on the results indicators presented in **Table 2** by taking into account the availability of data/information required and the capability of the program personnel, to monitor and evaluate over time;
- **Detailed definition of final outcome and impact indicators** through preparation of indicator data sheets;
- **Assignment of sources of data/information for each indicator** to the concerned lead and cooperating/partner implementing agencies of the programs, **frequency of data/information collection**, and **flow of reporting** (i.e., Who will monitor what, how and when?);
- **Baseline data on the final list of outcome and impact indicators** (i.e., "Where are we today?") through the conduct of a baseline study to serve as basis for monitoring and evaluation to measure changes or progress over time; and

- **Templates** for collection of data/information, and reporting of impact and outcome indicators.

MIDP-NCO will publish an annual report on the progress and performance of the priority programs for submission to the OP, Congress and MNPICC; and disseminate the report to the public through MARINA's website and the media. The same report will be presented by MIDP-NCO to different forums to be organized by the different programs for broader IEC activities.

## I. Estimated Total Costs and Financing Schemes

### (1) Estimated Total Costs

The total cost of MIDP implementation in the next 10 years (2019-2028) is estimated at PhP 94.57 billion, broken down by program as shown in **Table 3** (see **Appendix 2** for additional details on individual program costs). About 92 percent of this cost expected to be invested by the private sector in the form of direct investment or loans from financing institutions (i.e., DBP, LBP, IFC and JICA), and 8 percent from the government through the regular annual appropriations, and official development assistance (ODA) grants and/or soft loans from development partners. These cost estimates will be firmed up by MARINA during the initial year of the MIDP implementation in collaboration with the other lead and cooperating agencies/ organizations.

**Table 3: Cost Estimates by Program**

Priority Programs	Cost (PhP Million)		
	Total	Government	Private Sector
1. Upgrading of Domestic Shipping in Support of the Nautical Highway Development	45,155	5,100	40,055
2. Development of Shipping Services for Maritime Tourism	147	97	50
3. Development of Coastal and Inland Waterways Transport (CIWT) System	2,636	1,044	1,592
4. Strengthening of Safety Operations of Registered Fishing Vessels	75	55	20
5. Development of a Global Maritime Hub	45,727	970	44,757
6. Enhancement of Maritime Safety in the Philippines	149	134	15
7. Modernization of Maritime Security in the Philippines	83	83	-
8. Establishment of Maritime Innovation and Knowledge Center	599	399	200
<b>TOTAL</b>	<b>94,571</b>	<b>7,882</b>	<b>86,689</b>

## **(2) Financing Schemes**

Several modes of financing are available for government agencies and the private sector who will participate in the implementation of the MIDP, particularly in the development and operation of maritime industry related infrastructure. In addition, the proposed lead and cooperating agencies for the Program components which include facilitation / provision of financial assistance for the private sector will review and enhance the existing financing policies and programs of the government to be more accessible and affordable to the maritime industry members, particularly those in small- and medium-sized enterprises, in order to enable them to take part in, and benefit from, the MIDP's priority programs. The specific priority programs indicate the schedule for this financing policy/program review and enhancement at the initial year of the MIDP implementation for the private sector to avail of financing assistance in time for the construction/development of required infrastructure.

### **Government Agencies**

The implementation of the MIDP activities (not considered as regular activities of the agencies) may be funded through regular annual appropriations from the General Appropriations Act (GAA) provided such activities are included in the Annual Work and Financial Plan. There are some activities, such as, the conduct of feasibility studies and detailed engineering designs that can be funded by technical assistance (TA) grants from international funding institutions, such as; Asian Development Bank (ADB), World Bank and Japan International Cooperation Agency (JICA), among others. This type of assistance will require the lead and cooperating agencies to prepare and submit detailed program/project proposals to the target funding institutions through the National Economic and Development Authority (NEDA) for initial review/approval and subsequent endorsement to the funding institutions. For the construction and development of public infrastructure, the Government can avail of ODA loans from international financing institutions and/or bilateral agreements with other countries.

There is also a venue for LGUs who will participate in the MIDP implementation to improve accessibility of their areas through acquisition of vessels and construction of terminals or landing facilities, which they can operate or rent out to the private sector for operation. LGUs can access funding support through the Municipal Development Fund (MDF) being administered by the Department of Finance (DOF). LGUs can then lodge the management of maritime related revenue generating projects under their Municipal/City Enterprise Development Departments to operate as a service for their constituents. Smaller ports and landing facilities may also be funded under the MDF facility.

### **The Private Sector**

A large portion of the proposed MIDP will involve the private sector, particularly in the acquisition and operation of modernized, upgraded and compliant vessels with national and international standards. There are a few commercial banks which are available as sources of financing for vessels modernization. These commercial banks normally entertain companies which are creditworthy from the point of view of private lending institutions.

During the problem identification phase of the MIDP formulation, issues were raised on the present condition of smaller vessels, because of the stringent bank rules and “non-profitability” of these vessels, and that previous vessel modernization programs have largely benefited bigger vessels. Hence, a large number of vessels with GRTs below 3 remain un-upgraded. There are funding mechanisms that may be developed to specifically target these smaller vessels, particularly programs under JICA and World Bank. For the MIDP priority programs to benefit not only the large companies but more importantly the smaller vessel operators, the Government needs to ensure that the financing schemes will be truly accessible and affordable for all maritime industry members.



## **APPENDIX 1: Institutional Environment of the Maritime Sector in the Philippines**

Note: This information is part of the outputs of mapping and analysis of key stakeholders in the maritime sector conducted during the sector assessment. A rapid assessment of this institutional environment of the maritime sector reveals that there is a large number of public and private sector stakeholders who interact in different aspects of the maritime industry development. The key issues identified in this assessment include:

The maritime industry is a complex organization involving a series of activities, some of which fall in transport and agriculture, manufacturing, cruise tourism, maritime ancillary business as well as maritime education and training, as evidenced by a large number of the government agencies and instrumentalities involved in the development, promotion, regulation and oversight functions;

Although inter-agency collaboration and cooperation exists in the implementation of key policies, plans and programs, there is at present little ability to ensure alignment between the priorities of different government agencies and entities, and the primary development objective of the maritime sector; and

No single government agency takes the “driver’s seat” to steer a single direction in the planning and implementation of an integrated maritime industry development due to the fragmented assignment of the maritime administration and governance functions in the country in the past.

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**APPENDIX 1:**  
**Institutional Environment  
of the Maritime Sector  
in the Philippines**

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**Institutional Environment of the Maritime Sector in the Philippines**

Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
Sea-based Maritime Sub-Sector					
Department of Transportation (DOTr)					
<ul style="list-style-type: none"> <li>Maritime Industry Authority (MARINA)</li> </ul>	<ul style="list-style-type: none"> <li>Early replacement of obsolescent/uneconomic vessels;</li> <li>Modernization and expansion of the merchant fleet</li> </ul>	<ul style="list-style-type: none"> <li>Packaging of financing programs for the industry through public and private financing institutions;</li> <li>Technological assistance;</li> <li>Favorable climate for domestic and foreign investments in shipping enterprises</li> <li>Utilization of Philippine flag ships in carriage of RP foreign trade</li> <li>Develop plans, programs, policies, projects, standards, certifications, and guidelines to promote the maritime industry</li> <li>Build knowledge based on the maritime industry</li> <li>Establish a publicly available document repository of issuances</li> </ul>	<ul style="list-style-type: none"> <li>Accreditation for ownership and operations of all water transport utilities, and other maritime enterprises;</li> <li>Registration of all vessels;</li> <li>Issuance of certificate of public convenience to authorize the operation of all types of vessels in domestic shipping;</li> <li>Establishment of routes, zones or areas of operations of domestic shipping operation;</li> <li>Safety and service standards for all vessels according to applicable conventions and regulations;</li> </ul>	<ul style="list-style-type: none"> <li>Development of reservoir of trained manpower;</li> <li>Single maritime administration for the implementation and enforcement of the 1978 International Convention on Standards of Training, Certification and Watch-keeping for Seafarers (STCW), as amended, and International Agreements or Covenants related thereto</li> </ul>	<ul style="list-style-type: none"> <li>Determination of the impact of any new domestic shipping operation/service on the locality;</li> <li>Inspection and audit of all vessels to ensure compliance with safety standards and other regulations</li> </ul>

Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
<ul style="list-style-type: none"> <li>Philippine Coast Guard (PCG)</li> </ul>		<ul style="list-style-type: none"> <li>Maintenance of lighthouses for safe navigation</li> </ul>	<ul style="list-style-type: none"> <li>Maritime search and rescue;</li> <li>Maritime law enforcement;</li> <li>Maritime safety;</li> <li>Maritime security;</li> <li>Marine environmental protection</li> <li>Port State control</li> </ul>	<ul style="list-style-type: none"> <li>Development of adequate capability for containment and recovery of spilled oil in inland waters and high seas</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring of marine environmental protection law enforcement</li> </ul>
<ul style="list-style-type: none"> <li>Office of Transportation Cooperatives (OTC)</li> </ul>	<ul style="list-style-type: none"> <li>Modernization of banca operations</li> </ul>	<ul style="list-style-type: none"> <li>Financial assistance for banca operators</li> </ul>			
<ul style="list-style-type: none"> <li>Office for Transportation Security (OTS)</li> </ul>			<ul style="list-style-type: none"> <li>Sea transport and maritime infrastructure security by implementing the ISPS code and that a national security program for sea transport and maritime infrastructure</li> </ul>		
<b>Department of Agriculture (DA)</b>					
<ul style="list-style-type: none"> <li>Bureau of Fisheries and Aquatic Resources (BFAR)</li> </ul>	<ul style="list-style-type: none"> <li>Distribution of environment-friendly fishing gears and paraphernalia such as fish ports and vessel engines, among others.</li> </ul>	<ul style="list-style-type: none"> <li>Financial assistance for small fishers</li> </ul>	<ul style="list-style-type: none"> <li>Issuance of licenses for operation of commercial fishing vessels;</li> <li>Issuance of identification cards free of charge to fish workers</li> </ul>		<ul style="list-style-type: none"> <li>Monitoring and review of joint fishing agreements between Filipino citizens and foreigners who conduct fishing activities in international waters</li> </ul>

Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
			engaged in commercial fishing		to ensure consistency with the Philippine commitment under international treaties and convention on fishing in high seas
Department of Tourism (DOT)					
	<ul style="list-style-type: none"> <li>Development and promotion of tourism products (i.e., cruise, scuba diving, and yachting and marinas)</li> </ul>		<ul style="list-style-type: none"> <li>Licensing, accreditation and classification of tourism enterprises, prescribing minimum levels of quality and efficiency for operation in accordance with international standards</li> </ul>	<ul style="list-style-type: none"> <li>Development of training modules, and conduct of seminars and continuing education program for the industry manpower</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring of LGUs' compliance to standards in licensing of tourism enterprises, receive and investigate complaints concerning these enterprises, and act on such complaints;</li> <li>Monitoring of tourism enterprises' compliance to standards</li> </ul>
Department of Trade and Industry (DTI)					
DTI Proper			<ul style="list-style-type: none"> <li>Registration of single proprietorship banca operators</li> <li>Registration of single proprietorship boatyard operators</li> </ul>		
Board of Investments (BOI)		<ul style="list-style-type: none"> <li>Incentives for ship modernization and operations</li> </ul>			

Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
		<ul style="list-style-type: none"> <li>Incentives for shipyard modernization</li> </ul>			
Securities and Exchange Commission (SEC)			<ul style="list-style-type: none"> <li>Registration of shipping companies</li> <li>Registration of shipyard entities</li> </ul>		
Department of National Defense (DND)/ Armed Forces of the Philippines (AFP)					
<ul style="list-style-type: none"> <li>Philippine Navy</li> </ul>			<ul style="list-style-type: none"> <li>Enforcement of laws and regulations on navigation, immigration, customs revenue, opium, quarantine, fishing and neutrality in the territorial and contiguous waters of the Philippine Archipelago</li> </ul>		
Department of the Interior and Local Government (DILG)					
<ul style="list-style-type: none"> <li>Philippine National Police (PNP)</li> </ul>			<ul style="list-style-type: none"> <li>Public safety and internal security over Philippine territorial waters and rivers including ports of entry and exit;</li> <li>Sustaining the protection of the maritime environment</li> </ul>		

Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
Department of Environment and Natural Resources (DENR)					
<ul style="list-style-type: none"> <li>Environmental Management Bureau (EMB)</li> </ul>			<ul style="list-style-type: none"> <li>Set appropriate environmental quality standards (water, air and noise) for the prevention, control of pollution and protection of the environment;</li> <li>Issuance of permits, clearances under RA 8749, RA 9003, RA 9275, RA 6969 and PD 1586</li> <li>Issuance of environmental clearance for shipyard operations</li> </ul>	<ul style="list-style-type: none"> <li>Public information and education to encourage participation of an informed citizenry in environmental quality planning and monitoring</li> </ul>	<ul style="list-style-type: none"> <li>Compliance monitoring of businesses/ enterprises on environmental laws, rules and regulations</li> </ul>
National Mapping and Resource Information Authority (NAMRIA)		<ul style="list-style-type: none"> <li>Generation of navigational charts for safe navigation</li> </ul>			
local government units (LGUs)					
			<ul style="list-style-type: none"> <li>Enforcement of fishery laws in municipal waters</li> </ul>		

Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
Land-based Maritime Sub-Sector					
DOTr					
<ul style="list-style-type: none"> <li>MARINA</li> </ul>	<ul style="list-style-type: none"> <li>Expansion and modernization of shipyards/boatyards</li> </ul>	<ul style="list-style-type: none"> <li>Investments promotion for shipyards</li> <li>Financial, technical assistance and guarantees for shipyard operations</li> <li>Develop plans, programs, policies, projects, standards, certifications, and guidelines to promote the maritime industry</li> <li>Build knowledge based on the maritime industry</li> <li>Establish a publicly available document repository of issuances</li> </ul>	<ul style="list-style-type: none"> <li>Registration and licensing of shipyards</li> <li>Adoption and implementation of the Hongkong Convention</li> </ul>	<ul style="list-style-type: none"> <li>Accreditation, certification and training of maritime professionals for domestic and/or overseas deployment</li> <li>Enhancement of domestic capability for shipbuilding, repair and maintenance</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring maritime education programs being offered by authorized colleges and universities nationwide (with CHED)</li> <li>Annual inspection of shipyard facilities for purposes of license renewal</li> </ul>
<ul style="list-style-type: none"> <li>Philippine Ports Authority (PPA)</li> </ul>	<ul style="list-style-type: none"> <li>Planning, development, financing, operation and maintenance of ports or port districts for the entire country;</li> <li>Strengthening of cooperation between the government and the private sector for port development, operation and maintenance</li> </ul>		<ul style="list-style-type: none"> <li>Imposition of reasonable administrative fines for specific violations of its rules and regulations</li> </ul>		
<ul style="list-style-type: none"> <li>OTC</li> </ul>					
DOLE					
<ul style="list-style-type: none"> <li>Philippine Overseas Employment</li> </ul>	<ul style="list-style-type: none"> <li>Promote and develop the overseas employment program</li> </ul>	<ul style="list-style-type: none"> <li>Promote and develop the overseas employment program</li> </ul>	<ul style="list-style-type: none"> <li>Protect the rights of migrant workers and the rights of</li> </ul>		

Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
Administration (POEA)	<ul style="list-style-type: none"> <li>Secure best terms of employment for OFWs</li> </ul>		<ul style="list-style-type: none"> <li>OFW as a worker and human being</li> <li>Regulate private sector participation in recruitment and overseas placement</li> <li>maintain registry of skills</li> </ul>		
Overseas Workers Welfare Administration (OWWA)			<ul style="list-style-type: none"> <li>May provide appropriate representation with employers, agents and host authorities.</li> </ul>	<ul style="list-style-type: none"> <li>Deliver welfare services and benefits to member OFWs and their families from the pre-departure, on-site, upon arrival, and reintegration</li> </ul>	
Bureau of Local Employment (BLE)	<ul style="list-style-type: none"> <li>Formulate policies, standards and procedures on productive manpower resources, development, utilization and allocation;</li> <li>Develop and maintain a responsive vocational guidance and testing system in aid of proper human resources allocation;</li> <li>Formulate employment programs designed to benefit disadvantaged groups and communities</li> </ul>		<ul style="list-style-type: none"> <li>Establish and administer a machinery for the effective allocation of manpower resources for maximum employment and placement</li> <li>Regulate and supervise a private sector participation in the recruitment and placement of workers locally under such rules and regulations</li> </ul>		<ul style="list-style-type: none"> <li>Develop and maintain a labor market information system in aid of proper manpower and development planning</li> </ul>

Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
			<ul style="list-style-type: none"> <li>Establish and maintain a registration or work permit system to regulate employment of aliens</li> </ul>		
DTI					
<ul style="list-style-type: none"> <li>BOI</li> </ul>	<ul style="list-style-type: none"> <li>Formulate and develop strategies to position the country as among the prime destinations for investment</li> <li>Provide incentives for investments for the modernization/upgrading of vessels and related infrastructures</li> </ul>		<ul style="list-style-type: none"> <li>Improve the business environment by streamlining procedures and establishing close coordination among the concerned government agencies regarding investor and business-related issues and concerns</li> </ul>		
<ul style="list-style-type: none"> <li>Securities and Exchange Commission (SEC)</li> </ul>	<ul style="list-style-type: none"> <li>Develop and regulate the corporate and capital market toward good corporate governance, protection of investors, widest participation of ownership and democratization of wealth</li> </ul>	<ul style="list-style-type: none"> <li>Encourage investments and more active public participation in the affairs of private corporations and enterprise</li> </ul>	<ul style="list-style-type: none"> <li>Regulate the securities industry by supervising the corporate sector, the capital market participants, the securities and investment instruments market, and the investing public</li> </ul>		



Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
Commission on Higher Education (CHED)					
		<ul style="list-style-type: none"> <li>Promote relevant and quality higher education (i.e. higher education institutions and programs are at par with international standards and graduates and professionals are highly competent and recognized in the international arena)</li> </ul>	<ul style="list-style-type: none"> <li>Ensure that quality higher education is accessible to all who seek it particularly those who may not be able to afford it</li> </ul>	<ul style="list-style-type: none"> <li>Guarantee and protect academic freedom for continuing intellectual growth, advancement of learning and research, development of responsible and effective leadership, education of high level professionals, and enrichment of historical and cultural heritages</li> </ul>	
<ul style="list-style-type: none"> <li>Philippine Statistics Authority (PSA)</li> </ul>	<ul style="list-style-type: none"> <li>Plan, develop, prescribe, disseminate, and enforce policies, rules and regulations and coordinate government-wide programs governing the production of official statistics, general-purpose statistics</li> <li>Collaborate with departments of the national government including GOCCs and their subsidiaries in the collection, compilation, maintenance and publication of statistical information, including</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate with government departments and local government units (LGUs) on the promotion and adoption of statistical standards involving techniques, methodologies, concepts, definitions and classifications, and on the avoidance of duplication in the collection of statistical information</li> </ul>			

Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
	special statistical data derived from the activities of those departments, corporations and their subsidiaries				
Department of Information and Communications Technology (DICT)					
	<ul style="list-style-type: none"> <li>Serve as the primary policy, planning, coordinating, implementing, and administrative entity of the Executive Branch of the government that will plan, develop, and promote the national ICT development agenda.</li> </ul>		<ul style="list-style-type: none"> <li>Harmonize and coordinate all national ICT plans and initiatives to ensure knowledge, information and resource-sharing, database-building and agency networking linkages among government agencies, consistent with E-Government objectives in particular, and national objectives in general</li> <li>Assess, review and support ICT research and development programs of the government in coordination with the Department of Science and Technology</li> </ul>	<ul style="list-style-type: none"> <li>Assist and provide technical expertise to government agencies in the development of guidelines in the enforcement and administration of laws, standards, rules, and regulations governing ICT</li> </ul>	

Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
			(DOST) and other institutions concerned		
<ul style="list-style-type: none"> <li>Cybercrime Investigation and Coordinating Center (CICC)</li> </ul>	<ul style="list-style-type: none"> <li>Formulate a national cybersecurity plan and extend immediate assistance for the suppression of real-time commission of cybercrime offenses</li> <li>Coordinate the preparation of appropriate and effective measures to prevent and suppress cybercrime activities as provided for in R.A. 10175</li> </ul>	<ul style="list-style-type: none"> <li>Coordinate the support and participation of the business sector, local government units and nongovernment organizations in cybercrime prevention programs and other related projects</li> </ul>			
Presidential Communications Operations Office (PCOO)					
<ul style="list-style-type: none"> <li>Philippine Information Agency (PIA)</li> </ul>		<ul style="list-style-type: none"> <li>Disseminate information about government programs, projects, and services to the Filipino public</li> <li>Serve as a public relations firm for specific communication campaigns as requested by agencies under the Office of the President, national government agencies, local government units, government owned and</li> </ul>			

Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
		controlled corporations (GOCCs), government financial institutions (GFIs), special inter-agency committees/councils and government task forces, among others.			
<ul style="list-style-type: none"> <li>Philippine News Agency (PNA)</li> </ul>		<ul style="list-style-type: none"> <li>Disseminate timely, reliable and relevant news articles to community newspapers, national dailies, and local and international readers and subscribers</li> <li>Maintain long-standing working relationship with news agencies of ASEAN member-countries and the Organization of Asia-Pacific News Agencies, Asianet, among others</li> </ul>			

Government Agencies	Key Functional Mandates				
	Development	Promotion	Regulation and Supervision	Capacity Building	Monitoring and Evaluation (M&E)
<ul style="list-style-type: none"> <li>News and Information Bureau (NIB)</li> </ul>		<ul style="list-style-type: none"> <li>Provide efficient, effective, productive, and economical services relating to the development and formulation of a domestic and foreign information program for the Government in general, and the Presidency in particular, including the development of strategies for the dissemination of information on specific government programs</li> </ul>			
Financing Institutions					
<ul style="list-style-type: none"> <li>Development Bank of the Philippines (DBP) and Land Bank of the Philippines (LBP)</li> </ul>	<ul style="list-style-type: none"> <li>Provision of financial assistance for the modernization/upgrading of vessels and shipyards</li> </ul>				
Academic and Training Institutions					

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**APPENDIX 2:**  
**Results Framework of MIDP's**  
**Eight Priority Programs**

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## **APPENDIX 2: Profile of MIDP's Eight Priority Programs**

### **Program 1: Upgrading of Domestic Shipping in Support of the Philippine Nautical Highway Development**

#### **RATIONALE**

With the country divided into 7,641 islands, the development of the 919 km national nautical highway in 2003 is critical to the inter-island transport of people and goods, and dispersion of investments and employments to different provinces, cities and municipalities outside of metropolitan and highly urbanized areas like Metro Manila, Metro Cebu and Metro Davao. From 2011 to 2017, the number of domestic shipping passengers increased from about 49.49 to 72.05 million, or an average annual growth rate of 6.5 percent. Domestic cargoes also increased by an average annual growth rate of 5.5 percent from 74.17 million MT in 2011 to 102.53 million MT in 2017. As the country's population and economic activities continue to grow, both the number of passengers and volume of cargoes are expected to increase in the future.

Inter-island shipping in an archipelagic country like the Philippines is an important element in expanding market linkages and connecting/linking one island to another in particular and for economic development in general. It facilitates 98% of domestic inter-island trade - averaging 89 million metric tons of cargoes annually for the last five years. It also facilitates the movement of more than 72 million Filipinos as well as foreign tourists in CY 2017. Thus, the national government is currently expanding and upgrading the National Nautical Highway networks and facilities to meet this expected increase in demand for more economical, efficient, safe and secure domestic shipping services to facilitate the movement of people and goods across the country. However, this effort depends on the efficiency, safety and security of domestic merchant fleet.

#### **OBJECTIVES**

Under PD 474 and RA 9295, MARINA is mandated to provide an effective sea linkage in various islands and regions of the country. Hence, the agency supports the national government's program particularly the Nautical Highway Development by modernizing and upgrading the existing domestic merchant fleet, establishing new ship routes, and promoting private sector participation in domestic shipping facility development and operation.

The Program impact will be more efficient and safe sea transport for passengers and cargoes to be measured through reduced transport cost and time; reduced maritime accidents, and higher passengers' satisfaction. The outcomes of the Program will be increased number of passengers, volume of cargoes and number of ship calls; developed new routes/links, and increased investments in shipping and shipbuilding businesses. These impact and outcomes will be achieved by delivering the following outputs:

- (i) modernized/upgraded domestic vessels;

- (ii) increased amount of investments in shipping and shipbuilding;
- (iii) increased number of trained Deck and Engine cadets;
- (iv) expanded/improved existing roads, port infrastructures and facilities;
- (v) developed/constructed new port infrastructures and facilities;
- (vi) reduced number of motor-bancas/ motorboats and wooden-hulled ships; and
- (vii) retired/replaced old, obsolescent and/or uneconomic vessels.

These Program impact, outcomes and outputs are presented in the results framework (without means of verification and assumptions columns) below, which will be monitored regularly, and evaluated at mid-term and end-of-program implementation. As the lead implementing agency, MARINA will be responsible for the monthly, quarterly and yearly internal performance monitoring in collaboration with cooperating/partner agencies based on an agreed results-based monitoring and evaluation (RbME) system to be developed and operated by MARINA and partner agencies. An external evaluation will be contracted by MARINA to a reputable service provider for the midterm review and end-of-program evaluation.

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE*		TARGETS
		YEAR	DATA	
<b>IMPACT</b>				
Safer and better quality shipping service for passengers, and more efficient transportation of cargoes	Passengers' satisfaction on the efficiency, safety and quality of domestic shipping increased by 80% by EO 2028 from baseline	2017	0	Passengers' satisfaction rating increased by 80%
	Average transport time by sea reduced by 20% by EO 2028 from baseline	2017	4 hours average travel time of passengers in secondary routes	3 hours average travel time of passengers in secondary routes
	Maritime accidents decreased by 80% by EO 2028 from baseline	2017	31 maritime accidents	Maritime accidents reduced to 6 or lower
<b>OUTCOMES</b>				
Number of new routes/links developed	Existing routes increased by 50% or over by EO 2028 from baseline	2017	146 existing routes	73 new routes (see Table below)
Number of existing roads, port infrastructure and facilities expanded /improved	Existing roads and ports expanded/improved by 100%	2017	574 existing ports (see Table below)	574 existing ports expanded /improved nationwide
Number of domestic vessels	Brand new IACs classed vessels increased by 100%	2017	70 vessels	70 brand new IACs classed vessels



HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE*		TARGETS
		YEAR	DATA	
modernized/ upgraded				constructed locally or imported
Number of passenger traffic increased	Passenger traffic increased by 50% by EO 2028 from baseline	2017	72,051,946 passengers	Over 108 Million passengers
Number of cargo throughput increased	Cargo throughput increased by 50% by EO 2028 from baseline	2017	102,533,513 MT cargo throughput	Over 153 Million MT of cargoes
Number of ship calls increased	Ship calls increased by 50% by EO 2028 from baseline	2017	434,380 domestic ship calls	Over 651,500 ship calls in domestic ports
Number of investments increased	Investments increased by 50%	2017	PhP 12.6 Billion worth of investments	Over P18.9 Billion worth of investments for fleet modernization / upgrading
<b>OUTPUTS</b>				
1. Number of shipboard training for Deck and Engine cadets increased	Shipboard training for Deck and Engine Cadets increased by 50%	2017	4,980 Deck Cadets trained onboard  3,735 Engine Cadets trained onboard	7,470 Deck Cadets trained onboard  5,600 Engine Cadets trained onboard
2. Number of new port infrastructure and facilities developed/ constructed	New port infrastructure and facilities development increased by 50%	2017	574 Existing Ports	287 new port infrastructures and facilities developed/ constructed
3. Number of motorbancas/ motorboats and wooden-hulled ships reduced	Motorbancas/ motorboats and wooden-hulled ships phased-out by 50%	2017	3,058 existing WHS	Over 1,500 WHS phased-out  Over 1,500 technologically- advanced ships imported/ constructed
4. Number of old, obsolescent and uneconomic vessels retired and replaced	Old, obsolescent and uneconomic vessels retired and replaced by 100%	2017	25 existing old, obsolescent and uneconomic vessels	All old, obsolescent and uneconomic vessels retired and replaced by brand new ships

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE*		TARGETS
		YEAR	DATA	
<b>KEY ACTIVITIES</b>				
1.1	Establish potential sea routes			
1.2	Develop and implement an effective Route Capacity Measurement (RCM) System for maritime transportation			
1.3	Provide a comprehensive Financing Program for domestic shipping companies/operators			
1.4	Provide incentives/ privileges to domestic shipping companies/ operators			
2.1	Develop and implement mandatory shipboard training/ apprenticeship for Deck and Engine Cadets			
3.1	Improve/maintain and construct existing/ new road infrastructure			
3.2	Improve/maintain and construct existing/ new terminals, ports and other port facilities			
4.1	Develop standard boat design to replace wooden-hulled ships (per region based on their navigational areas)			
4.2.	Provide Incentives to affected motorbanca operators			
4.3	Provide Financing Scheme/Package for affected motorbanca operators			
5.1	Mandatory retirement of unclassified and obsolescent ships			
5.2	Develop a Vessel Retirement Program (VRP) for obsolescent and unseaworthy ships			

Notes: <sup>1</sup>Baseline data will be established or confirmed during the initial year of the Program implementation through a baseline study for all the Priority Programs included in this MIDP.

## SPATIAL CONTEXT

This Program will cover all merchant fleet operating in existing and future seaports/ terminals, roads, and navigational areas/waters covered by the nautical highway in the country.

### Proposed Routes with Roads/Ports/Terminals Without Vessels Plying (as if December 2017)

Proposed Routes	
1.	Cawayan, Masbate - Bogo, Cebu
2.	Jagna, Bohol - Balbagon, Camiguin
3.	Bulan, Sorsogon - San Jacinto, Ticao Island
4.	Pio Duran, Albay - Aroroy, Masbate
5.	Subuquin, San Juan, Batangas - Kawit, Boac/ Balanacan, Mogpog, Marinduque
6.	Mukas, Kolambugan, Lanao del Norte - Ozamis City
7.	Cawayan, Masbate - Daanbantayan, Cebu
8.	Bogo, Cebu - Palompon, Leyte

9.	Cagayan de Oro - Benoni, Camiguin
10.	Lupon, Davao Oriental - Davao City
11.	Pilar, Sorsogon - Aroroy, Masbate
12.	San Andres/San Narciso, Quezon - Pasacao, Camarines Sur - Pantao, Albay
13.	Pio Duran, Albay - Claveria, Masbate
14.	San Juan, Southern Leyte - Lipata, Surigao City
15.	San Jose, Occ. Mindoro - Coron - Taytay, Palawan
16.	Maasin, Southern Leyte - Ubay, Bohol
17.	Bato, Leyte - Ubay, Bohol
18.	Toledo City, Cebu - San Carlos City, Negros Occidental
19.	Palompon, Leyte - Bogu, Cebu
20.	Tabuelan, Cebu - Escalante, Negros Occidental
21.	Cadiz City, Negros Occidental - Concepcion, Iloilo
22.	Culasi, Roxas - Balud, Masbate
23.	San Jose, Occidental Mindoro - Coron, Palawan
24.	Taytay, Palawan - Cuyo, Palawan
25.	Cuyo, Palawan - San Jose de Buenavista, Antique
26.	Iloilo City - Jordan, Guimaras
27.	Pasacao, Camarines Sur - Romblon, Romblon
28.	San Agustin, Romblon - Roxas, Oriental Mindoro
29.	Danao City, Cebu - Isabel, Leyte
30.	Naval, Biliran - Cebu

#### Existing Ports in the Philippines by Ports Authority

MARINA Offices	Number of Existing Ports by Port Authority			Total
	PPA	Other Government Agencies/Units	Private Sector	
MARINA CO	19	2	23	44
MRO 1 & 2	6	17	20	43
MRO IV	25	16	49	90
MRO V	10	37	13	60
MRO VI	13	16	28	57
MRO VII	14	8	16	38
MRO VIII	15	28	26	69
MRO IX	13	6	28	47
MRO X	10	14	15	39
MRO XI	4	0	15	19
MRO XII	10	4	25	39
MRO XIII	9	7	13	29
<b>TOTAL</b>	<b>148</b>	<b>155</b>	<b>271</b>	<b>574</b>

## PROGRAM COMPONENTS

The key Program components will include:

- (i) Modernization and upgrading of domestic vessels;
- (ii) Capacity building for deck and engine cadets;
- (iii) Improvement of ports/terminals and road infrastructure;
- (iv) Phasing-out of wooden-hulled ships (WHS); and
- (v) Vessel Retirement Program (VRP) of unclassified and obsolescent ships.

## IMPLEMENTATION SCHEDULE

This Program is designed for 10 years (see **Appendix 3**).

## IMPLEMENTATION ARRANGEMENTS

As the lead implementing agency, MARINA will assume full responsibility in the Program administration and management. An inter-agency National MIDP Steering Committee (NSC-MIDP) will be established to provide overall policy guidance chaired by the DOTr Secretary. A National Project Coordination Office (NPCO) will also be set up at MARINA Central Office to be lodged with the Domestic Shipping Service (DSS). MARINA will work with and/or support PCG, PPA, CPA and other port authorities (including LGUs) for establishment of sea routes; the improvement of terminals, ports and other port facilities; and the conduct of IEC activities.

MARINA will coordinate with DOF and DTI/BOI for the development of appropriate incentive packages/programs, and with government and private sector financing institutions (i.e., DBP, LBP, etc.) for the development of a comprehensive financing program for domestic shipping companies to enable the latter to actively participate in, and benefit from, this Program. MARINA will also work with CDA and OTC for the organization of domestic shipping companies, most especially those small and medium-sized companies, to be organized into cooperatives to increase their financial capacity to avail of the financing program. In addition, MARINA will collaborate with DOST and University of the Philippines (UP) for the development of the Route Capacity Measurement (RCM) System for maritime transportation system/software, and the conduct training for Deck and Engine Cadets, among others. These implementation arrangements are summarized in the table below.

Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
<b>Component 1 Modernization and Upgrading of Domestic Vessels</b>				
1.1 Establish potential sea routes	MARINA	Establish sea routes, conduct market study and IEC activities	PPA, CPA and other Port Authorities; PCG	Assist in the IEC activities
1.2 Develop and implement an effective Route	MARINA	Prepare the TOR and implement the RCM System	DOST, UP	Develop the RCM System/Software, and conduct

Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
Capacity Measurement (RCM) System for maritime transportation				training on this System/ Software for MARINA personnel and other key stakeholders
1.3 Provide a comprehensive Financing Program for domestic shipping companies/operators	DBP, LBP and other financial institutions	Develop and implement a Financing Program/ for domestic shipping companies/operators	MARINA	Coordinate with the government and private financial institutions for the provision of this Financing Program
1.4 Provide incentives/ privileges to domestic shipping companies/operators	MARINA, DOF and DTI/BOI	Provide incentive programs/packages to domestic shipping companies/operators	Domestic Shipping Companies/ Operators	Avail the incentive programs/packages in upgrading domestic fleet and/or shipping facilities
<b>Component 2 Capacity Building for Deck and Engine Cadets</b>				
2.1 Develop and implement mandatory shipboard training/ apprenticeship for Deck and Engine Cadets	MARINA	Provide mandatory shipboard training/ apprenticeship onboard domestic vessels for Deck and Engine Cadets	Domestic Shipping Companies/ Operators	Comply with the requirements of MARINA to allow Deck and Engine Cadets for apprenticeship/ shipboard training
<b>Component 3 Improvement of Ports/Terminals and Road Infrastructure</b>				
3.1 Improve/ maintain existing road infrastructure	DPWH and LGUs	Improve and maintain existing road infrastructure	MARINA	Identify road infrastructure to be improved and maintained
3.2 Improve/ maintain existing terminals, ports and other port facilities	PPA, CPA and other Port Authorities and LGUs	Improve and maintain existing terminals, ports and other port facilities	MARINA	Identify ports to be improved and maintained
<b>Component 4 Phasing-Out of Wooden-Hulled Ships</b>				
4.1 Develop standard boat design to replace wooden-hulled ships (per region based on their navigational areas)	MARINA	Develop standard boat design based on their navigational area	Boat builders and affected motorbanca operators	Comply with the design requirements

Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
4.2. Provide Incentives to affected motorbanca operators	CDA and OTC	Provide incentives to affected operators through a cooperative	MARINA	Coordinate with CDA and OTC and identify other incentives for affected motorbanca operators
4.3 Provide Financing Scheme/ Package for affected motorbanca operators	DBP, LBP, MDFO and other financial institutions	Provide a comprehensive financial program/ assistance to affected motorbanca operators or LGUs affected by the phasing-out	MARINA	Coordinate with the government and private financial institutions for financing assistance to motorbanca operators
<b>Component 5 Vessel Retirement Program (VRP) of Unclassed and Obsolescent Ships</b>				
5.1 Mandatory retirement of unclassified and obsolescent ships	MARINA	Identify unclassified vessels to be retired	PCG	Enforce mandatory vessel retirement
5.2 Develop a Vessel Retirement Program (VRP) for obsolescent and unseaworthy ships	MARINA	Develop a Vessel Retirement Program (VRP) identifying some parameters to consider	Domestic Shipping Association s/ Companies	Comply with the Vessel Retirement Program (VRP)

## PROGRAM COST

The Program is estimated to cost PhP45.155 billion pesos for a 10-year period of implementation, broken down by component as summarized in the table below.

Item	Amount (Million Pesos)
<b>A. Base Cost (2018 prices)</b>	
• Component 1: Modernization and upgrading of domestic vessels	25,000.0
• Component 2: Capacity Building for Deck and Engine Cadets	50.0
• Component 3: Improvement/development of port infrastructure and facilities, and connecting roads	10,500.0
• Component 4: Phasing-Out of Wooden-Hulled Ships	5,000.0
• Component 5: Vessel Retirement Program (VRP) of unclassified and obsolescent ships	500.0
<b>Subtotal</b>	<b>41,050</b>

Item	Amount (Million Pesos)
<b>B. Contingencies (Computed at 10%)</b> Physical and price contingencies	4,105.0
<b>C. Total</b>	<b>45.155.0</b>

## Program 2: Development of Shipping Services for Maritime Tourism

### RATIONALE

The National Cruise Tourism Development Strategy and Action Plan (NCTDSAP) 2016-2022 sets out strategic actions to develop the competitiveness of the country's cruise shipping business with a long-term goal of promoting the Philippines as a regional cruise center in Asia -- serving as a home port for international cruise ships<sup>46</sup>, and eventually a regional center for cruise crew training, cruise line business outsourcing, and cruise ship maintenance services. NCTDSAP provides directions to both government and industry for increasing the number of cruise ship calls to ports and islands of the country, creating excellent tourist experiences, promoting sustainable tourism, and earning greater economic benefits for the country.

NCTDSAP aims to engage cruise ship industry more aggressively in cruise tourism, especially in the Asian Cruise Tourism Market, and attract more visitors from China, South Korea, Japan, India, Taiwan, Malaysia, Australia, United States and Europe, to travel to the Philippines. In 2017, nearly 3.1 Million Asians took a cruise, with 94 percent reportedly staying within the Asian region, and about 6.3 percent (195,751 passengers) visited the Philippines in 140 port calls<sup>47</sup>. These cruise ship passengers are expected to reach 329,000 with 190 port calls in 2018, and 456,164 with 402 port calls in 2022. There are potentially 15 destinations/port calls in the country, such as; Manila, Puerto Princesa, Busuanga (Coron), Malcapuya Island, Culion, El Nido, Boracay, Bohol, Bantayan Island, Cebu, Kalanggaman Island, Aparri - Ilocos Norte, Currimao - Ilocos Norte, Hundred Islands, and Lingayen Gulf, but not all are visited each year.

In its 2018 Asia Cruise Trends report, the Cruise Lines International Association (CLIA) advises that the Asian region will experience a greater number of cruises in 2018 with 6 Mega (3,500+ passengers) and 19 arge (2,500-3,500 passenger) Cruise Ships, and the Asian trend will be shorter sailings, consisting of 2-3 nights (26 percent), 4-6 nights (66 percent) and 7-13 nights (8 percent) due to the preference of tourists, mostly from China, for shorter vacations. The Philippines intends to capture part of this expected increases in number of Asian cruise ship port calls and passengers, and the growing number of Filipinos who are taking cruise ships for holiday vacations. NCTDSAP includes the plan to build new and larger ports to accommodate larger cruise liners, as well as additional port calls/destinations and cruise lines for longer holiday vacations.

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<sup>46</sup> The SuperStar Virgo is the first international cruise ship to homeport -- while a ship only visits a port of call, it picks up and drops off passengers at a home port -- in the Philippines. In 2017, two Genting Cruise Lines brands (i.e., Star Cruises and Dream Cruises) began to homeport in Manila. The bulk of passengers came from Metro Manila although passengers also came from major cities like Cebu and Davao through fly-cruise programs. Accessed from <https://www.philstar.com/lifestyle/travel-and-tourism/2018/04/01/1801829/smooth-sailing-seen-asias-cruise-tourism-industry#QsCe8i4usEwSgc WF.99>.

<sup>47</sup> Cruise Lines International Association (CLIA), 2017. *Asia Cruise Trends 2017 Edition*. Washington, D.C., 20004. Accessed from <https://cruising.org/docs/default-source/research/clia-2017-asia-cruise-trends-report.pdf?sfvrsn=0>.



International cruise call for Philippine ports is expected to reach 190 calls for 2018, bringing in 329,000 passengers, or 35.7 percent over total cruise calls of 140 in 2017 with 195,751 passengers.<sup>48</sup> NCTDSAP targets visitor arrivals via cruises to reach 456,164 passengers with 402 port calls in the Philippines by the end of its implementation in 2022. This target represents an average annual growth rate of 20.6 percent in port calls and 8.5 percent in passengers for the period 2018-2022.

## OBJECTIVES

To support NCTDSAP to achieve its goal of promoting the Philippines as a regional cruise center in Asia -- serving as a Home Port for international cruise ships, and the target to increase the number of port calls and passengers in 2022 and beyond -- this Program aims to develop and upgrade design and operational safety standards for cruise ships, promote local construction of cruise ships, and develop new cruise routes in order to provide more efficient and safe cruise ship services.

The Program impact will be increased revenue in maritime tourism, and maintained zero accident of tourist boats and pleasure crafts. The outcomes of the Program will be increased number of upgraded boats serving tourist destination areas (TDAs), number of Philippine registered tourist boats and pleasure crafts, number of new jobs generated by local shipyards in construction of boats/pleasure crafts, number of crew / personnel employed in foreign-flag cruise ships, and amount of remittances in dollars of foreign-flag cruise ship crew and personnel. These impact and outcomes will be achieved by delivering the following Program outputs:

- (vi) improved cruise ship designs and safety standards,
- (vii) developed cruise routes with improved infrastructure support in identified TDAs,
- (viii) developed/constructed ports in identified TDAs,
- (ix) locally constructed cruise ships/boats/yachts, and
- (x) trained cruise ship crew and other personnel.

These impact, outcomes and outputs are reflected in the Program results framework below, which will be monitored regularly, and evaluated at mid-term and end-of-program implementation. As the lead implementing agency, MARINA will be responsible for spearheading the monthly, quarterly and yearly internal performance monitoring in collaboration with cooperating/partner agencies based on an agreed results-based monitoring and evaluation (RbME) system which will be developed and operated by MARINA and partner agencies. An external evaluation will be contracted by MARINA with reputable service provider for the mid-term and end-of-program evaluation.

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<sup>48</sup> In 2017, this actual total cruise calls exceeded the country's projection of 105 port calls with 117,000 passengers, by 63 percent. Visiting cruise ships docked at Manila, Subic, Puerto Princesa, Coron, and Boracay, among others.

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	DATA	
<b>IMPACT</b>				
Maritime tourism in the country supported by safe, efficient and modern domestic shipping services	Maritime tourism revenue increased by 50% by EO 2028 from baseline	2017	TBD	TBD
	Number of tourist boats and pleasure crafts <sup>1</sup> accident maintained at 0 by EO 2028 from baseline	2017	0	TBD
	Amount of remittances in dollars of foreign-flag cruise ship crew and personnel increased by 273% by EO 2028 from baseline	2017	\$330 M <sup>5</sup>	\$900 M
<b>OUTCOMES</b>				
Number of upgraded boats serving tourist destination areas (TDAs) increased	Number of upgraded boats serving tourist destination areas (TDAs) increased by 80% by EO 2028 from baseline	2017	1,740 <sup>2</sup>	1,397
Philippine registered tourist boats and pleasure crafts operating in the Philippine waters increased	Number of Philippine registered tourist boats and pleasure crafts increased by 150% by EO 2028 from baseline	2017	238 <sup>3</sup>	595
Construction of cruise ships/ yacht in local shipyards employed more manpower	Construction of boats/pleasure crafts in local shipyards generated 18,096 new jobs by EO 2028 from baseline	2017	0	18,096 <sup>6</sup>
Crew and personnel employed in foreign-flag cruise ships increased	Number of crew and personnel employed in foreign-flag cruise ships increased by 273% by EO 2028 from baseline	2017	11,000 <sup>4</sup>	30,000
<b>OUTPUTS</b>				
Standard cruise ship designs for small and big ships developed and implemented	Standard cruise ship designs developed and implemented by EO 2019	2017	0	Design standards for cruise ships
Safety standards for cruise ships developed and implemented	Safety standards for cruise ships developed and implemented by EO 2019	2017	0	Safety standards for cruise ships

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	DATA	
Cruise routes developed for maritime tourism with improved infrastructure support	Number of developed cruise routes for maritime tourism with improve infrastructure support increased by 233% by EO 2028 from baseline	2017	3	7
Port facilities and terminals in identified TDAs developed and improved	Number of port facilities and terminals in identified TDAs developed and improved	2017	9	109 ports in identified TDAs completed
New cruise ships acquired and registered	3 new cruise ships acquired by EO 2028	2017	0	3
Cruise ship crew trained	Number of trained cruise ship crew increased by 273% by EO 2028 from baseline	2017	11,000 <sup>7</sup>	30,000 <sup>8</sup>
<b>KEY ACTIVITIES<sup>1</sup></b>				
1.1 Review and amend current policies and legislations to support the development of maritime tourism 1.2 Identify, formulate and implement appropriate new policies to improve shipping services for maritime tourism 2.1 Develop and implement standards for construction of cruise ships, boats and yachts for maritime tourism 2.2 Formulate and implement safety standards for cruise ships, boats and yachts for maritime tourism 2.3 Monitoring compliance of cruise ship operators with safety standards 3.1 Streamline regulatory requirements and processes for cruise ship operations 3.2 Identify incentives to attract potential cruise ship operators to invest in maritime tourism 3.3 Develop/construct and operate ports/terminals/facilities in identified TDAs 4.1 Develop and implement capacity building program for cruise ship building manpower, and cruise ship crew 1.1 Set goals in promote the country's maritime tourism to global travel industry/cruise tourism market 1.2 Conduct situation analysis (study) 1.3 Design a client-driven marketing strategy and marketing mix 1.4 Implement the plan				

Notes: <sup>1</sup>Pleasure craft is defined as a vessel propelled by any means which is intended for use exclusively for sport or pleasure/recreation purposes that may include yachts but does not include any craft which is used to carry passengers on sightseeing tours for commercial use.

<sup>2</sup>Number of existing wooden-hulled ships based on MARINA Franchising Service Report on the Implementation of MC 2016-02 on the Phase-out of WHS Carrying Passengers in Domestic Shipping dated 06 July 2018.

<sup>3</sup>MARINA Philippine Registry of Ships as of 2017.

<sup>4</sup>Number of Filipino crew employed by Royal Caribbean Cruise Lines as of 2017.

<sup>5</sup>Average annual income of crew \$ 33,000 x 11,000 crew employed on cruise ships.

<sup>6</sup>The estimated number of employment to be generated for the construction of boats is based on the minimum manpower requirement of 13 workers under MC 2015-02 multiplied by the number of target boats to be build/ upgraded by 2028.

<sup>7</sup>Number of Filipino crew employed by Royal Caribbean Cruise Lines as of 2017.

<sup>8</sup>Number of Filipino crew to be employed by Royal Caribbean Cruise Lines by 2028.

<sup>9</sup>These activities will be detailed in the preparation of the implementation plan.

## SPATIAL CONTEXT

This Program will cover all Philippine-registered cruise ships operating in existing and potential port calls/destinations in the country as specified in NCTDSAP. Areas with ready ports will be initially covered by the Program to accommodate cruise ships, such as, the “Turquoise Triangle” (Manila; Boracay, Caticlan, Aklan; and Puerto Princesa, Palawan) where all existing ports are accessible due to geography and inter-port distances. The cruise destinations in “Turquoise Triangle” are grouped in the three apexes, namely:

- **Manila** and Subic Bay;
- **Boracay** and Iloilo and Romblon; and
- **Puerto Princesa** and El Nido and Coron.

The other potential Philippine cruise destinations to be covered by the Program are:

- Aparri;
- Batanes;
- Currimaog/Salomague, Ilocos Norte;
- Cebu, Cebu Province
- Tagbilaran City, Bohol;
- Cagayan de Oro, Misamis Oriental; and
- Davao City.

## PROGRAM COMPONENTS

The key Program components will include:

- (i) Creation of a Maritime Tourism Committee (MTC);
- (ii) Design and safety standards for construction and operation of cruise ships, boats and pleasure crafts;
- (iii) Facilitating investments in maritime tourism (Ease of Doing Business);
- (iv) Capacity building of cruise shipbuilding manpower and cruise ship crew;
- (v) Promotion of maritime tourism to global travel industry/ cruise tourism market; and
- (vi) Program management, monitoring and evaluation support.

## IMPLEMENTATION SCHEDULE

This program is designed for 10 years (see **Appendix 3**).

## IMPLEMENTATION ARRANGEMENTS

This Program will be implemented by MARINA in collaboration with other agencies under the DOTr like the PCG and PPA and other mandated agencies, such as; DOT,

DENR, Department of Public Works and Highways (DPWH), Department of Trade and Industry/Board of Investments (DTI/BOI), DOF/BOC, Department of Justice/Bureau of Immigration (DOJ/BI), LGUs, financial institutions and the private sector. The implementation arrangements for this Program are summarized in the table below.

Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
<b>Component 1 Creation of a Maritime Tourism Committee (MTC)</b>				
1.1 Organize MTC	MARINA	Draft an Executive Order for Creation of MTC  Lead in formulation /implementation of the Maritime Tourism Program	DOTr/PPA, DOT, DPWH, DOJ/BI, DOF/BOC, BOQ, PAGCOR, TIEZA, DTI/BOI, DENR and private sector representatives	Formulate/implement projects/activities under the Maritime Tourism Program
1.2 Review and amend current policies and legislations to support the development of maritime tourism	MARINA	Collaborate with concerned agencies/ Flag State Policy	DOTr/PCG, DOF/BOC, DOJ/BI, DENR	Port State Policy Customs Policy Immigration Policy Environment Policy
1.3 Identify, formulate and implement appropriate policies to support maritime tourism	MARINA	Collaborate with concerned agencies	DOTr/PPA, DOT, DPWH, DOJ/BI, DOF/BOC, BOQ, PAGCOR, TIEZA, DTI/BOI, DENR and private sector representatives	Formulate and implement appropriate policies in support of the Program
<b>Component 2 Design and Safety Standards for Cruise Ship, Boat and Pleasure Craft Construction and Operation</b>				
2.1 Develop and implement standards for construction of cruise ships, boats and yachts for maritime tourism	MARINA	Perform activity 2.1	Boating Industry Association of the Philippine (BIAP) and Shipbuilding Associations of the Phils. (ShAP)	Cooperate and assist in the development of, and compliance with, the design standards
2.2 Formulate and implement safety	MARINA	Perform activity 2.2	Classification Societies/ROs	Assist in the development and implementation of

Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
standards for cruise ships, boats and yachts for maritime tourism				the safety standards
2.3 Monitoring compliance of safety standards	MARINA	Conduct regular inspection and monitoring	DOTr/PCG	Enforcement of safety standards
<b>Component 3 Facilitating Investments in Maritime Tourism (Ease of Doing Business)</b>				
3.1 Streamline regulatory requirements and processes	MARINA	Collaborate with concerned agencies	DOF/BOC, DTI/BOI	Streamline documentary requirements and processes
3.2 Identify incentives and financing packages to attract investments in maritime tourism	MARINA	Identify appropriate incentives and financing packages such as: <ul style="list-style-type: none"> <li>• Tonnage fee exemption</li> <li>• Tax free importation of cruise ships/boats/pleasure crafts for tourism</li> <li>• Fiscal incentives for construction of ports and marinas</li> </ul>	DTI/BOI, Financing Institutions	Develop and provide incentives and financing packages to cruise ship, boat and pleasure craft, and shipbuilding operators
3.3 Develop/construct and operate ports/terminals/facilities/marinas in identified TDAs	PPA, CPA other port authorities, LGUs	Develop and improve ports, and port facilities, terminals and marinas	MARINA	Assist PPA and other port authorities and LGUs in implementing port design standards for different types of ships
<b>Component 4 Capacity Building of Cruise Shipbuilding Manpower and Cruise Ship Crew</b>				
4.1 Develop and implement capacity building program for cruise ship	MARINA	Design and implement capacity building program in collaboration	Shipyards TESDA Cruise Ship Lines/Companies	Assists MARINA in the design and implementation of capacity building programs

Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
building manpower, and cruise ship crew		with shipyards and cruise ship lines/ companies		
<b>Component 5 Promotion of Maritime Tourism to global travel industry/ cruise tourism market</b>				
5.1. Set goals for the promotion of the maritime industry	DOT	Identify mission, and objectives of the project	MARINA DTI DFA	Participate in planning workshops to reach a consensus on the project objectives
5.2. Conduct situation analysis (study)	DOT	Identify and analyze factors affecting the marketplace and the client's needs	MARINA	Provide input and data to the market research.
5.3. Design a client-driven marketing strategy and marketing mix	DOT	Develop the marketing plan and identify the resources needed	DTI	Review the strategy and provide feedback to refine it.
5.4. Implement the plan	DOT	Launch and carry out the plan.	DFA	Support the conduct of the plan.

## PROGRAM COST

The Program is estimated to cost PhP147.4 billion pesos for a 10-year period of implementation, broken down by component as summarized below.

Item	Amount (Million Pesos)
<b>A. Base Cost (2018 prices)</b>	
Component 1: Creation of a Maritime Tourism Committee (MTC)	2.00
Component 2: Design and Safety Standards for Cruise Ship Construction and Operation	50.00
Component 3: Facilitating Investments in Maritime Tourism (Ease of Doing Business)	2.00
Component 4: Capacity Building of Cruise Shipbuilding Manpower and Cruise Ship Crew	10.00
Component 5: Promotion of Maritime Tourism	50.00

Item	Amount (Million Pesos)
Component 6: Program Management Support	20.00
<b>Subtotal</b>	<b>134.00</b>
<b>B. Contingencies (Computed at 10%)</b>	
Physical and price contingencies	13.40
<b>C. Total</b>	<b>147.40</b>



### Program 3: Development of Coastal and Inland Waterways Transport (CIWT) System

#### RATIONALE

Coastal and inland waterways are important part of the Philippine economic development, particularly in the past where traded commodities were shipped by water from the coast or ocean through rivers and lakes to reach the final destination areas. Until recently, many of the country's rivers (i.e., Pasig River, Cagayan River, Pampanga River, Agusan River, Mindanao River, etc.) serve as watercourses to transport agricultural products from upstream communities to central markets, including local people to reach workplaces, schools and other service centers. The Philippines consists of 421 rivers, of which 50 are considered biologically dead due to pollution, siltation and other environmental problems. The other rivers (and lakes) are potential inland waters for the development of CIWTS. Based on available data, the country's 38 bays and coasts cover an area of 266,000 km<sup>2</sup>, while inland waters cover 1,830 km<sup>2</sup>.

In the country, the **Pasig River Ferry Service** is the only water-based inland waterways transport system in Metro Manila that cruises the Pasig River from Pinagbuhatan in Pasig City to Intramuros in Manila City. This ferry system was originally operated by a private shipping company in 1990 which lasted for only one year, and reopened in 1996 under another private shipping company but also closed after three years of operation. In both cases, ferry service's short-lived operation was attributed to the proliferation of informal settlers, presence of water lilies, and various environmental problems which posed severe risks to health and life passengers, and safety of ferry boats. The latest ferry service, reactivated in 2014, was placed under the management of the Metro Manila Development Authority (MMDA). As designed, the main purpose of this ferry system was to decongest urban traffic in Metro Manila, estimated with a possible reduction of traffic volume by 30 percent at full operation.

Pasig River is 27 km in length and 3.2 km longer than EDSA, the primary north-south land transport corridor in Metro Manila, where travelers spend two or longer hours each day especially during "rush periods". Reviving the Pasig River ferry cruise service with water-front development will significantly ease urban road density and traffic, resulting in shorter transport cost and time, and reduction in air pollution in addition to the other benefits identified below. Further expansion of the Pasig River ferry cruise to connect coastal cities and municipalities of Bataan and Cavite provinces offers potential significant reduction in traffic loads and car accidents along North and South Luzon Expressways (NLEX and SLEX), respectively, and provides options to vehicle owners and travelers heading for provinces north and south not to pass through EDSA and other Metro Manila's road networks.

In Region 1 (Northern Luzon), the Regional Development Council (RDC) has planned to establish a **Tri-City Ferry System** that links the cities of Dagupan and Alaminos in Pangasinan, and San Fernando in La Union in order to reduce the heavy flow of road traffic in the three cities and, at the same time, provide a faster and more convenient alternative mode of transport for tourists and local travelers. However, this plan will

have to undergo detailed feasibility study to determine economic and financial viability, social acceptability and environmental sustainability.

Until 1980, urban population accounted for nearly 37.5 percent of total population in the Philippines. Thirty years later, the country witnessed a rapid urbanization characterized by significant migration of rural population to major cities and highly urbanized areas. As a result, urban population increased to 45.3 percent of total population in 2010 and 46.5 percent in 2017. Based on the latest population projections made by the Philippine Statistics Authority (PSA), urban population will further grow to 47.2 percent of total population in 2030 and 52.6 percent in 2040. This means that over 50 percent of total population will be living in urban areas in the next 22 years. Hence, the development of CIWT system is a significant and timely initiative to develop an alternative mode of transport other than land route in the next 10 years to reduce traffic and urban congestion, create new development opportunities, raise property values along riverbanks, and promote healthy human activities through walkways and bike lanes along riverbanks. The development of CIWTS also prevents the country's highly urbanized cities to be ranked among the top 25 most congested cities in the world based on the TomTom Traffic Index published by the Dutch's navigation company TomTom.<sup>49</sup>

Heavy traffic has become a major concern of the government, private sector and urban settlers not only in Metro Manila but in the other metropolitan and highly urbanized areas in the country. One of the solutions being looked into by the government is the development of ferry system in the coastal and inland waterways. This alternative mode of transport is more economical, efficient, safe and less pollutant to environment than land transport system.

## OBJECTIVES

The development of CIWT system aims to increase the efficiency, safety and utility of transport system in the country's metropolitan and highly urbanized areas by reducing traffic congestion, improving connectivity between these areas, upgrading ferry boat designs and safety standards, enhancing navigability and quality of coastal and inland waterways, and providing access channel for sealift emergency operation during disasters and other related cases. As a pioneering effort, the Program will be carried out in two phases: (i) inland waterways transport (IWT) system development during the period 2019-2024; and (ii) expansion of IWT to cover coastal areas (CIWT) during the period 2025-2029).

The Program impact will be an efficient, safe and environmentally-sustainable CIWT system to be measured by the reduced cost and time of transport, and increased passengers' satisfaction with CIWT system. The outcomes of this Program will be increased movement of people and goods, and generated investments in CIWT boat and facility operation. The impact and outcomes will be achieved by the following outputs:

- (i) Development of design and ecological standards for CIW,

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<sup>49</sup> Shead, S., 2017. "The 25 most congested cities in the world," in U.K. Business Insider. Accessed from <http://uk.Businessinsider.com/most-congested-cities-tomtom-traffic-index-2017-2>.

- (ii) installation/improvement of CIWT system markings/navigational aids,
- (iii) design, construction and O&M standards for CIWT boats and ports/terminals/facilities,
- (iv) CIWT information system (CIWT-IS) establishment, and
- (v) capacity building of CIWT personnel.

The results framework of the Program (without the means of verification and assumptions columns) is shown below.

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	DATA	
<b>IMPACT</b>				
Efficient and safe coastal and inland waterways transport (CIWT) system developed	Efficient and safe CIWT system reduced time and cost of transport in urban and coastal areas by 30% by EO 2028 from baseline	2017	0	Transport time and cost by CIWT system reduced by 30%
	Passengers' satisfaction with CIWT system increased by 85% by EO 2028 from baseline	2017	0	Passengers' satisfaction rating increased by 85%
<b>OUTCOMES</b>				
Mobility of passengers and cargoes increased	Number of passengers transported by CIWT system increased by 90% by EO 2028 from baseline	2017	0	CIWT system transported 90% of passengers at full capacity
	Volume and value of cargoes transported by CIWT system increased by 80% by EO 2028 from baseline	2017	0	Volume and value of cargoes transported by CIWT system increased by 80%
Investments in CIWT ship and facility operation generated	Amount of investments in CIWT ship and facility operation generated PhP 1.9 Billion by EO 2028	2017	0	P 1.9 B investments generated for CIWT system
<b>OUTPUTS</b>				
1. Design/dimension of coastal and inland waterways (CIW) developed and implemented	Manual/Guidelines on Design, Development and Maintenance of CIW Waterways completed and implemented by EO 2019	2017	0	Manual/Guidelines on Design, Development and Maintenance of CIW Waterways
2. Ecological standards when designing waterways applied and monitored	Ecological standards for CIW development and maintenance completed and implemented by EO 2019	2017	0	Ecological standards for CIW development and maintenance
3. Quality waterways markings/	CIW markings/navigational aids established by EO 2020 and maintained regularly	2017	0	CIW markings/navigational aids

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	DATA	
navigational aids established and maintained				established and maintained
4. Design, construction, and O&M of ports/landings/terminals developed/improved	60 ports/landings/terminals with improved design and O&M constructed/upgraded for 6 priority CIWT systems by EO 2020	2017	0	60 ports/landings/terminals constructed/improved
5. Design, construction, and O&M of CIWT boats improved	60 CIWT boats with improved design and O&M constructed and operating by EO 2020	2017	0	??? CIWT boats constructed and operating
6. CIWT Information System (CIWT-IS) established and implemented	CIWT-IS established and implemented by EO 2020	2017	0	CIWT-IS established and functional
7. Number of personnel trained on CIWT system development	190 personnel trained on CIWT system development conducted periodically from 2019 and thereafter	2017	0	190 personnel training on CIWT system development and maintenance
<b>KEY ACTIVITIES</b>				
1.1 Develop Classification Standards of Waterways 1.2 Develop Ecological Standards 1.3 Install and maintain navigational aids (bank markings, float, buoys, etc.) 1.4 Operate and maintain CIWT boats 1.5 Develop and implement capacity building program for CIWT personnel 1.6 Develop and implement IEC materials and activities 2.1 Design and construct Ports/Landings/Terminals Including Technical Maintenance and Operational Management 2.2 Operate and maintain ports/landings/terminals including search and rescue (S&R) measures 3.1. Develop and implement Boat Design and Safety Standards 3.2. Develop and implement capacity building program for CIWT crew 3.3. O&M of boats 4.1 CIWT-IS Database Development 4.2 Promotion and capacity building of CIWT-IS 4.3 Evaluation of CIWT-IS				

## SPATIAL CONTEXT

This Program will cover the metropolitan and highly urbanized areas with coastal/inland waters, such as but not limited to: Metro Manila through the Pasig River Ferry System; San Fernando City, La Union - Dagupan City and Alaminos City,

Pangasinan through the Tri-City Ferry System; Metro Cebu; Metro Davao; Manila - Subic; Manila - Batangas; and Manila - Calapan City, Oriental Mindoro routes where water transport can serve as an alternative mode of transport.

### PROGRAM COMPONENTS

The key Program components will include:

- (viii) Waterways development and maintenance;
- (ix) Ports/landings/terminals construction, and operation and maintenance (O&M);
- (x) Boat building and O&M;
- (xi) CIWT information system (CIWT-IS) establishment and operation;
- (xii) Capacity building on CIWT boat and system design and safety standard;
- (xiii) Development and implementation of information, education and communication (IEC) plan; and
- (xiv) Program management, monitoring and evaluation support.

### IMPLEMENTATION SCHEDULE

This Program will be implemented for 10 years (see **Appendix 3**).

### IMPLEMENTATION ARRANGEMENTS

MARINA will take the lead role in implementing CIWTS Program with PPA and PCG, all of which are under DOTr; DPWH, DENR/NAMRIA, other concerned government entities, and all LGUs along coastal and inland waterways to be covered by the Program as cooperating partners. The key responsibilities of the Program actors are summarized in the table below.

Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
<b>Component 1: Waterways Development and Maintenance</b>				
1.1 Develop and implement CIW classification standards	MARINA	Develop and implement CIW classification standards (navigability and safety)	DENR/NAMRIA, DOTr/PCG, LGUs	ECC, water quality Waste management and river description and information
1.2 Develop and implement Ecological Standards	DENR	Develop and implement ecological standards	DOTr/MARINA, DOTr/PCG, LGUs	Assist DENR in implementation of ecological standards
1.3 Install and maintain navigational aids (bank markings, float, buoys, etc.)	PCG	Safe navigation/provision of facilities	DENR/NAMRIA, LGUs	Assist PCG in installation and protection/maintenance of markings/navigation aids

Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
1.4 Operate and maintain CIW system	LGUs	Safe navigation/ provision of facilities	DOTr/MARINA / PCG, DENR, LGUs	Assist and monitor CIW operation and maintenance; waterways environmental protection; and informal settlers management
1.5 Develop and implement capacity building program for CIWT personnel	MARINA	Ensure competency of CIWT personnel on waterways development and maintenance	LGUs, Private Sector	Support and compliance to capacity building of CIWT personnel
1.6 Develop and implement IEC materials	MARINA	Create/enhance awareness on the Program	LGUs	Support to IEC activities
<b>Component 2: Ports/Landings/Terminals Construction and O&amp;M</b>				
2.1 Design and construct ports/landings/terminals Including technical maintenance and operation management	MARINA	Design, construct, and O&M ports/landings/terminals (navigability and safety)	DOTr/PCG/PPA, DPWH, DBP, LBP, DTI/BOI, DENR, DOF/MDFO, LGUs, Private Sector	Develop and implement financing and incentives packages; support ecological and safety standards for ports/landings/terminals ; Investments; waste management system; and invest in ancillary business
2.2 Operate and maintain ports/landings/terminals including search and rescue (S&R) measures				
<b>Component 3: Boat Building and O&amp;M</b>				
3.1 Develop and implement Standard Boat Design and Safety Standards	MARINA	Design and operational standards (safety)	DBP, LBP, Private sector/ SBSR	Develop and implement financing and incentives packages for CIWT boatbuilding and boat companies
3.2 Develop and implement capacity building program for CIWT crew	MARINA	Ensure CIWT crew competency on CIWT standards	Private sector	Ensure compliance with crew documentation

Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
3.2 O&M of boats	Private sector/ investors	Comply with standards to ensure safe operation of boats	DOTr/MARINA / PCG	Assist CIWT CIWT boat companies, and enforce standards and monitor compliance
<b>Component 4: CIWT-IS Establishment and Operation</b>				
<b>1.1 Database Development</b>				
<ul style="list-style-type: none"> <li>Database Planning</li> </ul>		Identify the goals, objectives, and feasibility of the project. Consult with, and reach an agreement among stakeholders on what they want in a system. The output is the statement of requirements.	DOTr/PCG/ PPA, DENR/ NAMRIA, LGUs	Participation in planning sessions to identify the database requirements.
<ul style="list-style-type: none"> <li>Analysis</li> </ul>		Get detailed description of the data that will suit user requirements. The output is the system specification.		
<ul style="list-style-type: none"> <li>Database Design</li> </ul>		Prepare the conceptual design, logical design, and physical design of the system. The output is the design document.		Provide feedback on the design.
<ul style="list-style-type: none"> <li>Construction / Implementation</li> </ul>		Construct the system based on design document. Consider the environment in which the system will be operating.		Provide / share the required data to populate the database
<ul style="list-style-type: none"> <li>Testing / Implementation and roll-out, capacity building</li> </ul>		Deploy the database to the field and provide training sessions on how the system operates. The output is the released system.		Nominate users who will test the system. Participate in the training sessions and provide counterpart support.



Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
<ul style="list-style-type: none"> <li>Ongoing support / Maintenance</li> </ul>		Identify and correct bugs in the system. Provide security patches and performance enhancements.		Provide regular user feedback to help improve the system.
<b>1.2 Promotion and capacity building</b>				
<ul style="list-style-type: none"> <li>Development and publication of training manual, communication materials</li> </ul>		Prepare training manual for the system and communication materials to promote its use.		Promote the use of the database
<ul style="list-style-type: none"> <li>Knowledge sharing events and promotional activities</li> </ul>				Help in disseminating communication materials
<ul style="list-style-type: none"> <li>Organization of capacity building program/sessions</li> </ul>		Organize additional training sessions for users as needed		Attend trainings sessions, as needed
<b>1.3 Evaluation</b>		Organize annual evaluation of the system		Participate in the evaluation.

## PROGRAM COST

The Program is estimated to cost PhP2.64 billion pesos for a 10-year implementation period.

Item	Amount (Million Pesos)
<b>A. Base Cost (2018 prices)</b>	
Component 1: Waterways Development and Maintenance	380.00
Component 2: Ports/Landings/Terminals Construction and O&M	1,500.00
Component 3: Boat Building and O&M	420.00
Component 4: CIWT-IS Establishment and Operation	30.00
Component 5: Program Management Support (including Feasibility Studies)	66.00
<b>Subtotal</b>	<b>2,396.00</b>
<b>B. Contingencies (Computed at 10%)</b> Physical and price contingencies	239.60
<b>C. Total</b>	<b>2,635.60</b>



## Program 4: Strengthening of the Safety Standards of Philippine-Registered Fishing Vessels

### RATIONALE

In the agriculture industry, fisheries is the second most important subsector - next to crops - in the Philippines. In 2015, fisheries contributed 1.5 percent and 1.7 percent at current and constant prices, respectively, to gross domestic products (GDP) of the country, providing employment and livelihood to over 1.6 million Filipinos, 85 percent of whom were from municipal fisheries and 1 percent from commercial fisheries, while aquaculture employed 14 percent<sup>50</sup>. The contribution of fisheries to total GDP contracted to 1.3 percent in 2016<sup>51</sup>. This reflected the continuing decline in fisheries production from 4.97 million MT in 2011 to 4.36 million MT in 2016<sup>52</sup>. However, the food consumption requirements from fisheries of the growing population, despite a slowing down in population growth rate, has also increased pressures on the subsector and the fisheries resources in the country. In 2017, total population reached to about 103 million, and mean per capita consumption of fish and fishery products reported at 40 kg/year or 109 grams/day, which accounted for 12.8 percent of total intake.

The Philippines ranked 7<sup>th</sup> among the world's top 10 fish producing countries in 2013, then dropped to 10<sup>th</sup> position in 2015, and eventually lost its place in 2016 up to 2018 due to overfishing; and illegal, unreported and unregulated fishing (IUUF) practices. Moreover, the rights granted by the government to foreign investors in fishing operations in the country have also increased stress on marine resources and ecosystems, and contributed to steady decline in the country's fish stocks. Some of the key fishing groups have been reported to be approaching, have exceeded, the point of maximum exploitation levels.

Across the country, coastal fishers now have to venture farther and farther out to sea to catch fish; and have to increasingly rely on motorized vessels, instead of the traditional non-motorized bancas, thus entailing higher operational costs associated with fuel and engines, among others, than the traditional method. Accompanying this new order in fishing operations -- "farther and farther out to sea" -- has been the reportedly increasing fishing accidents, involving the death of fishing crew and/or damage or loss of fishing boats due to bad weather conditions, hazardous waters, high sea waves, and ignition of illegal fishing devices (i.e., dynamites). At present, there is no systematic data recording, compilation, analysis and reporting of fishing accidents in the country; hence, most information only appears in daily newspapers. Scientific study on factors contributing to these fishing accidents in the Philippines also does not exist to date. These increasing fishing accidents raise new questions about the safety of fishing crew and fleet, as well as the general working conditions for fishing crew

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<sup>50</sup> Lamarca, N. S. J., 2018. Fisheries Country Profile: Philippines. Southeast Asian Fisheries Development Center (SEAFDEC) website. Accessed from <http://www.seafdec.org/fisheries-country-profile-philippines/>.

<sup>51</sup> Bureau of Fisheries and Aquatic Resources. Fish Contribution to the Economy 2016. Accessed from <https://www.bfar.da.gov.ph/profile?id=18#post>.

<sup>52</sup> PSA, 2017. Fisheries Statistics of the Philippines. Accessed from <https://psa.gov.ph/sites/default/files/FStatPhil14-16docx%282%29.pdf>.

(most particularly the millions of small coastal fishers), in light of the growing fisheries' commercialization and competition in the country.

The International Maritime Organization (IMO) identifies four (4) pillars for fishing vessel safety for fishing and fishers, which include the following mandatory agreements/ conventions:

5. **IMO's 2012 Cape Town Agreement (CTA)** - Not yet in force. It aims to facilitate better control of fishing vessel safety by flag, port and coastal States; and contribute to the fight against IUUF<sup>53</sup>. It also includes mandatory international requirements for stability, construction and associated seaworthiness of fishing vessels of 24 meters in length and over, as well as requirements for life-saving appliances, communications equipment and fire protection.
6. **IMO's STCW-F Convention on Training of Fishers** - It entered into force in 2012. It seeks to promote the safety of life at sea and the protection of the marine environment, taking into account the unique nature of the fishing industry and the fishing working environment.
7. **ILO's Work in Fishing Convention 2007 (Convention No. 188)** - It entered into force in 2017. It sets minimum requirements for work on board including hours of rest, food, minimum age and repatriation.
8. **FAO's Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (PSMA), 2009** - It entered into force in 2016. It seeks to prevent, deter and eliminate IUUF through adoption and implementation of effective port State measures.

IMO has also worked to address fishing vessel safety for many decades, in collaboration with the Food and Agriculture Organization of the United Nations (FAO) and the ILO on non-mandatory instruments which address the design, construction and equipment of fishing vessels, as follows:

- Code of Safety for Fishermen and Fishing Vessels, 2005;
- Revised Voluntary Guidelines for design, construction and equipment of small fishing vessels, 2005;
- Safety Recommendations for Decked Fishing Vessels of Less Than 12 Meters in Length and Undecked Fishing Vessels; and
- Implementation Guidelines on Part B of the Code of Safety, the Voluntary Guidelines, and the Safety Recommendations (Implementation Guidelines).

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<sup>53</sup> FAO describes illegal, unreported and unregulated fishing (IUUF) to include: (i) fishing and fishing-related activities conducted in contravention of national, regional and international laws; (ii) non-reporting, misreporting or under-reporting of information on fishing operations and their catches; (iii) fishing by "Stateless" vessels; (iv) fishing in convention areas of Regional Fisheries Management Organizations (RFMOs) by non-party vessels; and fishing activities which are not regulated by States and cannot be easily monitored and accounted for. [Accessed from http://www.fao.org/iuu-fishing/en/](http://www.fao.org/iuu-fishing/en/).

The Program intends to strengthen the safety standards for fishers and fishing vessels in all Philippine-registered fishing vessels to support a safer and sustainable fishing industry.

## OBJECTIVES

The main objective of this Program is to increase the efficiency and safety of all Philippine-registered fishing vessel operations, both in commercial and municipal fisheries, through improved regulatory framework for fishing vessel design and operational safety standards; improved database on fishing accidents, and preventive and response actions; upgraded fishing crew competency; increased level of awareness on fishing safety standards by DA/BFAR and LGU personnel and fishers associations; and reduced high-risk fishing vessels and fishing accidents.

The Program impact will be more efficient and safe fishing vessel operations in the country with the implementation of IMO and ILO conventions on safety of life at sea and fishing vessels, onboard welfare of fishing crew, and prevention of IUUF practices through the development of national policy on fishing vessel operations safety standards. This impact will be measured by the reduced fishing vessels operation cost, and maritime accidents involving fishing vessels. The outcomes of the Program will be reduced IUUF practices and increased number of fishing vessels registered with Fishing Vessel Safety Certificates (FVSC).

These Program impact and outcomes will be achieved by delivering the following outputs:

- (vi) developed and implemented new fishing vessels safety rules and regulations;
- (vii) trained trainers, operators and seafarers on fishing vessels safety;
- (viii) developed and implemented safety designs in fishing vessels;
- (ix) developed and disseminated IEC materials to fishing key stakeholders; and
- (x) developed and maintained a database on fishing vessels and crew.

The results framework of the Program (without the means of verification and assumptions columns) is shown below.

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	VALUE	
<b>IMPACT</b>				
More efficient and safe fishing vessels operations developed and maintained	Fishing vessels operation cost reduced by 10% by EO 0f 2028 from baseline	2017	3,184 Billion	3,502 Billion
	Maritime accidents / incidents involving fishing vessels reduced by 50% by EO 2028 from baseline	2017	210, 035	105,018

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	VALUE	
<b>OUTCOMES</b>				
Rationalized regulatory regime of fishing industry developed and implemented	Operation of illegal, unregulated and unreported fishing (IUUF) practices reduced by 10% per year from baseline	2017	0	IUUF practices reduced by 10% per year
Number of high-risk fishing vessels reduced	Fishing vessels registered with Fishing Vessel Safety Certificates (FVSC) increased by 10% by EO 2028 from baseline	2016	<b>Municipal:</b> 192,351 <i>(sourced: BFAR)</i>  <b>Commercial:</b> 10,589 out of 17,684 (60%) with FVSC <i>(source: DSS and MSS, MARINA)</i>	<b>Municipal:</b> 498,908 <b>Commercial:</b> 18,758 or 100% by EO 2024
<b>OUTPUTS</b>				
Fishing vessels safety rules and regulations (FVSRR) developed and implemented to include adoption of CTA and STCW-F	FVSRR developed and implemented by EO 2019 and thereafter	2017	0	FVSRR developed and implemented
Trainers, operators and seafarers on-board fishing vessels trained on safety in fishing vessels operations	Number of trainers, operators and seafarers trained on safety in fishing vessels operation increased by 10% annually starting in 2019	2017	130	337
Safety designs in fishing vessels developed and promoted with fishing operators and associations	Number of fishing operators and associations informed on safety designs on fishing vessels increased by 50% by EO 2022	2017	40,000	100% of fishing operators and associations fully informed by 2022
User-friendly fishing safety guides as Information, Education and Communication (IEC) materials developed and disseminated	IEC materials developed and disseminated to fishing operators and associations completed by EO 2019	2017	0	IEC materials developed and disseminated to fishing operations and associations completed
Development of a database of fishing vessels (municipal	Database established by EO 2020 and	2017	0	Database establishment completed

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	VALUE	
and commercial fishing vessels) and crew on board (officers and ratings)	maintained thereafter			
<b>KEY ACTIVITIES</b>				
1.1	Complete Staff Work for CTA and STCW-F presentation to Department Foreign Affairs (DFA)			
1.2	Prepare legislation proposal			
1.3	Lobby with Congress for proposed legislation approval			
1.4	Formulate and enforce Implementing Rules and Regulations (IRR)			
2.1	Formulate and implement Trainers' Training Program			
2.2	Formulate and implement Training/Familiarization Program for Stakeholders			
3.1	Coordinate with DA/BFAR regarding identification of fishing grounds			
3.2	Coordinate with SBSR companies regarding appropriate design of vessels operating within identified fishing grounds			
4.1	Conduct communication needs assessment			
4.2	Design strategy for IEC materials development and dissemination			
4.3	Implement strategy			
4.4	Monitor and evaluate IEC materials			
4.5	Conduct Training/Familiarization for key stakeholders (MROs, DA/BFAR, LGUs, and fishing associations)			
5.1	Develop database on registered fishing vessels and crew			
5.2	Promotion and capacity building of database			
5.3	Evaluation of database			

## SPATIAL CONTEXT

This Program will be implemented nationwide, covering all Philippine-registered fishing vessels operating in the Philippine and international waters.

## PROGRAM COMPONENTS

The Program components will include:

- (i) Development and implementation of Fishing Vessels Safety Rules and Regulations (FVSRR) to include adoption of CTA and STCW-F;
- (ii) Development and Implementation of Capacity Building Program for Trainers, Operators and Seafarers on Safety in Fishing Vessels Operations;

- (iii) Development and Promotion of Safety Designs in Fishing Vessels;
- (iv) Development and Dissemination of User-Friendly Fishing Safety Guides as Information, Education and Communication (IEC) Materials;
- (v) Development of a Database of Fishing Vessels (Municipal and Commercial Fishing Vessels) and Crew (Officers and Ratings); and
- (vi) Program Management Support.

## IMPLEMENTATION SCHEDULE

This Program will be implemented for a period of 10 years (see **Appendix 3**).

## IMPLEMENTATION ARRANGEMENTS

This Program will be implemented by MARINA in close collaboration with DA/BFAR, DOTr/PCG, LGUs, and fishing operators and associations for the development, training, IEC and implementation of FVSRR to attain the desired Program results. Implementation arrangements for this Program are summarized in the table below.

Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
<b>Component 1: Development of Fishing Vessels Safety Rules and Regulations (FVSRR) taking into consideration the CTA and STCW-F for possible amendments</b>				
1.1 Complete Staff Work for CTA and STCW-F presentation to Department Foreign Affairs (DFA)	MARINA	Develop, implement and monitor compliance to PFVSRR to include CTA and STCW-F including lobbying with Congress for approval of appropriate legislation/s on FVSRR	DA/BFAR,	Coordinate and enforce FVSRR for commercial fishing vessels
1.2 Prepare legislation proposal			DOTr/PCG	Enforce FVSRR and monitor compliance
1.3 Lobby with Congress for proposed legislation approval			LGUs	Enforce FVSRR for municipal fishing vessels, and monitor compliance
1.4 Formulate and enforce Implementing Rules and Regulations (IRR)			DFA	Submit legal instrument to IMO for ratification Invest and comply with FVSRR
			Fishing operators and associations Bantay Dagat	Assist in enforcing FVSRR for municipal fishing vessels
<b>Component 2: Development and Implementation of Capacity Building Program for Trainers, Operators and Seafarers on Safety in Fishing Vessels Operations</b>				
2.1 Formulate and implement Trainers'	MARINA	Train MARINA Central Office and MRO personnel as trainers		

Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
Training Program		on safety in fishing vessels (Trainers' Training)		
2.2 Formulate and implement Training/ Familiarization Program for Stakeholders	MARINA	Conduct Familiarization Training for other key stakeholders  Monitor knowledge application by other key stakeholders	DA/BFAR, DOTs/PCG, LGUs, and Fishing Associations	Participate in Familiarization Program on safety in fishing vessels, and conduct Safety Training (Transfer of Knowledge) on their Respective Areas of Jurisdiction
<b>Component 3: Development and Promotion of Safety Designs in Fishing Vessels</b>				
3.1 Coordinate with DA/BFAR regarding identification of fishing grounds	MARINA	Develop and promote safety designs on fishing vessels with DA/BFAR and fishing operators/ associations	DA/BFAR and LGUs	Identify fishing grounds
3.2 Coordinate with SBSR companies regarding appropriate design of vessels operating within identified fishing grounds			DOTr/PCG	Enforce safety designs on fishing vessels, and monitor compliance
			Fishing Operators and Associations	Invest and comply with safety design standards
<b>Component 4: Development and Dissemination of User-Friendly Fishing Safety Guides as Information, Education and Communication (IEC) Materials</b>				
4.1 Develop and disseminate IEC materials on fishing safety guides	MARINA	Gather and develop IEC materials on fishing safety guides	DA/BFAR, DORs/PCG, LGUs, Fishing Operators and Associations	Participate in and support the Program's IEC activities
4.2 Conduct Training/ Familiarization for key stakeholders (MROs, DA/BFAR, LGUs, and fishing associations)		Conduct training/ familiarization on fishing safety guides		



Program Components/ Activities	Lead Implementing Agencies		Cooperating Agencies	
	Name of Agencies	Responsibilities	Name of Agencies	Responsibilities
<b>Component 5: Development of a Database of Fishing Vessels (Municipal and Commercial Fishing Vessels) and Crew (Officers and Ratings)</b>				
5.1 Develop and maintain database on registered fishing vessels and crew, and fishing accidents/incidents	MARINA	Develop and maintain database	DA/BFAR, DORs/PCG, LGUs, Fishing Operators and Associations	Collaborate in data gathering and exchange/sharing to continuously populate and update the database

## PROGRAM COST

The Program is estimated to cost PhP74.80 million pesos for a 10-year period of implementation, broken down by component as shown in the table below.

Item	Amount (Million Pesos)
<b>A. Base Cost (2018 prices)</b>	
Component 1: Development of Fishing Vessels Safety Rules and Regulations (FVSRR) taking into consideration the CTA and STCW-F for possible amendments	5.50
Component 2: Development and Implementation of Capacity Building Program for Trainers, Operators and Seafarers on Safety in Fishing Vessels Operations	12.00
Component 3: Development and Promotion of Safety Designs in Fishing Vessels	5.00
Component 4: Development and Dissemination of User-Friendly Fishing Safety Guides as IEC Materials	5.50
Component 5: Development of a Database of Fishing Vessels (Municipal and Commercial Fishing Vessels) and Crew (Officers and Ratings)	30.00
Component 6: Program Management Support	10.00
<b>Subtotal</b>	<b>68.00</b>
<b>B. Contingencies (Computed at 10%)</b> Physical and price contingencies	6.80
<b>C. Total</b>	<b>74.80</b>





## Program 5: Development of a Global Maritime Hub

### RATIONALE

The Philippines is strategically situated along the international sea lanes of commercial ships catering to world trade. Complemented by the country's potentials on maritime manpower, maritime services and shipbuilding/ship repair, such comparative advantage can be galvanized to transform the Philippines into a global maritime hub.

In order for the Philippines to attract commercial ships to call on the Philippine ports, avail of logistics, supplies, services and needed maintenance/repairs, and eventually become a central point for the accumulation and distribution of cargoes for worldwide trade (transshipment hub) - the Program includes five interlinked development projects which are critical components of the maritime sector to realize this goal.

### OBJECTIVES

Merchant ships servicing the world trade often make some port calls in their long voyages between the ports of origin/loading and destination/unloading to refuel, replenish supplies and logistics, have repair works on ships' parts/machineries, and attend to administrative/technical requirements related to their commercial undertaking or on ships' or crew's documentation. Thus, the five projects under the Program will have the following Outputs, with their corresponding Outcomes and Impacts:

#### 1. An Attractive Philippine Ship Registry

Outcomes from this Project will be increased number of Philippine-registered ocean-going ships, increased taxes and revenues for the government, and increased employment for Filipino seafarers. The impact will be increased contribution of the maritime sector to the country's gross domestic product (GDP).

#### 2. World Class Bunkering Facility and Major Ports Development for Regional Transshipment in Southeast Asia

Outcomes from this Project will be increased calls of foreign ships, increased productivity of related maritime industries (e.g., ports, ship agency/husbandry, cargo handling, ancillary industries; etc.), and increased employment opportunities. Again, the impact will be increased contribution of the maritime sector to the country's GDP.

#### 3. Globally Competitive Shipyards Development for Meeting Foreign demand for Shipbuilding/Ship Repair/Ship Recycling

Outcomes from this Project will be increased number of local shipyards capable of building/ repairing ships of 2,000 GT and above, increased investments for shipyard expansion and modernization, increased productivity of shipyards, and

increased employment opportunities. Similarly, the impact will be increased contribution of the maritime sector to the country's GDP.

**4. Eco-Industrial Maritime Park Establishment for Clustering and Consolidation of all Maritime-Related Services (i.e., shipbuilding, ship repair, technical and legal services, manning, flag registry; etc.)**

Outcomes from this Project will be increased investments, productivity and employment, with the corresponding impact of increased contribution of the maritime sector to the country's GDP.

**5. Maritime Training and Research Center Establishment for Meeting Manpower Requirements for the Entire Maritime Industry Locally and Internationally, as well as Technology-Based/ Policy-Related Studies.**

Outcomes from this Project will be increased number of competent and qualified maritime manpower complying with international best standards, and increased employment and investments. The impact will be increased contribution of the maritime sector to the country's GDP.

The Program results framework (without means of verification and assumptions columns) is summarized in the table below.

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	DATA	
<b>OVERALL IMPACT</b>				
Philippine maritime industry's contribution to total gross domestic product (GDP) increased	Maritime industry's contribution to total GDP increased by 100% by EO 2028 from baseline	2017	PhP 720 Billion	PhP 1.44 Trillion of total GDP
<b>OVERAL OUTCOMES</b>				
Maritime industry's total revenue from the Program increased	Industry's total revenue increased by 50% by EO 2028 from baseline	2017	PhP 80 Billion	Additional PhP 40 Billion in total revenue
Volume and value of traded exports and imports via Philippine-registered merchant fleet increased	Volume of traded goods via Philippine-registered merchant fleet increased by 50% by EO 2028 from baseline	2017	102 Million MT	Additional 51 Million MT in total volume of traded goods
	Value of traded goods increased by 50% by EO 2028 from baseline	2017	PhP 12.5 Billion	Additional PhP 6.25 Billion in total value of traded goods
Number and value of new ancillary	500 new ancillary businesses established by EO 2028	2017	0	500 new establishments

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	DATA	
businesses increased	New ancillary business investments generated PhP 10 Billion by EO 2028	2017	0	PhP 10 Billion investments in new establishments
New maritime employment generated	Number of generated new maritime employment increased by 50% by EO 2028 from baseline	2017	600,000 jobs	Additional 300,000 jobs created
<b>Project 1: Promotion of the Philippine Flag Registry</b>				
<b>OUTCOMES</b>				
Philippine-registered merchant fleet revenues increased	Philippine-registered merchant fleet revenues increased by 50% by EO 2028 from baseline	2017	PhP 60 Million	Additional PhP 30 Million in total revenue
New ancillary business establishments increased	Number of new ancillary businesses increased by 20% by EO 2028 from baseline	2017	487 establishments	Additional 97 new establishments
	Value of new ancillary business investment increased by 20% by EO 2028 from baseline	2017	PhP 244 Million	Additional PhP 49 Million in total value of investments
New employment generated	Number of generated new maritime employment increased by 50% by EO 2028 from baseline	2017	2,000 shore and sea-based jobs	Additional 1,000 new jobs
<b>OUTPUTS</b>				
Number and capacity of Philippine-registered ships increased	Number of Philippine-registered ships increased by 100% by EO 2028 from baseline	2017	116 Philippine-overseas registered ships	232 total number of registered ships
	Capacity of Philippine-registered ships increased by 100% by EO 2028 from baseline	2017	2.35 Million GT	10% increased in ship registry in terms of GT
Bilateral Agreements to support the competitive position of Philippine Flag Vessels strengthened	5 new agreements signed by the Government in support of Philippine Flag Vessels	2017	53 signed agreements	2 new agreements signed
Ship Registration Bill developed to	About 50% of shipowning and	2017	61 companies	30 companies availed of financing

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	DATA	
include financing schemes, incentives and ship mortgage law	shipping companies availed of financing assistance increased by EO 2028 from baseline  One new law developed			assistance/ incentives scheme
<b>Project 2: Development of the Philippines as a Transshipment and Bunkering Hub in the Southeast Asian region</b>				
<b>OUTCOMES</b>				
Maritime hub business revenues increased	Maritime hub business revenues generated by EO 2028	2017	0	PhP 5 Billion in total revenues
Maritime hub's new ancillary business establishments increased	Number of maritime hub's new ancillary businesses established by EO 2028	2017	0	100 establishments
	Value of maritime hub's new ancillary business investment generated by EO 2028 from baseline	2017	0	PhP 50 Million in total value of investment
Maritime hub generated new employment	3,000 new jobs generated by the maritime hub by EO 2028	2017	0	3,000 new jobs
<b>OUTPUTS</b>				
Foreign ships calling in the Philippines increased	Number of foreign ships calling in the Philippines increased by 10% by EO 2028 from baseline	2017	10,00 foreign ship port calls	11,000 foreign ship port calls
Bunkering terminal/station established	New bunkering terminal/station established and operational by EO 2028	2017	0	1 50-hectare new bunkering terminal/station established and operational
Existing major ports upgraded into international ports/terminals	Number of existing major ports upgraded into international ports/terminals by EO of 2028	2017	0	5 new international ports
Maritime-related businesses and services developed	Number of new maritime-related businesses and services developed by EO 2028	2017	0	5 new businesses/services developed

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	DATA	
Marketing of bunkering facility to domestic and global markets	Number of marketing events for promoting bunkering facility to domestic and global markets	2017	0	10 international and national marketing events
<b>Project 3: Upgrading and Expansion of Local Shipyards</b>				
<b>OUTCOMES</b>				
SBSR companies' revenues increased	SBSR business revenues increased by 30% by EO 2028 from baseline	2017	PhP 92.4 Billion	Additional PhP 24.7 Billion in tota SBSRI revenues
SBSR companies' employment generation increased	Number of generated SBSR's new employment increased by 30% by EO 2028 from baseline	2017	25,000 jobs	Additional 7,500 new jobs
<b>OUTPUTS</b>				
Shipyards facilities upgraded/expanded	Number of upgraded/expanded shipyard facilities increased by 25% by EO 2028 from baseline	2017	244 shipyard facilities	61 facilities upgraded/expanded
Medium to large-ships built by local shipyards increased	Size of new ships constructed by local shipyards increased from 500 GT (ave) to 3,000 GT by EO 2028	2017	500 GT (ave)	3,000 GT (ave) in size of ships built locally
Modern, safe and environment-friendly Philippine ships designed and built by local shipyards	Number of modern, safe and environment-friendly Philippine designed and built by local shipyards increased by 50% by EO 2018 from baseline	2017	2,140 ships	Additional 1,070 new ships designed and built locally
Laws/policies on Vessel Retirement and Progressive Restriction of Vessel Importation, and existing program on the Philippine Navy Modernization, etc.) to create greater opportunities for SBSR projects fully implemented	All these laws and program fully implemented by EO 2025 in collaboration with other programs under this MIDP	2017	Restriction on vessel importation of tanker and passenger ships	Restriction on importation of all types of second-hand ships  (Vessel retirement policy implementation)
Trained shipyard manpower increased	Number of trained shipyard manpower	2017	0	TBD

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	DATA	
	increased by 50% by EO 2028 from baseline			
Promotion of Philippine shipyards in international market conducted	Number of marketing tools to promote shipyard facilities in global market conducted by EO 2028	2017	1 SBSR mission to Japan	10 marketing tools
<b>Project 4: Establishment of an Eco-Industrial Maritime Park</b>				
<b>OUTCOMES</b>				
Eco-Industrial Maritime Park's revenues generated	Eco-Industrial Maritime Park (EIMP) revenue generated at least PhP 15 Billion by EO 2028	2017	0	At least PhP 15 Billion in total EIMP revenues
Eco-Industrial Maritime Park's ancillary businesses established	100 new EIMP ancillary business established	2017	0	100 new EIMP ancillary business establishment
Eco-Industrial Maritime Park's employment generation increased	5,000 new employment generated by EIMP ancillary business establishments by EO 2028	2017	0	5,000 new jobs created by EIMP ancillary business establishments
Foreign investment in Eco-Industrial Maritime Park generated.	PhP 15 Billion investment in EIMP generated by EO 2028	2017	0	PhP 15 Billion in total EIMP investment
<b>OUTPUTS</b>				
Eco-Industrial Maritime Park established and operational	EIMP established and operational by EO 2028	2017	0	1 100-hectare EIMP established (in Region 3, 4, or 7)
Marketing of the Eco-Industrial Maritime Park for locators such as shipyards, ancillary industries, technical/legal/logistics services, both at domestic and global markets conducted	10 marketing events organized for EIMP business locators by EO 2028	2017	0	10 international and local marketing events
<b>Project 5: Establishment of a Maritime Training and Research Center</b>				
<b>OUTCOME</b>				
Employment opportunities for Filipino maritime workers increased	Number of employed Filipino maritime workers increased by 33% by EO 2028	2017	600,000 workers	Additional 200,000 workers

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	DATA	
<b>OUTPUTS</b>				
Maritime Training and Research Center (MTRC) developed and operational	MTRC established and operational by EO 2025	2017	0	1 5-hectare MTRC established
MTRC revenue generated	PhP 400 Million revenue generated by EO 2028	2017	0	PhP 400 Million MTRC revenue
More Filipino maritime workers have improved education and training	Number of Filipino maritime professionals with masteral/doctoral degree increased by 40% by EO 2028 from baseline	2017	500 professionals	Additional 200 professionals with masteral/doctoral degree
	Number of maritime skilled workers certified increased by 40% by EO 2028 from baseline	2017	700,000 skilled workers	Additional 280,000 skilled workers certified
Institutional arrangements with business locators for purposes of the MTRC's operation and maintenance (O&) established and functional	Institutional arrangements with business locatros established and functional by EO 2025	2017	0	TBD
Marketing of METC to national and international markets conducted	10 marketing events organized for promoting METC by EO 2028	2017	0	10 international and national marketing events
<b>KEY ACTIVITIES</b>				
1.1 Encourage and enhance the competitive position of Philippine Flag Vessels through international cooperation (ASEAN, Bilateral Agreements) 1.2 Ensure the availability of shipping services to transport Philippine import and export trade 1.3 Strengthen Philippine Maritime Administration (policy, ratification, MA, etc) 1.4 Provide incentives for shipowning/hipping companies 1.5 Develop ship financing scheme 1.6 Review, assess and improve the bareboat chartering program and mortgage law 1.7 Strengthen ship management, ship brokerage, ship chandling, ship insurance services				



HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	DATA	
2.1 Establish Bunkering Terminal/ Station in the Philippines				
2.2 Upgrade International Container Port/ Terminals				
2.3 Develop maritime ancillary business and logistics services				
3.1 Develop the capability and capacity of SBSR services in the Philippines				
3.3 Produce modern, safe and environmental friendly Philippines ships				
4.1 Establish Ship Research Institute				
- Establish towing tank & cavitation tunnel tank test facility				
- Develop standard ship design				
1.1 Establish modern shipyard facilities				
1.2 Develop SBSR ancillary businesses				
1.3 Establish/enhance ship recycling facilities				
5.1 Develop masteral program for naval architects and related maritime professionals				

## SPATIAL CONTEXT

Two projects under the Program will have national scope of coverage, while the other three will involve localized locations which are to be eventually identified under each project.

## PROGRAM COMPONENTS

The key components of the five projects under the Program will include:

### 1. Promotion of the Philippine Flag Registry

- Strengthening of regional and international cooperation (ASEAN, Bilateral Agreements) to support the competitive position of Philippine Flag Vessels;
- Strengthening of shipping services for Philippine export and import trade transportation;
- Development and promotion of ship financing schemes, and incentives for shipowning and shipping industry;
- Review and improvement of bareboat chartering program and ship mortgage law;
- Strengthening of ship management, ship brokerage, ship chandling and ship insurance services; and
- Strengthening of the maritime administration administration through ratification and implementation of international maritime instruments and restructuring of MARINA.

2. **Development of the Philippines as a Transshipment and Bunkering Hub in the Southeast Asian region**
  - Feasibility study and detailed engineering design on bunkering terminal development;
  - Establishment of bunkering terminal/station;
  - Upgrading of existing major ports into international ports/terminals;
  - Development of maritime-related businesses and services; and
  - Marketing of bunkering facility to domestic and international markets.
3. **Upgrading and Expansion of Local Shipyards**
  - Strengthening of SBSR services in the Philippines through development and promotion of incentives, joint ventures, and investments;
  - Design and production of modern, safe and environmentally-friendly Philippine ships to achieve global competitiveness;
  - Full implementation of laws/policies on vessel retirement and progressive restriction of vessel importation, and existing program on the Philippine Navy Modernization, etc.) to create greater opportunities for SBSR projects;
  - Shipyard manpower development and upgrading; and
  - Marketing of shipyard facilities in international markets.
4. **Establishment of an Eco-Industrial Maritime Park**
  - Feasibility study and detailed engineering design of an Eco-Industrial Maritime Park;
  - Development and operation of the Eco-Industrial Maritime Park; and
  - Marketing of the Eco-Industrial Maritime Park for locators such as shipyards, ancillary industries, technical/ legal/logistics services, both at domestic and global markets.
5. **Establishment of a Maritime Training and Research Center**
  - Feasibility study and detailed engineering design of Maritime Training and Research Center;
  - Development, operation and maintenance of Maritime Training and Research Center;
  - Establishment of institutional arrangement with business locators for purposes of the Center's operation and maintenance; and
  - Marketing of the Center to national and international markets.

## **IMPLEMENTATION SCHEDULE**

This Program will be implemented for a period of 10 years (see **Appendix 3**).

## IMPLEMENTATION ARRANGEMENTS

The implementation arrangements for the five projects under this Program are briefly described in the table below.

Project / Component	Lead Implementing Agency		Cooperating Agency/ies	
	Name of Agency	Key Responsibilities	Name of Agency/ies	Key Responsibilities
Promotion of the Philippine Flag Registry	MARINA	<ul style="list-style-type: none"> <li>Initiate bilateral/regional agreements with other countries/ASEAN member states to support and promote the country's ship registry</li> <li>Formulate policies on the carriage of export/import trade</li> <li>Reorganize/restructure MARINA</li> <li>Review existing policies/gap analysis, draft/develop new policies</li> <li>Strengthen coordination with other maritime agencies</li> <li>Initiate drafting of National Interest Analysis (NIA)</li> <li>Issue COC</li> <li>Identify high impact incentives for the shipping companies and ancillary businesses that support them</li> <li>Identify financing schemes for shipping companies</li> <li>Strengthen partnership/coordination with relevant government agencies/entities</li> <li>Draft policy/legislation</li> <li>Review and assess bareboat chartering and ship mortgage, draft enabling law</li> <li>Formulate policies and measures to further strengthen ship management companies, ship</li> </ul>	DFA  DTI  OP, Senate,  DOTr/PPA/PCG/CPA, DBM, SBMA, and other maritime agencies  DTI/BOI  DOF, LBP OP, Congress,  DOTr, other financing institutions  Congress  Private Stakeholders	<ul style="list-style-type: none"> <li>Facilitate bilateral/regional agreements to support and promote the country's ship registry</li> <li>Initiate policies on export/import trade</li> <li>Endorse/approve</li> <li>Participate in gap analysis, drafting/development of new policies</li> <li>Participate in drafting of NIA</li> <li>Develop and implement incentive programs for shipping companies and ancillary businesses that support them</li> <li>Develop financing schemes for shipping companies</li> <li>Endorse/approve policy/legislation proposals</li> <li>Draft/endorse/ approve enabling legislation</li> <li>Participate in and support the Program</li> </ul>

Project / Component	Lead Implementing Agency		Cooperating Agency/ies	
	Name of Agency	Key Responsibilities	Name of Agency/ies	Key Responsibilities
		brokerage, ship chandling, ship insurance services		
Development of the Philippines as a Transshipment and Bunkering Hub in the Southeast Asian region	MARINA	<ul style="list-style-type: none"> <li>Identify and study suitable site for bunkering station and terminal stations</li> <li>Identify and study suitable site for higher port capacity</li> <li>Identify incentives for SBSR companies and ancillary businesses that support them</li> </ul>	DOE, LGUs, PPA and other port authorities  PPA and other port authorities DTI/BOI	<ul style="list-style-type: none"> <li>Construct Bunkering terminals and stations</li> <li>Upgrade, expand and construct Philippine ports</li> <li>Develop and implement incentives programs for SBSR companies and ancillary business that support them</li> </ul>
Upgrading and Expansion of Local Shipyards	MARINA	<ul style="list-style-type: none"> <li>Formulate policies and measures to further enhance capacity of SBSR companies</li> <li>Formulate policies to further promote safe and environmentally sound operations of ships</li> </ul>	Private Stakeholders (ShAP)  SONAME, ShAP  DTI/BOI, DOF/MFDO	<ul style="list-style-type: none"> <li>Participate in and support the Program</li> <li>Participate in and support the Program</li> <li>Incentives and financing program for facility improvement</li> </ul>
Establishment of an Eco-Industrial Maritime Park	MARINA	<ul style="list-style-type: none"> <li>Identify and study suitable location for the ECO park</li> <li>Study for the establishment of ancillary SBSR companies</li> <li>Formulate policies, rules and regulations for SBSR operations.</li> </ul>	DTI/BOI, LGUs, DOF  DTI/BOI, DOST  DENR, environmental organizations	<ul style="list-style-type: none"> <li>Incentives and financing programs, and locations</li> <li>Incentives, and research and development (R&amp;D)</li> <li>Promote and support green SBSR practices and operations</li> </ul>
Establishment of a Maritime Training and Research Center	MARINA	<ul style="list-style-type: none"> <li>Identify Master's program for maritime professionals</li> <li>Develop standard ship design</li> </ul>	ChED, Maritime Universities, SONAME  DOST, JICA	<ul style="list-style-type: none"> <li>Implement Master's program for maritime professionals</li> <li>Support for establishment of towing tank and cavitation tunnel tank test facility</li> </ul>

## PROGRAM COST

The entire Program is estimated to cost PhP 45.73 billion, broken down by project as follows:

Item	Amount (Million Pesos)
<b>A. Base Cost (2018 prices)</b>	
Project 1: Promotion of the Philippine Flag Registry	150.00
Project 2: Development of the Philippines as a Transshipment and Bunkering Hub in the Southeast Asian region <sup>1</sup>	30,000.00
Project 3: Upgrading and Expansion of Local Shipyards	1,000.00
Project 4: Establishment of an Eco-Industrial Maritime Park <sup>2</sup>	10,000.00
Project 5: Establishment of a Maritime Training and Research Center <sup>3</sup>	400.00
Overall Program Management Support	20.00
<b>Subtotal</b>	<b>41,570.00</b>
<b>B. Contingencies (Computed at 10%)</b> Physical and price contingencies	4,157.00
<b>C. Total</b>	<b>45,727.00</b>

Notes: <sup>1</sup>50 hectares (ha) at PhP 600 Million development cost per ha based on Singapore's investment cost to a New Bunkering Facility.

<sup>2</sup>100 ha at PhP 100 Million development cost per ha based on Global security.org. HHI invested US\$ 1 Billion for 480 ha Shipbuilding Facility in Subic.

<sup>3</sup>5 ha MTRC development cost per ha based on prevailing construction cost of PhP 60,000 to 80,000 per square meter (OPEX excluded).

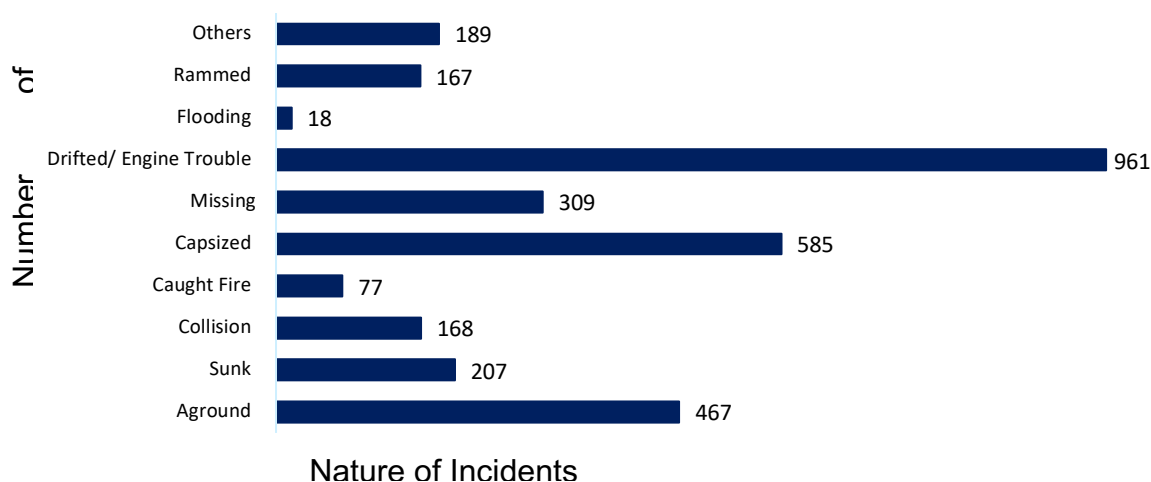
## Program 6: Enhancement of Maritime Safety in the Philippines

### RATIONALE

In the Philippines, as in many other maritime countries in the world, fishing, seafaring and other sea-and land-based related activities are as much a way of life as a profession. Families and communities of fishers, seafarers and other workforces depend on the maritime sector for employment, livelihood and even subsistence. Hence, any accident at sea causes severe problems within their families and the communities. With the growing global maritime industry in terms of numbers, capacities and sizes of merchant and cruise ships, and even fishing vessels, as well as the increasing density of shipping routes and strategic passages, maritime safety becomes a critical aspect of the “health of seafarers” and the competitiveness and sustainability of the industry.

There are many types of maritime incidents. In the Philippines, the most common types of maritime incidents for the last six years (2011-2016) is engine trouble (961 incidents), followed by capsizing (585 incidents) and grounding (467 incidents) as shown in **Figure 1**. The other notable types include sinking, collision, ramming and fire. Most of these incidents can be attributed to crew error, in addition to engine and other mechanical troubles, and natural disasters.

**Figure 1: Types of Maritime Incidents Per Vessel Type, 2011-2016**

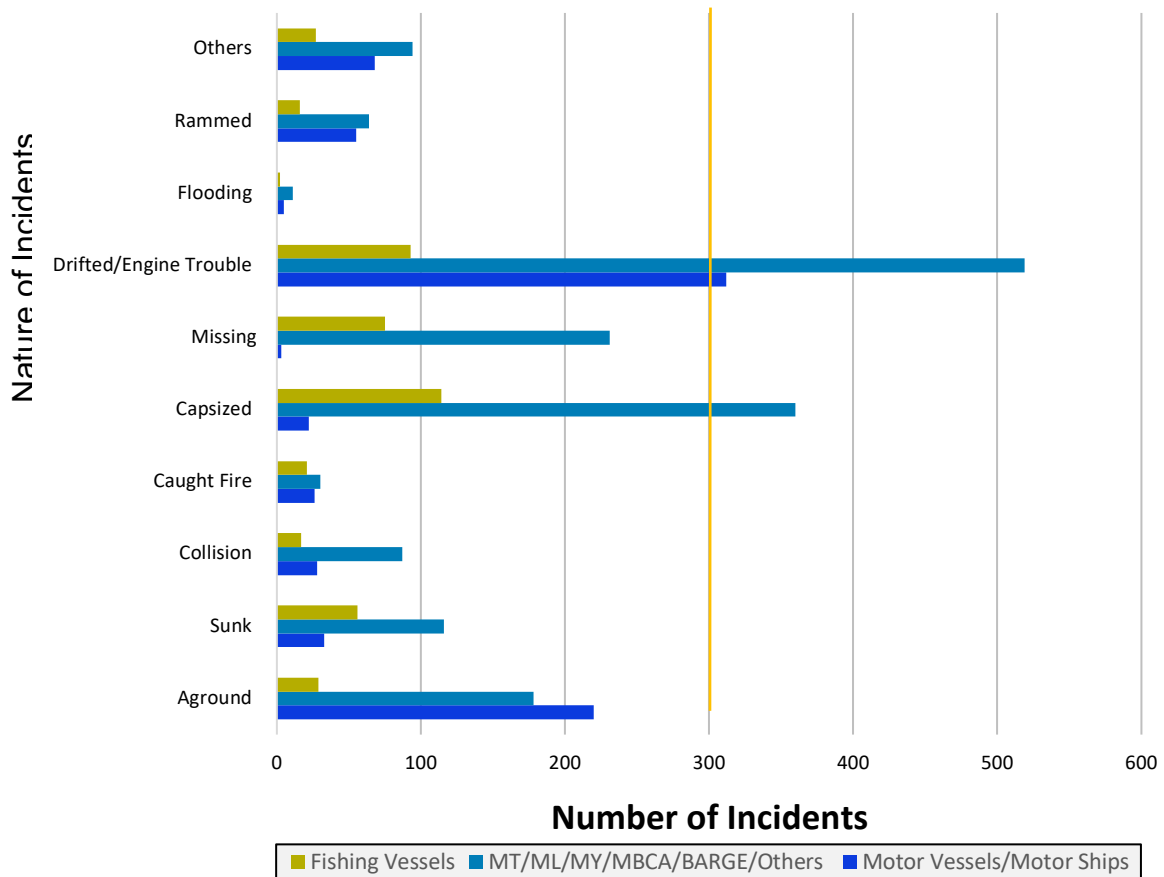


Source: Data taken from Philippine Coast Guard (PCG).

For the period 2011-2016, the two most common maritime incidents by type of vessel are engine trouble and capsizing for passenger or cargo vessels; engine trouble and grounding for motorized vehicles; and capsizing and engine trouble for fishing vessels (**Figure 2**). An average of 526 incidents per year occurred during this period, involving around 99 casualties and 152 missing persons per year. In many instances, some passengers and crew members who died or could not be found during incidents were unreported because they were not recorded in passengers’ manifests of boats/ships involved in such incidents. Cargo ships that leaked or spilt oil and chemicals at sea or

shore also caused damages to the marine environment<sup>54</sup>, which can be attributed to failure of safety standards in ship operations, but this type of incident is not presently recorded systematically as the above ship-focused incidents.

**Figure 2: Incidents Per Vessel Type, 2011-2016**



Source: Data taken from Philippine Coast Guard (PCG).

Raw and scanty information on the possible causes of these incidents, indicates that most capsizing incidents happened during adverse weather conditions, particularly typhoon occurrences with high waves and strong winds. The other causes include crew error, poorly designed and constructed boats/ ships, inadequate/inappropriate navigational aids, and lack of adequate facilities (e.g., properly built sea wall, anchorage of sufficient depth, berths for tying boats to, and slipways for hauling or launching boats) for shelter or protection, most especially of fishing boats, against destructive waves and strong winds. Most municipal ports are generally provided by a single jetty or pier mainly for the purpose of fish landing, but without a safe and well

<sup>54</sup> Dimailig, O. S., Jeong, J-Y. and Kim, C-S., 2011. Marine Transportation in the Philippines: The Maritime Accidents and their Causes. Journal of Navigation and Port Research International Edition Vol.35, No.4 pp. 289-297 (ISSN-1598-5725). Accessed from [https://www.researchgate.net/profile/Orlando\\_Dimailig/publication/264016565\\_Marine\\_Transportation\\_in\\_the\\_Philippines\\_The\\_Maritime\\_Accidents\\_and\\_their\\_Causes/links/5a6126120f7e9b6b8fd3ecac/Marine-Transportation-in-the-Philippines-The-Maritime-Accidents-and-theirCauses.pdf?origin=publication\\_detail](https://www.researchgate.net/profile/Orlando_Dimailig/publication/264016565_Marine_Transportation_in_the_Philippines_The_Maritime_Accidents_and_their_Causes/links/5a6126120f7e9b6b8fd3ecac/Marine-Transportation-in-the-Philippines-The-Maritime-Accidents-and-theirCauses.pdf?origin=publication_detail).

protected harbor. Most of these causes of maritime incidents in the country can be traced to problems of understanding and compliance of safety standards on the part of fishing, cruising and/or shipping crew and operators, as well as of supervision and compliance monitoring on the part of the government agencies responsible for this task. Effective and consistent enforcement of safety standards is evidently wanting in continued occurrences of different maritime incidents in recent years.

Low public awareness and lack of crew training/competency on safety standards for fishing, cruising and shipping operations are also critical elements of maritime safety, but these do not seem to have received priority attention in the enforcement of safety standards. Hence, overloading of passenger ships or fishing boats has sometimes been reported as a cause of ships/boats which capsized even during normal weather conditions. Search and rescue (S&R) activity is another important maritime safety element, and available records show that an average of 245 S&R missions were carried out by PCG and other maritime authorities during the period 2011-2016, resulting in the rescue of an average of 17,121 boat/ship passengers and crew members per year. Lack of adequate S&R equipment and components is identified as the key constraint in effective S&R operations.

As noted above, the lack of accurate, complete and updated database on physical configurations and safety components of all Philippine-registered vessels that are operating within the national water territories including the country's ports and harbors; the qualification profiles of all crew members (i.e., officers and ratings) of those vessels; the nature and extent of information, education and communication (IEC) activities relative to dissemination of safety standards; and essential information about maritime incidents also appears as a major constraint to effective planning and implementation of maritime safety strategy and action plan for so a long a time in the country.

## **OBJECTIVES**

The Program impact will be enhanced efficiency and safety of all Philippine-registered vessels operating within the national water territories by developing and implementing a comprehensive safety plan that encompasses the six fundamental elements of maritime safety: (i) standards, (ii), IEC, (iii) enforcement, (iv) M&E, (v) S&R, and (vi) database to ensure passengers to reach destinations in the country safely and timely. This impact will be measured by the reduced transport time and maritime accidents, and increased passengers' satisfaction with maritime safety standards. The outcomes of the Program will be more compliant ship operators and crew to safety standards with certified maritime personnel, and increased number of technical manpower certified professional safety standards inspectors and auditors.

The Program impact and outcomes will be achieved by delivering the following outputs: (i) developed and implemented a manual of maritime safety standards consistent with IMO standards; (ii) designed and conducted IEC activities for greater awareness on, and compliance to, maritime safety standards; (iii) upgraded enforcement, and search and rescue capacity through closer collaboration and joint operation among maritime related government agencies, and with maritime industry and civil society organizations; and (iv) improved maritime safety administration through database and M&E establishment and operation for improved policy making,



plan development, and implementation. The results framework (without means of verification and assumptions columns) of the Program is presented below.

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	VALUE	
<b>IMPACT</b>				
Passengers and cargoes arrived their port destinations throughout the Philippines more safely and timely.	Average transport time by sea reduced by 20% by EO 2028 from baseline	2017	0	Average transport time by sea reduced by 20%
	Maritime accidents/incidents involving all vessels reduced by 50% by EO 2028 from baseline	2017	TBD	TBD
	Passengers' satisfaction on the Philippine maritime safety increased by 50% by EO 2028 from baseline	2017	0	By 2028, level of satisfaction of passengers increased by 50%
<b>OUTCOMES</b>				
Ships compliant with national and international safety standards increased	Number of ships compliant with national and international safety standards increased by 30% by EO 2028 from baseline	2017	7,062	Additional 2,119 Philippine-registered ships complied with safety standards
	Number of new/younger ships compliant with national and international safety standards increased by 40% by EO 2028 from baseline	2017	10 RORO fastcraft	4 new/younger fleet complying with safety standards plying in various domestic routes
Trained government/private sector manpower conducting regular safety standards inspections and audits of Philippine-registered ships	Number of technical manpower certified professional safety standards inspectors and auditors increased by 80% by EO 2028 from baseline	2017	120	Additional 96 technical manpower certified professional safety inspectors and auditors
<b>OUTPUTS</b>				
1. Policies and guidelines on maritime safety for all Philippine-registered vessels reviewed, amended, updated	Rule Book for each type of ship (PSSRR) developed and implemented by 2019	2017	0	Updated Rule Book and other Guidelines on maritime safety and marine environmental protection standards
	Guidelines on implementation of the Ship Survey System	2017	0	

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	VALUE	
or developed, and implemented	(3S) revised and enforced by 2019			completed and published by 2019
	Guidelines on implementation of Safety Management System revised and enforced by 2019	2017	0	
2. National legislation on mandating all Philippine-registered ships to be compliant with international safety conventions approved and enforced	National legislation approved through RA, translated into IRR and MC, and enforced by 2020	2017	0	Priority international conventions related to safety are ratified and published by 2020
3. A standard Maritime Safety Strategy and Action Plan specific for the needs of each region developed and implemented	All Regional Maritime Safety Strategy and Action Plans developed and implemented by 2021	2017	0	All Regional Maritime Safety Strategy and Action Plans published and implemented by 2021
4. IEC plan to increase public awareness on maritime safety and marine environmental protection standards developed and implemented	Level of awareness of key stakeholders on maritime safety and marine environmental protection standards increased by 85% by EO 2028 from baseline	2017	0	Public awareness on maritime safety and marine environmental protection standards increased by 85%
5. Training modules/ courses on maritime safety and marine environmental protection standards developed and implemented	Participation and compliance of key stakeholders on maritime safety and marine environmental protection standards increased by 85% by EO 2028 from baseline	2017	0	Participation and compliance of key stakeholders on maritime safety and marine environmental protection standards increased by 85%
	Number of MARINA personnel trained on maritime safety and marine environmental protection standards increased by 75% by EO 2028 starting in 2019	2017	0	MARINA personnel trained on maritime safety and marine environmental protection standards increased by 75%

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	VALUE	
6. Maritime Safety Enforcement and Search and Rescue (S&R) Plan developed and implemented	Maritime Safety Enforcement and Search and Rescue (S&R) Plan developed and implemented by EO 2020	2017	0	Enforcement and S&E Plan completed and implemented
7. Database and M&E system on maritime safety and marine environmental protection established and operational	Database and M&E system established and operational by 2019	2017	0	Database and M&E system established and operational
	Impact assessment conducted every three years starting with baseline study in 2019	2017	0	Baseline study completed in 2019 and impact assessment conducted every three years from 2022
<b>KEY ACTIVITIES</b>				
<ul style="list-style-type: none"> <li>1.1 Finalize and adopt the Revised PMMRR (PSSRR)</li> <li>1.2 Review and enhance the Ship Survey System (3S)</li> <li>1.3 Review and enhance the Safety Management System Policy</li> <li>1.4 Conduct of impact assessment (every 3 years) on safety procedures, rules and regulations</li> <li>2.1 Ratify, adopt, legislate and implement relevant IMO Conventions</li> <li>3.1 Formulate a National Maritime Safety Strategy and Action Plan and development of specific regional versions</li> <li>4.1 Conduct communication needs assessment</li> <li>4.2 Develop communication strategy to increase public awareness on maritime safety and marine environmental protection standards</li> <li>4.3 Implement strategy</li> <li>4.4 Conduct forums with stakeholders on maritime-related maritime safety policies and regulations</li> <li>4.5 Monitor and evaluate</li> <li>5.1 Develop and institutionalize on-the-job training and certification for MARINA Inspectors and Auditors</li> <li>6.1 Develop and implement Maritime Safety Enforcement and Search and Rescue (S&amp;R) Plan</li> <li>7.1 Develop database and M&amp;E system on maritime safety and marine environmental protection</li> <li>7.2 Promote and build capacity to use the database</li> <li>7.3 Conduct monitoring and evaluation</li> </ul>				

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	VALUE	
7.4 Establish a National Maritime Safety Council (NMSC)				

## SPATIAL CONTEXT

This Program will cover all Philippine-registered vessels, such as regular passenger and cargo ships, fishing vessels, and cruise ships, yachts and related recreational crafts.

## PROGRAM COMPONENTS

The Program components will include:

- (i) Review, amend or develop, and implement policies and guidelines on maritime safety for all Philippine-registered vessels;
- (ii) Develop and pass a national legislation mandating all Philippine-registered ships to be compliant with international safety conventions;
- (iii) Develop and implement a standard Maritime Safety Strategy and Action Plan, and specific versions for each region in the country;
- (iv) Develop and implement IEC plan to increase public awareness on maritime safety and marine environmental protection standards;
- (v) Develop and implement training modules/courses on maritime safety and marine environmental protection standards;
- (vi) Develop and implement Maritime Safety Enforcement and Search and Rescue (S&R) Plan;
- (vii) Establish database and M&E system on maritime safety and marine environmental protection; and
- (viii) Program management support.

## IMPLEMENTATION SCHEDULE

This Program will be implemented for a period of 10 years (see **Appendix 3**).

## IMPLEMENTATION ARRANGEMENTS

This Program will be implemented by MARINA in partnership with PCG, PPA and other port authorities, and in collaboration with other concerned government agencies, LGUs, shipowners, shipbuilders, maritime professionals, academic and training institutions, media and other key stakeholders, as defined in the table below. The Program intends to establish a National Maritime Safety Council (NMSC) to perform the following functions:

1. To provide advice to MARINA Administrator on priority action that will improve the implementation of maritime safety;

2. To suggest options on the recommendations resulting from maritime accident investigations to reduce or to lessen loss of life, damage to property, and marine environmental protection and maritime security;
3. To recommend to relevant agencies appropriate actions that should be taken to implement maritime safety measures; and
4. To coordinate and monitor the implementation of maritime safety measures vis-à-vis with other government agencies involved in maritime sector.

The composition of NMSC will be defined during the initial year of the Program implementation in coordination with the concerned government agencies and other key stakeholders.

Program / Component	Lead Implementing Agency		Cooperating Partners	
	Name of Agency	Key Responsibilities	Name of Partner/s	Key Responsibilities
Review, amend or develop, and implement policies and guidelines on maritime safety for all Philippine-registered vessels	MARINA with PCG and PPA	Lead the review, amendment or development, and implementation of policies and guidelines on maritime safety for all Philippine-registered vessels	Shipowners, Class Societies, Ship Builders, Marine Professionals, Academic Institutions	Participate and support the development and implementation of policies and guidelines on maritime safety
Develop and pass a national legislation mandating all Philippine-registered ships to be compliant with international safety conventions	MARINA	Lead the drafting of proposed legislation	DOTs/PCG/PPA, Shipowners, Class Societies, Ship Builders, Marine Professionals, Academic and Training Institutions	Participate and support the drafting of the proposed legislation and the implementation of the approved legislation, IRR and MC
		Lobby with Congress for early passage of a legislation		
		Prepare, publish and issue the necessary IRR and MC		
		Coordinate with DFA and Congress for the ratification of relevant IMO conventions	DFA, DENR, DOTr/PCG/PPA, other port authorities, ICCRIMC members, Academic and Training Institutions	Participate and support in the preparation of required documents
Develop and implement a standard Maritime Safety Strategy and Action Plan, and specific versions for each region	MARINA	Develop and implement a standard Maritime Safety Strategy and Action Plan		
		Support MROs in developing specific Strategy and Action for each region		

Program / Component	Lead Implementing Agency		Cooperating Partners	
	Name of Agency	Key Responsibilities	Name of Partner/s	Key Responsibilities
Develop and implement IEC plan to increase public awareness on maritime safety and marine environmental protection standards	MARINA	Identify/analyze/refine audiences of communication materials, risks and opportunities, knowledge needs, preferred media/channels, M&E indicators, and objectives of the communication material	DOTr/PCG/PPA/OTC/OTS, Other port authorities, LGUs, Shipowners, Shipbuilders, Maritime Professionals, Academic and Training Institutions, Media	Participate in and support the IEC Plan development and implementation
		Design Communication strategy by selecting the best approach and message for the audience		
		Implement the strategy - Conduct pretesting of message and communication materials, develop and produce the knowledge products, IEC materials, organize training activities and disseminate message		
		Conduct regular forums with key stakeholders		
		Conduct M&E, share the results in learning events, and use the feedback to refine the process or succeeding materials		
Develop and implement training modules/courses on maritime safety and marine environmental protection standards	MARINA with PCG	Develop and implement relevant training modules/courses	DOTr/PCG/PPA, DA/BFAR, DENR/EMB, LGUs, Shipowners, Shipbuilders, Academic and Training Institutions, Maritime Professionals	Participate in and support the conduct of training activities
		Prepare and disseminate learning materials		
Develop and implement Maritime Safety Enforcement and Search and Rescue (S&R) Plan	MARINA	Develop and implement the necessary Plan	DOTr/PCG	Conduct verification to ensure compliance
		Ensure operational readiness of crew and equipment		Conduct inspection and report to nearest MARINA Regional Office (MRO) for issuance of Safety Certificates

Program / Component	Lead Implementing Agency		Cooperating Partners	
	Name of Agency	Key Responsibilities	Name of Partner/s	Key Responsibilities
	PCG	Lead the S&R activities	DOTr/ MARINA/ PPA, DND/PN, Port Authorities, Academic and Training Institutions	Participate in and support the preparation and implementation of S&R Plan and relevant training
Establish and operate database and M&E system on maritime safety and marine environmental protection	MARINA	Develop database – plan database, conduct analysis, design database, construct database, conduct testing, provide ongoing support and maintenance	DOTr/PCG/ PPA, Other Port Authorities, DENR/EMB, DA/BFAR, DND/PN, DILG/ PNPMG, other concerned government agencies, Academic and Training Institutions	Participate in and support the data exchange and sharing for database and M&E system, as well as the conduct of necessary training
		<b>Promote the database and conduct capacity building</b> – Develop and publish training manual, communication materials; organize trainings; and conduct knowledge sharing events and promotional activities		
		Conduct monitoring and evaluation		
		Coordinate the establishment of NSMC		Participate in NSMC as members

### Program Cost

The Program is estimated to cost PhP 148.5 million for a 10-year implementation period, broken down by component as follows:

Item	Amount (Million Pesos)
<b>A. Base Cost (2018 prices)</b>	
Component 1: Review, amendment or development, and implementation of policies and guidelines on maritime safety for all Philippine-registered vessels	} 30.00
Component 2: Development, approval and implementation of a national legislation mandating all Philippine-registered ships to be compliant with international safety conventions	
Component 3: Development and implementation of a Standard Maritime Safety Strategy and Action Plan, and specific versions for each region	25.00
Component 4: Development and implementation of IEC Plan to increase public awareness on maritime safety and marine environmental protection standards	30.00

Item	Amount (Million Pesos)
Component 5: Development and implementation of training modules/courses on maritime safety and marine environmental protection standards	20.00
Component 6: Development and implementation of Maritime Safety Enforcement and Search and Rescue (S&R) Plan	30.00
Component 7: Establishment and operation of database and M&E system on maritime safety and marine environmental protection (included in the budget for Component 4).	
<b>Subtotal</b>	<b>135.00</b>
<b>B. Contingencies (Computed at 10%)</b> Physical and price contingencies	13.50
<b>C. Total</b>	<b>148.50</b>



## Program 7: Modernization of Maritime Security in the Philippines

### RATIONALE

The Experts' Dialogue on Maritime Security Governance in the Philippine conducted in 2016 provides a comprehensive description of the nature and scope of the country's maritime security concerns, as follows<sup>55</sup>:

- **Maritime security is complex and multi-dimensional.** The character and typology of maritime threats are constantly evolving, adapting with technology and the tactics, techniques, and procedures (TTPs) used by maritime law enforcement agencies. It is therefore important that a venue to exchange information not readily available to other maritime law enforcement agencies other than the PN and the PCG be made collaboratively to address these threats. To understand maritime security, one must closely look into the situation on land and its interplay with sea and people. Aside from the complex and multi-dimensional nature of maritime security, it was noted in several instances during the dialogue that crimes at sea are hatched on land. Maritime issues trace their cause from the situation on land and their interplay with sea and people. Yet, most of the time, the general law and sea law enforcements are disjointed, and create a sense of a great divide. Thus, it is desirable to transform the disjointed efforts into complementary efforts that constitute the whole-of-nation approach. Also, the country can be pro-active and target land supply chains to prevent their access to the maritime domain.
- Existing international and regional frameworks for cooperation on maritime security governance is at present insufficient to address evolving maritime security concerns. Existing cooperation frameworks should undergo periodic reviews and recalibrations to effectively address present challenges. At the international level, the United Nations Convention on the Law of the Sea (UNCLOS) remains the cornerstone of international legal instrument on maritime cooperation. At the regional level, ASEAN has played a central role in devising cooperative mechanisms. Constant review on the effectiveness and relevance of UNCLOS could provide topics for future discussions. Alternatively, ASEAN can continue to take the lead in inter-agency cooperation across the region.
- **Strong national institutions, policies, and capabilities should underpin Philippine contribution to regional maritime security.** The Philippines should continually equip itself in order to explore the possibilities of regional cooperation in maritime security governance, such as that of alignment of laws and policies, and comprehensive information sharing. Aside from capability development of our law enforcement agencies, there should be a strict implementation of our protocols and a comprehensive plan to communicate our activities and initiatives, which may add to the country's credible deterrent factor against crimes-at-sea. This could be achieved by improving physical infrastructure of the country, most important of

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<sup>55</sup> This information was extracted from the article "Experts' Dialogue on Maritime Security Governance 2016" published by the Maritime Review. The Online Edition of the Maritime League's Maritime Review Magazine. Accessed from <http://maritimereview.ph/2017/01/30/experts-dialogue-on-maritime-security-governance-2016/>.

which are: (i) the information and communications technology (ICT) framework, and (ii) the port security measures. Further, the personnel aspect should also be well considered, as this will reinforce an enabling policy environment.

- **Maritime security governance could be best articulated within the economic development paradigm.** ..., combating crimes at sea is viewed as having direct impact on the government and businesses. The shadow economy created by revenues from overfishing, poaching, and other crimes at sea undermines the legitimate economy. This perspective has aided ... to reduce the gaps by targeting regional transnational crime logistics chains.
- Strengthening inter-agency coordination and information sharing in both official and unofficial mechanisms is necessary to improve maritime security governance. Aside from participation of different agencies in addressing interrelated issues, another key element in maritime security governance is the clear delineation of the agencies' functions. Inter-agency rivalry and unilateral actions should be eliminated and be replaced with joint efforts and strong support systems.

Maritime security, primarily from seajacking/hijacking and piracy/armed robbery persists to be a significant risk and threat to the maritime industry in the Philippines, as in other maritime nations. While total worldwide incidents of piracy and armed robbery against ships dropped from 191 in 2016 to 180 in 2017, these incidents increased in the country's national territorial waters from 10 in 2016 to 22 in 2017, with the latest foiled seajacking attempt taking place on 18 February 2018 off the coast of Basilan in the vicinity of Coco and Sibago islands, involving the Philippine-registered cargo ship MV Kudos.

Even in international waters, especially off the coast of Somalia which became the concentration of piracy attacks peaking up in 2010, Philippine-registered ships and even seafarers have been among those victimized. MARINA's role in addressing these problems will be more of providing technical support to the Philippine Navy (PN) and Philippine Coast Guard (PCG) through their Naval Fleet Modernization Programs, as well as close coordination with international and regional entities on anti-piracy, like International Maritime Bureau (IMB), European Union Naval Force (EU NAVFOR), and Anti-Piracy Task Forces of Malaysia and Indonesia.

Another important facet of the maritime security problem, which receives less attention until recently, is the security of the country's domestic ships and ports from terrorist and criminal threats. While the International Ship and Port Facility Security Code (ISPS Code) of the IMO has been implemented for ocean-going ships, domestic ships and ports have no such system of maritime security precautions to speak of, which makes this Program more urgent and useful.

## OBJECTIVES

With the formulation and full implementation of the NSPS Code as a major output, the Program outcomes will be increased level of ship crew's knowledge on maritime security requirements, measures, threats and risks; increased frequency of maritime security inspection; and reduced number of violations of security rules by shipping,

fishing and maritime tourism by companies. The Program impacts will be reduced maritime incidents caused by criminality and terrorism, and cargo pilferage; and increased passengers' satisfaction on maritime security measures and standards in the country.

The results framework (without means of verification and assumptions columns) of the Program is presented below.

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	VALUE	
<b>IMPACT</b>				
Passengers and cargoes including sea vessels secured from criminality, terrorism and other maritime illegal activities	Maritime incidents caused by criminality and terrorism reduced to 0 by EO 2028 from baseline	2017	TBD	Criminality and terrorism at sea reduced to 0.
	Incidents of cargo pilferage reduced by 80% by EO 2028 from baseline	2017	TBD	TBD
	Passengers' satisfaction on Philippine maritime security increased by 100% by EO 2028 from baseline	2017	0	TBD
<b>OUTCOMES</b>				
Ship crew's knowledge on maritime security requirements, measures, threats and risks increased	Level of ship crew's knowledge on maritime security requirements, measures, threats and risks increased by 90% by EO 2028 from baseline	2017	TBD	TBD
Frequency of maritime security inspection increased	Frequency of maritime security inspection increased by 85% by EO 2028 from baseline	2017	TBD	TBD
Violations of security rules by shipping, fishing and maritime tourism by companies reduced	Number of violations of security rules by shipping, fishing and maritime tourism by companies reduced by 90% by EO 2028 from baseline	2017	TBD	TBD

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		TARGETS
		YEAR	VALUE	
<b>OUTPUTS</b>				
1. NSPS policy/legislation drafted, issued and implemented	NSPS Policy and Guidelines issued and implemented by EO 2019	2017	0	NSPS Policy and Guidelines issued and implemented
	All domestic ships and ports certified to be compliant with NSPS by EO 2022	2017	0	All domestic ships and ports certified to be compliant with NSPS
2. IEC materials on NSPS policy/regulations developed and implemented/enforced	All ship owners /operators and port managers/ operators attended meetings/ seminars on NSPS by EO 2021	2017	0	All concerned ship owners/operators & port operators made familiar with NSPS policy/regulations
	Policy forums on NSPS with key stakeholders conducted twice a year from 2019	2017	0	NSPS policy forums conducted
3. Training on NSPS policy/ regulations for both government and private stakeholders developed and implemented	All concerned government and private stakeholders trained on NSPS policy/ regulations by EO 2022	2017	0	All concerned government and private stakeholders trained on NSPS policy/regulations
4. Emergency Response Plan developed and implemented	Emergency Response Plan developed and implemented by EO 2019	2017	0	Emergency Response Plan developed and implemented
5. Database and M&E system on maritime security established and maintained	Database and M&E system established and functional by EO 2019	2017	0	Database and M&E system established and functional
<b>KEY ACTIVITIES</b>				
2.1 Conduct communication needs assessment 2.2 Develop communication strategy to increase public awareness on maritime safety and marine environmental protection standards 2.3 Implement strategy 2.4 Monitor and evaluate 5.1 Develop database and M&E system on maritime security 5.2 Promote and build capacity to use the database 5.3 Conduct monitoring and evaluation				

## SPATIAL CONTEXT

This Program will cover all domestic ships and ports operating throughout the country.

## PROGRAM COMPONENTS

The NSPS Code will require all domestic ships and ports to have their respective Vessel Security Plan (VSP) and Port Facility Security Plan (PFSP) based on an assessment of expected security threats in their nature and area of operation, with the Plans providing mechanisms, measures and responses to avoid and address such identified threats.

The key Program components will include:

- Formulation of NSPS;
- Training on NSPS policy/ regulations for both government and private stakeholders;
- Development and implementation of IEC plan;
- Implementation/enforcement of NSPS including VSP and PFSP;
- Development and operation of RbME system including compliance monitoring;
- Development and implementation of emergency response mechanisms; and
- Establishment and operation of a database and M&E system.

## IMPLEMENTATION SCHEDULE

This Program will be implemented in 10 years (2019-2028), with the initial year devoted to setting up the necessary institutional arrangements (structures and processes) among government agencies involved in maritime security, including the formulation of NSPS, development of IEC plan and SRR protocols and training of key government and private sector stakeholders (see **Appendix 3**). The subsequent years of implementation will include enforcement of NSPS policy/regulations, conduct of emergency response activities, and establishment and operation of database and RbME system.

## IMPLEMENTATION ARRANGEMENTS

This Program will be implemented according to the institutional arrangements described in the table below.

Program Components	Lead Implementing Agency		Cooperating Partners	
	Name of Agency	Key Responsibilities	Name of Partner/s	Key Responsibilities
Formulation of the NSPS (ISPS)	MARINA	<ul style="list-style-type: none"> <li>• Convene The TWG and Lead in the drafting of the NSPS</li> <li>• Consultation with OTS</li> <li>• Consultation with Law Enforcement Agencies</li> <li>• Consultation with other stakeholders</li> <li>• Incorporate Implementation of AIS</li> </ul>	OTS, PCG, PN, Arrastre and its Security Office, Stevedore and its Security Office, PPA Port Management, PPA Port Police to include the IMDG Code, City/Municipal	Install CCTV or Close Circuit Television on board ships, terminals, ship's store at port, berthing areas, port facility and shipyards as well as security controlled fences; offshore oil and gas security zone, waterside restricted

Program Components	Lead Implementing Agency		Cooperating Partners	
	Name of Agency	Key Responsibilities	Name of Partner/s	Key Responsibilities
		and GIS in domestic ships • Lobby with Congress • Sign and publish the Final NSPS	/Local Port Security, PDEA using RA 9165, PNPMG and PNP outside of Port, Shipping Companies, Shipper, Truckers/ Brokerage, Mooring, Chandlers, Port and Dock Workers, Porter, Gantry Crane & Forklift Operator, Immigration Officers, DOH for Derating, SBSR Facility and Sub-Contractors, Port Terminal Concessionaires	zone, landside restricted zone and ship security zone
	PPA, SBSR Facility, LGUs with ports	<ul style="list-style-type: none"> <li>• ???</li> </ul>	Sub-Contractors, Manufacturing Plants and Warehouses	Computerize ID System for people transacting and entering ports or SBSR facility, with GPS and Smart Phone identity locator
	PPA, SBSR Facility, Shipping Lines, LGU with Ports	<ul style="list-style-type: none"> <li>• ???</li> </ul>	Warehouses, Manufacturing Plants, Food Producer or Supplier, Trucking Service, Container Providers	Install Close Circuit Television (CCTV) at Ports, Plants, Ships, SBSR Facility and related sources of Cargo with possibility of employing thermal CCTV or infra-red imaging cameras at select areas
	PCG	<ul style="list-style-type: none"> <li>• ???</li> </ul>	Shipping agencies	Deploy plain clothes security personnel on board ships, Marshalls from PCG and other Law Enforcement Agencies
	PCG	<ul style="list-style-type: none"> <li>• ???</li> </ul>	Shipping agencies	Deploy K-9 dogs at specific areas
	Shipping Agency	<ul style="list-style-type: none"> <li>• ???</li> </ul>	???	Computerize Ticketing System to include discounts to student, senior citizen and PWDs with validation upon checking in (avoid double booking, do away with excess passengers, effective

Program Components	Lead Implementing Agency		Cooperating Partners	
	Name of Agency	Key Responsibilities	Name of Partner/s	Key Responsibilities
				no ticket no-boarding policy implementation, security identification to deter bad elements from undertaking their plans in crowded places, ports and vessels)
Information, Education and Communication (IEC)	MARINA	<ul style="list-style-type: none"> <li>• Publish and disseminate Program activities</li> <li>• Conduct training and other capacity building activities for MARINA and Other Law Enforcement Agencies</li> <li>• Organize/participate in Fora, Advisories, TV and Radio Guesting, PIA Kapihan, Tri-media</li> <li>• Contribute to Maritime News and Port Calls of PPA</li> </ul>	PIA, PTV 4, CDRRMC, Shipping companies, PPA, PCG, OCD, BFAR, LGUs and other tri-media outlets	Participate in and support the IEC activities
Enforcement	MARINA	<ul style="list-style-type: none"> <li>• Implement NSPS Code</li> <li>• Enforce ISPS Code provisions relative to the security of Philippine flagged/registered ships</li> </ul>	PPA PDEA	<ul style="list-style-type: none"> <li>• Enforce IMDG Code</li> <li>• Enforce RA 9165</li> </ul>
Monitoring and Evaluation	MARINA and Recognized Security Organizations	<ul style="list-style-type: none"> <li>• M&amp;E of NSPS Code enforcement</li> </ul>	PPA PDEA	<ul style="list-style-type: none"> <li>• M&amp;E of IMDG Code</li> <li>• M&amp;E of RA 9165</li> </ul>
	MARINA	<ul style="list-style-type: none"> <li>• Download Program info to MARINA Regional Offices</li> <li>• Train MARINA personnel and Other Law Enforcement Agencies and Stakeholders</li> </ul>		
	OTS	<ul style="list-style-type: none"> <li>• Monitor compliance of PPA, other port authorities, PCG, MARINA, and other relevant government agencies, and recognized security organizations with the</li> </ul>		



Program Components	Lead Implementing Agency		Cooperating Partners	
	Name of Agency	Key Responsibilities	Name of Partner/s	Key Responsibilities
		standards prescribed in the ISPS Code		
Emergency Response	PCG  PN	<ul style="list-style-type: none"> <li>PCG Command Center for Crisis and Emergencies at Sea</li> <li>PN Command Center for security issues on Philippine Flag Vessel - reporting to DND, DOTR, etc.</li> </ul>	PNPMG, MARINA, Tug & Pilotage Services, Shipping Lines, Rescue Groups, OCD-CDRRMC, PRC, BFP, AFP, Arrastre and Stevedores, SBSR and Sub-Contractors	Support PCG and PN in response activities
	PPA	PPA Maritime Command Center crisis and emergencies at Port	PN, PNPMG, MARINA, Tug & Pilotage Services, Shipping Lines, Rescue Groups, OCD-CDRRMC, PRC, BFP, AFP, Arrastre and Stevedores, SBSR and Sub-Contractors	Support PPA in response activities
	MARINA	MARINA Operation Center to collaborate and Provide Safe and Secure Vessels for the transport of relief goods and R&R personnel during emergencies from one port to the other	PPA, PCG, PNPMG, Shipping Lines, Arrastre and Stevedores as well as Port Concessionaires	Support group in times of crisis and emergencies, gather and produce relief goods and other services, transport, logistics, personnel, etc.
Database	PPA	Maritime Command Center Repository of Maritime Related activities, threats, information, drills and simulation, documentation in the handling of port / maritime events, emergency and crisis	MARINA, PN, PPA, OTS, PCGA, Port Concessionaires	Supply and support the Maritime Command Center database and exchange of information regarding safety and security, among others
	MARINA	Maritime Operation Center Repository of Maritime Related Security Activities, Compliance Monitoring, Accreditation, Complaints and Investigation, Drills and	PN, NCWC, PCG, BFAR, Shipping Lines, PPA and (MROs)	Supply and support information to MARINA MOC as repository of information



Program Components	Lead Implementing Agency		Cooperating Partners	
	Name of Agency	Key Responsibilities	Name of Partner/s	Key Responsibilities
		Simulation, Documentation in the handling of port / maritime events relating to security matters		

## PROGRAM COST

This Program is estimated to cost PhP82.5 Million, broken down by component as follows:

Item	Amount (Million Pesos)
<b>A. Base Cost (2018 prices)</b>	
Component 1: Drafting, issuance and implementation of NSPS policy/legislation	10.0
Component 2: Development and implementation of IEC materials on NSPS policy/regulations	10.0
Component 3: Development and implementation of training on NSPS policy/regulations for both government and private stakeholders	10.0
Component 4: Development and implementation of Emergency Response Plan	20.0
Component 5: Establishment and operation of database and M&E system on maritime security	15.0
Overall Program Management Support	10.0
<b>Subtotal</b>	<b>75.0</b>
B. Contingencies (Computed at 10%) Physical and price contingencies	7.5
<b>C. Total</b>	<b>82.5</b>

## Program 8: Establishment of Maritime Innovation and Knowledge Center (MIKC)

### RATIONALE

Nurturing innovation in the maritime industry should be a priority for the Philippines as a maritime nation. The country is ranked as the 5<sup>th</sup> biggest in shipbuilding globally. In fact, shipbuilding and ship repair brought in about \$1.5 billion revenue to the economy in 2016.<sup>56</sup> This revenue could potentially increase with investments in state-of-the-art facilities that will enhance the productivity of shipyards and resources poured into research and development of green ships. The country is also the second highest supplier of qualified officers next to China and the biggest source of rated seafarers globally.<sup>57</sup> Sea-based overseas Filipino workers (OFWs) contributed up to 23% of the country's total remittances from 2010 to 2017. Their remittances had a growth rate of 3.8% annually making them a critical factor in boosting the country's Gross Domestic Product.<sup>58</sup>

However, Filipinos face stiffer competition in the international labor market with a growing number of highly qualified officers and rated seafarers supplied by China, India, and Eastern Europe (Ukraine, Croatia, and Latvia). The Bangko Sentral ng Pilipinas (BSP) concluded that this led to the decline in remittances among sea-based workers in 2016 and 2017.<sup>59,60</sup> The industry now demands highly educated maritime professionals who are not only technically competent in handling advanced information communication technologies (ICTs) but also possess leadership qualities and soft skills.

To remain as a regional powerhouse in shipbuilding and ensure that Filipino sea-based workers will thrive, the government must invest heavily in innovation and knowledge generation. Breakthroughs such as advanced robotics, new forms of automation, new energy sources, and mobile Internet, among others, are expected to increase productivity in the maritime industry.<sup>61</sup> Energy innovations would be needed to develop more efficient vessels. In the coming years, the public will demand the private and the public sector to establish more socially and environmentally responsible practices and to address the impact of climate change.

Given this scenario, a dedicated innovation program focused on the maritime industry is vital to spur growth and sustainable development in the country. Previous studies on innovation in the Philippines have already identified the government's role, which

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<sup>56</sup> MARINA (2018). Presentation on Philippine Shipbuilding and Ship Repair Sector (Project Proposals)

<sup>57</sup> Baltic and International Maritime Council and International Chamber of Shipping (2016) "Manpower Report." <https://www.bimco.org/products/publications/other-manuals/manpower-report-2015>

<sup>58</sup> Bangko Sentral ng Pilipinas (2018). Overseas Filipinos cash remittance by country, by source. <http://www.bsp.gov.ph/statistics/keystat/ofw2.htm>

<sup>59</sup> Lopez, M (2016). September cash remittances highest for the year, so far; but growth slows. <http://www.bworldonline.com/content.php?section=TopStory&title=september-cash-remittances-highest-for-the-year-so-far-but-growth-slows&id=136447>

<sup>60</sup> Marquez, M. C. (2017) BSP: January Personal Remittances Up, Sea-based Remittance Down. <http://www.ibtimes.ph/bsp-remittances-overseas-filipinos-sea-based-remittances-land-based-remittances-6763>

<sup>61</sup> MESA FP7 (2016) Global Trends Driving Marine Innovation. <https://www.waterborne.eu/media/20004/global-trends-driving-maritime-innovation-brochure-august-2016.pdf>

are: (i) to provide meaningful and impactful support to innovators; (ii) invest in the required technology, research infrastructure, and research and development (R&D) researchers; (iii) carry out appropriate reforms in education, the investment climate, and trade; and (iv) remove barriers and bottlenecks to innovative initiatives in regulatory frameworks.<sup>62</sup>

In the next 10 years, the proposed Maritime Innovation and Knowledge Center will respond to this challenge by:

- (i) Strengthening public-private collaboration particularly with the academe and MSMEs through
  - engagement of youth in science, technology, and innovation (STI) for the maritime industry;
  - establishing smart partnership with MSMEs through dialogue and nurturing knowledge creation and STI applications to raise competitiveness; and
- (ii) Public awareness on the value of STI to the maritime industry and raising the profile of the locally and internationally
- (iii) Development of the knowledge base of the maritime industry in collaboration with other agencies and organizations.

## OBJECTIVES

The impact of the Program will be improved capacity of MARINA and other partners to innovate and operate modern technologies, and apply or implement best practices in shipping, fishing, maritime tourism, CIWT system, SBSR/ship management, and other ancillary businesses. This impact will be measure by the increased clients'/stakeholders' satisfaction on maritime industry policies, programs and services; and positive feedback and sound suggestions on maritime administration received from clients/ stakeholders. The Program outcomes will be increased number of data searches on government websites related to maritime sector; enhanced and integrated database; developed and applied improved and new products, services and processes associated with this MIDP; and forged and strengthened partnership with local, regional and international stakeholders.

The results framework (without means of verification and assumptions columns) of the Program is summarized in the table below.

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		PROGRAM TARGETS
		YEAR	VALUE	
<b>IMPACT</b>				
Capacity of MARINA and other partners to innovate and operate modern technologies, and apply or implement best practices in shipping, fishing, maritime tourism, CIWT system, SBSR/ship	Green shipping/ship building design and operation standards developed and implemented by EO 2028	2017	0	5 Green shipping/ship building design and operation standards developed and implemented
	Clients/stakeholders' satisfaction on maritime industry policies,	2017	0	2,775 clients/ stakeholders

<sup>62</sup> <https://pidswebs.pids.gov.ph/CDN/PUBLICATIONS/pidsdps1728.pdf>

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		PROGRAM TARGETS
		YEAR	VALUE	
management, and other ancillary businesses improved.	programs and services increased by 85% by EO 2028 from baseline			
	Positive feedback and sound suggestions received from clients/stakeholders increased by 90% by EO 2028 from baseline	2017	0	5,000
<b>OUTCOMES</b>				
Stakeholders' awareness of the Philippine maritime policies, regulations, programs, products and services at the local and international levels increased	Number of data searches on government's websites related to maritime sector development increased by 100% by EO 2028	2017	100,000	200,000
Maritime sector databases enhanced and integrated	Databased enhanced and integrated by EO 2022	2017	0	15 databases integrated and accessible
Improved and new products, services and processes developed and applied	Improved and new products, services and processes associated with this MIDP developed and applied by EO 2028	2017	80	120 new products, services and processes
Partnerships with local, regional and international stakeholders on maritime sector development forged and strengthened	Partnerships with 200 key stakeholders that promote and support competitiveness of the Philippine maritime sector forged and strengthened by EO 2028	2017	0	200 partnership arrangements
<b>OUTPUTS</b>				
1. Philippine maritime industry promoted	Communication materials developed and campaign activities conducted regularly starting in mid 2019	2017	0	<p><b>Materials</b></p> <ul style="list-style-type: none"> <li>Videos – 1 video per program per year (80 videos in 2028)</li> <li>Publication materials – 1 publication material per program per year (80 publications in 2028)</li> </ul> <p><b>Campaigns</b></p> <p>1 campaign per program in 2 years (40 campaigns by EO 2028)</p>

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		PROGRAM TARGETS
		YEAR	VALUE	
	Social media presence (regular monthly press briefings through TV and Facebook Live, and more news stories and feature articles/videos) established and maintained by EO 2019	2017	35	<b>Press briefings</b> 2 press briefings per program per year (160 press briefings by EO 2028)  <b>News stories</b> 4 news stories per program per year (320 news stories by EO 2028)
	Outreach to regional and international media partners strengthened by EO 2019	2017	0	50 outreach activities
	Public forums with stakeholders including academic and training institutions conducted semi-annually starting in mid 2019	2017	9	12 public forums
	Active engagement of media, academe, maritime associations/ organizations and private sector recognized for their maritime innovations (specifically in the design, construction, and repair of green ships, drone ships, etc.) and best practices starting EO 2020	2017	0	20 innovative products
2. Knowledge products and technology solutions developed and applied/utilized	Enabling technologies (hardware and software) to establish the Maritime Innovation and Knowledge Center (MIKC) and to help collect and connect knowledge within the maritime industry developed and deployed by EO 2020	2017	0	30 technologies
	Integrated databases (developmental databases and application-based systems) to build internal knowledge partnerships and support the information needs of MIDP's Priority Programs, and maritime associations/ organizations established, operated	2017	0	Integrated database system established and functional

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		PROGRAM TARGETS
		YEAR	VALUE	
	and maintained by EO 2019			
	Link of MIKC with <b>Global Integrated Shipping Information System (GISIS)</b> established and maintained by EO 2019	2017	0	Link with GISIS formally established by EO 2019, and relevant maritime information included in maritime industry statistics to be published annually starting in 2020
	Maritime-related knowledge products developed and promoted starting in 2020	2017	0	<b>Videos</b> 1 video per program in two years (40 videos by EO 2028)  <b>Publication materials</b> 1 publication material per program in two years (40 publication materials by EO 2028)
	Maritime industry statistics consistent with Philippine Standard Industrial Classification (PSIS) and International Standard Industrial Classification (ISIC) collected, stored, maintained and published annually starting in 2020	2017	0	Maritime industry statistics aligned with PSA' PSIC/UN's ISIC, and collected, stored, maintained and published annually starting in 2020
3. Innovation capacity of partners strengthened	MARINA Library (online and physical space) with regular quarterly report/newsletter publications and at least 50 maritime related journals subscriptions annually established and maintained by EO 2019	2017	0	360
	Number of information and technologies requested by maritime stakeholders (government agencies, private sector, general public) increased by 10% by EO 2028	2017	0	70 information and technology products provided to key stakeholders
	Capacity building of 50 MARINA staff (Central Office and MROs) and 400 key stakeholders in knowledge management, information management, and	2017	0	450 MARINA staff and other key stakeholders trained on knowledge management, information management and communication

HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		PROGRAM TARGETS
		YEAR	VALUE	
	communication enhanced by EO 2028			
	Competency training for 360 registered seafarers and other maritime professionals to continuously achieve and maintain global competitiveness developed and implemented starting in mid 2019.	2017	0	360 maritime professionals trained on specialized fields
4. Program management support provided	A pool of MARINA trained personnel to implement the Program in the next 10 years designated with clearly defined functions, responsibilities and accountabilities by 1 <sup>st</sup> quarter of 2019	2017	0	120 MARINA personnel trained on program planning and management
<b>ACTIVITIES</b>				
1.1 Develop communication materials and conduct campaign activities regularly 1.2 Establish and maintain social media presence (regular monthly press briefings through TV and Facebook Live, and more news stories and feature articles/videos) 1.3 Strengthen outreach to regional and international media partners 1.4 Design and conduct public forums with stakeholders including academic and training institutions semi-annually 1.5 Engage media, academe, maritime associations/organizations and private sector through recognition for their maritime innovations (specifically in the design, construction, and repair of green ships, drone ships, etc.) and best practices starting EO 2020 2.1 Develop and deploy enabling technologies (hardware and software) to establish the Maritime Innovation and Knowledge Center (MIKC) and to help collect and connect knowledge within the maritime industry 2.2 Establish, operate and maintain integrated databases (developmental databases and application-based systems) to build internal knowledge partnerships and support the information needs of MIDP's Priority Programs, and maritime associations/organizations 2.3 Link MIKC with <b>Global Integrated Shipping Information System (GISIS)</b> 2.4 Develop and promote maritime-related knowledge products 2.5 Collect, store, maintain and publish maritime industry statistics consistent with Philippine Standard Industrial Classification (PSIS) and International Standard Industrial Classification (ISIC) 2.6 Establish and maintain MARINA Library (online and physical space) with regular quarterly report/newsletter				



HIERARCHY OF OBJECTIVES	INDICATORS	BASELINE		PROGRAM TARGETS
		YEAR	VALUE	
<p>publications and maritime related journals subscriptions annually</p> <p>1.1 Enhance capacity building of 50 MARINA staff (Central Office and MROs) and 400 key stakeholders in knowledge management, information management, and communication</p> <p>1.2 Develop and implement competency training for all registered seafarers and other maritime professionals to continuously achieve and maintain global competitiveness</p> <p>4.1 Designate a pool of MARINA trained personnel to implement the Program in the next 10 years with clearly defined functions, responsibilities and accountabilities</p> <p>4.2 Provide appropriate office space, equipment and supplies for the designed Program management staff throughout the Program period</p>				

## SPATIAL CONTEXT

This Program will be implemented nationwide, covering MARINA's Central and Regional Offices and involving all local and international stakeholders.

## PROGRAM COMPONENTS

The project will include four components, namely:

- A. Promotion of the maritime industry
  1. **Public awareness initiatives** - communication campaigns; strengthened social media presence; regular press briefings (through TV and Facebook Live); more news stories and feature articles; videos; outreach to regional and international media partners
  2. **Knowledge sharing and learning activities** - public fora with stakeholders including state universities, colleges, Maritime Higher Education Institutions;
  3. **External knowledge partnerships** - engaging the media, academe, maritime associations and organizations and private sector through recognizing maritime innovations (specifically in the design, construction, and repair of green ships, drone ships, etc.) and best practices.
- B. Development of knowledge products and technology solutions
  1. **Deployment of enabling technologies** (hardware and software) to establish the MARINA Knowledge & Information Technology Center and to help and collect and connect knowledge within the maritime industry
  2. **Development of integrated databases** (developmental databases and application-based systems) to build internal knowledge partnerships and support the information needs of MARINA's seven technical working groups, maritime associations and organizations
  3. Integration with the **Global Integrated Shipping Information System (GISIS)**
  4. Development of knowledge products
  5. Establishment of the MARINA Library (online and physical space)



- C. Strengthening the innovation capacity of partners
1. Capacity building of MARINA staff and key stakeholders in knowledge management, information management, and communication
  2. Competence training for our seafarers to continuously achieve global competitiveness.

D. Program monitoring and evaluation

## IMPLEMENTATION SCHEDULE

This Program is designed for 10 years (see **Appendix 3**).

## IMPLEMENTATION ARRANGEMENTS

MARINA will take the lead role in implementing the Program. Other national concerned government agencies and local government units (LGUs), maritime organizations/ associations, private sector, academe and media will serve as cooperating Program partners. The key responsibilities of these Program actors are summarized below.

### Lead Implementing Agency/ies

MARINA will assume the overall responsibility for Program planning and implementation.

Program Components	Main Responsibilities
<b>A. Promotion of the maritime industry</b>	
1. Public awareness initiatives	<ul style="list-style-type: none"> <li>• Prepare, carry out, and update the communication plan</li> <li>• Plan and perform needed coordination for the press briefing</li> <li>• Conduct research, prepare scripts and storyboard, plan shooting, and edit video reports until final approval</li> <li>• Build linkages with representatives from bigger media organizations, regional media, and online influencers to widen reach</li> </ul>
2. Knowledge sharing and learning activities	<ul style="list-style-type: none"> <li>• Organize the public fora, provide complete documentation</li> <li>• Identify action items/issues and forward these to the management / relevant partner for discussion/resolution</li> <li>• Share fora results to participants and stakeholders</li> </ul>
<b>B. Development of knowledge products and technology solutions</b>	
1. Deployment of enabling technologies	<ul style="list-style-type: none"> <li>• Acquire software &amp; hardware</li> <li>• Develop systems</li> <li>• Coordinate with DICT / DOST on data sharing, cloud-based repository for the government, cybersecurity, and other technologies</li> <li>• Design and construct physical structure</li> </ul>
2. Development of integrated databases	<ul style="list-style-type: none"> <li>• Work closely with MARINA TWGs in developing the systems and in delegating tasks related to data collection, organization</li> <li>• Invite stakeholders to test databases and establish feedback mechanisms to improve them</li> <li>• Coordinate with relevant agencies for data sharing and to ensure interoperability and interconnection of applications and databases to achieve an integrated electronic government</li> </ul>

Program Components	Main Responsibilities
3. Integration with the Global Integrated Shipping Information System (GISIS)	<ul style="list-style-type: none"> <li>• Consolidate information and update all fields of the Country Maritime Profile (CMP)</li> <li>• Craft policies on the delegated functions to the recognized organizations</li> <li>• Review and consolidate existing policies on marine casualties and incidents</li> <li>• Craft necessary legislation related to status of treaties and non-mandatory instruments</li> <li>• Communicate and disseminate information on the existing policies and non-mandatory instruments</li> <li>• Continuous monitoring of the approved education and training facilities employing the use of simulators in coordination with CHED and PAMTCI</li> <li>• Lead the conduct of continuous Member States Audits</li> <li>• Consolidate reports and audit results and take charge of communication to the IMO</li> </ul>
4. Development of knowledge products	<ul style="list-style-type: none"> <li>• Prepare the annual publication plan</li> <li>• Lead the production of regular knowledge products – e.g. annual report, statistical report</li> <li>• Collaborate with sub-sectors and TWGs in preparing special/thematic reports</li> </ul>
5. Establishment of the MARINA Library (online and physical space)	<ul style="list-style-type: none"> <li>• Acquire key reference materials related to the maritime industry</li> <li>• Develop archive</li> <li>• Promote the use of the library through partnerships with the academe, maritime associations, organizations</li> </ul>
<b>C. Strengthening the innovation capacity of partners</b>	
1. Conduct training needs assessment, prepare a training plan;	
2. Hold regular trainings	
<b>D. Program monitoring and evaluation</b>	
1. Prepare the monitoring and evaluation plan and conduct activities;	
2. Share the evaluation results to key internal and external stakeholders	

### Cooperating Partner/s

Cooperating partners will take responsibilities for some Program components as noted below, and play support role in other components. MARINA will support cooperating agencies who assume major responsibilities as stated above.

Program Components	Cooperating Partner/s	Main Responsibilities
<b>Promotion of the maritime industry</b>		
External knowledge partnerships	DOST	1. Plan and implement the recognition rites/competition on maritime innovations with MARINA
		2. Provide additional budget for promotional campaigns related the recognition rites/competition

Program Components	Cooperating Partner/s	Main Responsibilities
<b>Development of knowledge products and technology solutions</b>		
Development of integrated databases	Philippine Statistics Authority	Statistical data on maritime sector
Integration with the Global Integrated Shipping Information System (GISIS)	Philippine Coast Guard	1. Coordinate with MARINA on maritime security related reports
		2. Review existing policies and identify areas for coordination in the following: <ul style="list-style-type: none"> <li>• Global SAR Plan</li> <li>• MARPOL Annex VI</li> <li>• Ballast Water Chemicals</li> <li>• Inter-agency platform for information sharing on migrant smuggling by sea</li> </ul>
		3. Review and consolidate existing policies on: <ul style="list-style-type: none"> <li>• pollution prevention equipment and anti-fouling systems</li> <li>• piracy and armed robbery</li> </ul>
	PPA/CPA/SBMA	Review and consolidate existing policies on port reception facilities
	PPA	Review existing policies and identify areas for coordination in <ul style="list-style-type: none"> <li>• Facilitation of International Maritime Traffic</li> <li>• Cargoes</li> </ul>

## PROGRAM COST

The Program is estimated to cost PhP 599.31 million pesos for a 10-year period of implementation, broken down by component as follows:

Item	Amount (Million Pesos)
<b>A. Base Cost (2018 prices)</b>	
Component 1: Promotion of the maritime industry	37.72
Component 2: Development of knowledge products and technology solutions	453.11
Component 3: Strengthening the innovation capacity of partners	4.50
Component 4: Program management, monitoring and evaluation	49.50
<b>Subtotal</b>	<b>544.83</b>
<b>B. Contingencies (Computed at 10%)</b>	
Physical and price contingencies	54.48
<b>C. Total</b>	<b>599.31</b>

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## **APPENDIX 3:**

# **Implementation Schedule**

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<b>3.0 Development of Coastal and Inland Waterways Transport (CIWT) System</b>										
3.1	Waterways Development and Maintenance									
3.2	Ports/Landings/Terminals Construction and O&M									
3.3	Boat Building and O&M									
3.4	CIWT-IS Establishment and Operation									
3.5	Program Management Support (including Feasibility Studies)									
<b>4.0 Strengthening of Safety Operations of Registered Fishing Vessels</b>										
4.1	Development of Fishing Vessels Safety Rules and Regulations (FVSRR)									
4.2	Development and Implementation of Capacity Building Program for Trainers, Operators and Seafarers on Safety in Fishing Vessels Operations									
4.3	Development and Promotion of Safety Designs in Fishing Vessels									
4.4	Development and Dissemination of User-Friendly Fishing Safety Guides as IEC Materials									
4.5	Development, Updating and Dissemination of a Database of Fishing Vessels (Municipal and Commercial Fishing Vessels) and Crew (Officers and Ratings)									
4.6	Program Management Support									
<b>5.0 Development of a Global Maritime Hub</b>										
5.1	Promotion of the Philippine Flag Registry									
5.2	Development of the Philippines as a Transshipment and Bunkering Hub in the Southeast Asian region									
5.3	Upgrading and Expansion of Local Shipyards									
5.4	Establishment of an Eco-Industrial Maritime Park									
5.5	Establishment of a Maritime Training and Research Center									
5.6	Program Management Support									







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## **APPENDIX 4: Relevant Laws, Policies, and Guidelines**

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## APPENDIX 4: Relevant Laws, Policies and Guidelines

**Note:** This information is part of the outputs of the review of existing laws, policies and guidelines that are likely to facilitate or hinder the implementation of the priority programs included in this MIDP, as carried out by MARINA's Technical Working Groups (TWGs). These TWGs were formed by the agency to formulate the programs based on the problem and objectives trees which evolved from the sector assessment using logical framework analysis. The list of laws, policies and guidelines, as presented herein, focuses on the key instruments and thus cannot be viewed as complete and exhaustive. Other important laws and administrative circulars, which are presently not included in the list will be further reviewed during the initial year of MIDP implementation for improvement or amendment to promote and support the programs.

This section identifies the existing maritime laws and policies that are relevant to the eight priority programs under this MIDP, which will be subjected to deeper study to enhance the competitiveness of the Philippine maritime industry.

### International Maritime Convention Ratification and Regional Cooperation

The Philippines has already ratified many international maritime conventions and signed regional and bilateral cooperation, but there are still remaining fundamental international conventions to be ratified to bring the maritime industry at par with the global maritime standards. Below provides a list of the international conventions ratified by the Philippine Government and the corresponding legal instruments issued to put into effect the global maritime standards, the conventions with draft National Interest Analysis (NIA) prepared by MARINA, and the conventions that are not yet ratified. As noted above, this MIDP will work on the issuance or passage of necessary national legal instruments to fully enforce the ratified conventions, and to ratify other relevant conventions as outlined in this section during the first four years of MIDP implementation.

#### I. IMO Conventions

##### (1) Ratified Conventions

Title of Convention	Date Ratified/ Signed	Legal Instruments Issued
1. IMO Convention 48 Convention on the International Maritime Organization	*	
2. IMO Amendments 91 1991 Amendments to the IMO Convention	*	
3. IMO Amendments 93 1993 Amendments to the IMO Convention	*	

Title of Convention	Date Ratified/ Signed	Legal Instruments Issued
4. SOLAS Convention 74 International Convention for the Safety of Life at Sea, 1974, as amended	1982	PMMRR 1997; EO 125/125A; MC 122; MC 2012-02 - CSR; MC 200 -CSR; MC 2011-02; MC 2018-03 MSMC; MC 168; OTS: EO 311
5. LOADLINE Convention 66 International Convention on Load Lines, 1966	1969	EO 125/125A (Jan 30 & Apr 13, 1987); PMMRR 1997; MC 2007-03 (Aug 29, 2007)
6. TONNAGE 1969 International Convention on Tonnage Measurement of Ships, 1969	1969	EO 125/125A; PMMRR 1997; MC 2007-04
7. STCW Convention 78 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended	1984	RA 10635 and its Implementing Rules and Regulation; EO 36
8. STP Agreement 71 Special Trade Passenger Ships Agreement, 1971 (STP 1971)	1974	
9. IMSO Convention 76 Convention on the International Mobile Satellite Organization, as amended	1979	
10. INMARSAT OA 76 Operating Agreement on the International Mobile Satellite Organisation, as amended, amendments 98	1979	
11. MARPOL 73/78 (Annex I/II) International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978 relating thereto (Annexes I/II) ▪ Annex I: Regulations for the Prevention of Pollution by Oil ▪ Annex II: Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk	2001	RA 9993; RA 8550 as amended by RA 10654; RA 9375; RA 6969, RA 9003; PD 979; PD 474; EO 125/125A  PCG: MC 01-2005; MC 02-2006; MC 03-2006; MC 04-2005; MC 06-2005; MC 08-2014; MC 09-2014
12. MARPOL 73/78 (Annex III) ▪ Annex III: Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form	2001	
13. MARPOL 73/78 (Annex IV) ▪ Annex IV: Prevention of Pollution by Sewage from Ships (entered into force 27 September 2003)	2001	PCG: MC 10-2014
14. MARPOL 73/78 (Annex V) ▪ Annex V: Prevention of Pollution by Garbage from Ships	2001	PCG: MC 07-2014
15. London Convention 72 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972	1975	PCG: MC 11-2014

Title of Convention	Date Ratified/ Signed	Legal Instruments Issued
16. London Convention Protocol 96 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972	Acceded/ 8 June 2012 (entered into force)	PCG: MC 11-2014
17. CLC Protocol 92 Protocol of 1992 to amend the International Convention on Civil Liability for Oil Pollution Damage, 1969	1998	RA 9483
18. FUND Protocol 92 Protocol of 1992 to amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971	1998	RA 9483
19. SUA Convention 88 Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, 1988	*	
20. SUA Protocol 88 Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms Located on the Continental Shelf, 1988	*	
21. COLREG 72 International Regulations for Preventing Collisions at Sea, 1972	Acceded/ Philippines Instrument of Accession signed 14 March 2013	
22. OPRC International Convention on Oil Pollution, Preparedness and Response Cooperation	Acceded 6 February 2014/ entry into force on 06 May 2014	RA 9483
23. Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1974, as amended (SOLAS PROT 1978)	Acceded 24 April 2018/ entry into force on 24 July 2018	
24. Protocol of 1988 relating to the International Convention on Load Lines, 1966, as amended (LL PROT 1988)	Acceded 24 April 2018/ entry into force on 24 July 2018	
25. Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, as amended (MARPOL PROT 1997)	Acceded 24 April 2018/ entry into force on 24 July 2018	
26. Protocol of 1988 relating to the International Convention for the Safety of	Acceded 06 June 2018/ entry into	

Title of Convention	Date Ratified/ Signed	Legal Instruments Issued
Life at Sea, 1974, as amended (SOLAS PROT 1988)	force on 06 September 2018	
27. International Convention on the Control of Harmful Anti-fouling System on Ships, 2001 (AFS 2001)	Acceded 06 June 2018/ entry into force on 06 September 2018	
28. International Convention for the Control and Management of Ship's Ballast Water and Sediments, 2004	Acceded 06 June 2018/ entry into force on 06 September 2018	

Note: \* Information on the Year of Ratification/Accession is not available.

Source: Information on the status of IMO Convention is based on the IMO website.

## (2) Conventions with draft National Interest Analysis (NIA) prepared by MARINA on 11-13 December 2017

1. Cape Town Agreement of 2012 on the Implementation of the Provisions of 1993 Protocol relating to the Toremolinos International Convention for the Safety of Fishing Vessels (Cape Town Agreement 2012)
2. International Convention on the Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel, 1995 (STCW-F Convention 95)
3. International Convention on Liability and Compensation for Damage in connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996 and Protocol of 2010 to the Convention (HNS PROT 2010)
4. Nairobi International Convention on the Removal of Wrecks (NAIROBI WRC 2007)
5. Hongkong International Convention for the Safe and Environmentally Sound Recycling of Ships (HONG KONG Convention)

## (3) Not Yet Ratified Conventions

1. SOLAS Agreement 96
2. Convention of Safe Container (CSC) Convention 72
3. CSC Amendments 93
4. Safety of Fishing Vessels (SFV) Protocol 93
5. Search and Rescue (SAR) Convention
6. Space Special Trade Passenger Agreement (STP) Protocol 73
7. International Mobile Satellite Organization (IMSO) Amendments 2006
8. IMSO Amendments 2008
9. FACILITATION Convention 65
10. INTERVENTION Convention 69 (Intervention in the High Seas)
11. INTERVENTION Protocol 73
12. International Convention on Civil Liability for Oil Pollution Damage (CLC) Convention 69
13. CLC Protocol 76
14. FUND Protocol 76 (Oil Pollution Compensation)
15. FUND Protocol 2003
16. LLMC Convention 76 (Limitation of Liability for Maritime Claims)

17. LLMC Protocol 96
18. BUNKER Convention 01 (Civil Liability for Bunker Oil)
19. NUCLEAR Convention 71 (Convention relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material)
20. PAL Convention 74 (Passenger and Luggage Convention)
21. PAL Protocol 76
22. PAL Protocol 90
23. PAL Protocol 02
24. SUA CONVENTION 2005 (Suppression of Unlawful Acts against the Safety of Navigation)
25. SUA Protocol 2005
26. SALVAGE Convention 89 (International Convention on Salvage)
27. OPRC/HNS 2000 (Oil Preparedness, Response and Cooperation to Pollution Incident by Hazardous and Noxious Substances)

## II. ASEAN

The Philippines has also signed maritime related agreements with member states of the Association of Southeast Asian Nations (ASEAN), as outlined below.

- (1) **Memorandum of Understanding (MOU) Between the Governments of Brunei Darussalam, Indonesia, Malaysia and the Philippines on Establishing and Promoting Efficient and Integrated Sea Linkages (November 2, 2007, Singapore)**
- (2) **Signed Merchant Shipping Agreements (including other Maritime Countries)**

Merchant Shipping Agreement	Date Signed	Date Ratified	Entered into Force
Philippines and Bangladesh	10 October 1989	11 June 1991	15 March 1995
Philippines and Brunei Darussalam	27 January 2003	22 April 2004	-
Philippines and Cyprus	7 September 1984 9 November 2006 (Amendment)	22 October 1984	06 June 1985
Philippines and Iran	08 October 1995	-	-
Philippines and Netherlands	22 March 2000	May 2000	22 June 2000
Philippines and Norway	22 October 1999	15 February 2000	06 March 2000
Philippines and Viet Nam	27 February 1992	July 1997	05 August 1997

## III. Bilateral Agreements (Memorandum of Agreement/ Understanding [MOA/ MOU]) on the Recognition of Certificates under the Terms of the 1978 STCW Convention, as amended

MOA/MOU	Date Signed
1. Philippines and Antigua and Barbuda	16 October 2001
2. Philippines and Australia	21 October 2002
3. Philippines and Bahamas	10 September 2001
4. Philippines and Barbados	22 April 2002
5. Philippines and Belgium	12 June 2003
6. Philippines and Belize	No Date

MOA/MOU	Date Signed
7. Philippines and Brazil	07 February 2012
8. Philippines and Brunei Darussalam	13 September 2001
9. Philippines and Cambodia	02 October 2002
10. Philippines and Croatia	Croatian side - 11 April 2017 Philippines side - 05 July 2017
11. Philippines and Cyprus	13 September 2001
12. Philippines and Denmark	03 August 2001
13. Philippines and Dominica	25 April 2003
14. Philippines and Egypt	05 January 2007
15. Philippines and Eritrea	17 April 2006
16. Philippines and Georgia	06 May 2003
17. Philippines and Hellenic Republic	12 March 2003
18. Philippines and Hongkong	29 October 2001
19. Philippines and Indonesia	16 September 2002
20. Philippines and Iran	25 June 2012
21. Philippines and Ireland	25 April 2003
22. Philippines and Isle of Man	11 January 2002
23. Philippines and Italy	24 April 2002
24. Philippines and Jamaica	21 April 2005
25. Philippines and Japan	21 January 2000
26. Philippines and Korea	05 June 2002
27. Philippines and Kuwait	No Date
28. Philippines and Liberia	Liberia - 21 May 2002 Philippines - 05 June 2002
29. Philippines and Luxembourg	28 June 2002
30. Philippines and Malaysia	21 October 2002
31. Philippines and Malta	11 January 2002
32. Philippines and Marshall	08 October 2001
33. Philippines and Mongolia	12 June 2003
34. Philippines and Netherlands	31 May 2001
▪Amendment of the Agreement	14 June 2016
35. Philippines and Norway	19 November 2001
36. Philippines and Panama	26 July 2002
▪Amendment of the agreement	25 June 2016
37. Philippines and Poland	02 September 2004
38. Philippines and Portugal	07 March 2007
39. Philippines and Qatar	09 August 2006
40. Philippines and Saint Christopher & Nevis	05 July 2007
41. Philippines and Singapore	25 August 2001
42. Philippines and St. Vincent & the Grenadines	29 July 2005
43. Philippines and South Africa	05 November 2006
44. Philippines and Sweden	29 February 2002
45. Philippines and Switzerland	28 March 2005
▪Amendment of the agreement	03 March 2016
46. Philippines and Thailand	Thailand side - 13 December 2017 Philippines side - 16 January 2018
47. Philippines and Ukraine	02 September 2004
48. Philippines and Vanuatu	26 September 2001

## National Legislations and Other Policy Instruments

At the national level, review and enhancement of existing maritime legislations and policy instruments will focus on the following instruments which generally aim to enhance the competitiveness of the maritime industry through: (i) promoting and supporting greater private sector investment and participation in maritime related businesses; (ii) increasing efficiency of shipping, CIWT, maritime tourism and fishing vessels; and (iii) improving maritime safety and security of all Philippine-registered vessels, including passengers and cargoes:

- 1) **Republic Act No. 9295 (2004):** An Act Promoting the Development of Philippine Domestic Shipping, Shipbuilding, and Ship Repair and Ship Breaking, Ordering Reforms in Government Policies Towards Shipping in the Philippines, and for Other Purposes

Provisions for investment incentives under this law have expired last 30 May 2014, containing: (i) 12% value added tax (VAT) free on importation and local purchase of passenger and/or cargo vessels; (ii) VAT exemption on importation of life saving equipment, safety and rescue equipment, communication and navigational safety equipment, steel plates and other metal plates; (iii) net operating loss carry over (NOLCO); and accelerated depreciation. MIDP will work for the extension of these provisions to encourage greater private sector participation to the priority programs, including the establishment and operation of shipbuilding and ship repair yards.

MIDP will also plan and implement a time-bounded mandatory Vessel Retirement Program (VRP) for all unclassed vessels; ships that have attained the maximum vessel age as stipulated in the VRP; and vessels that do not carry a class certificate issued by a government-recognized classification society in pursuant to Section 23 Chapter IX on the Retirement of Old Vessels under this law.

- 2) **Presidential Decree No. 474 (1974):** Providing for the Reorganization of Maritime Functions in the Philippines, Creating the Maritime Industry Authority, and for Other Purposes

The time-bounded mandatory VRP will also comply with Section 2 of PDP 474 that mandates the Government through MARINA to implement the early replacement of all obsolescent and uneconomic vessels as well as to modernize and expand the Philippine merchant fleet. MIDP incorporates concrete actions in Priority Programs 1, 2, 3 and 5 for the development, promotion and/or provision of attractive financing and incentive schemes through the government and private sector financing/lending institutions and DTI's BOI, respectively, to support the expansion and modernization of the Philippine merchant fleet, including cruise ships, CIWT boats, and fishing vessels.

- 3) **Republic Act No. 9337 (2005):** An Act Amending Sections 27, 28, 34, 106, 107, 108, 109, 110, 111, 112, 113, 114, 116, 117, 119, 121, 148, 151, 236, 237 and 288 of the National Internal Revenue Code (NIRC) of 1997, as Amended and For Other Purposes



Provisions of this law on: (i) 12% VAT exemption granted by the Department of Finance (DOF); and (ii) six-year income tax holiday and a duty-free importation of brand new IACS-classed ships granted by the Board of Investments (BOI) will also be studied for inclusion in the time-bounded mandatory VRP.

- 4) **Republic Act No. 7916 (1995):** An Act Providing for the Legal Framework and Mechanisms for the Creation, Operation, Administration and Coordination of Special Economic Zones in the Philippines, Creating for this Purpose, the Philippine Economic Zone Authority (PEZA), and For Other Purposes

Review of this law will focus on the development of similar legal framework and mechanisms for the establishment and operation of a maritime hub in existing or new agri-industrial park with prospective business locators enjoying the benefits and incentives provided for companies operating in PEZA-managed economic zones.

- 5) **Republic Act No. 9301 (2004):** An Act Amending Certain Provisions of Republic Act No. 7471, Entitled "An Act to Promote the Development of Philippine Overseas Shipping and For Other Purposes; and **Republic Act No. 7471 (1992):** An Act to Promote the Development of Philippine Overseas Shipping and For Other Purposes

Provisions of this law on (i) "SEC. 7. *Exemption from Income Tax.* - a Philippine shipping enterprise shall be exempt from payment of income tax on income derived from Philippine overseas shipping for a period of ten (10) years from the date of approval of this Act. *Provided, that:* (a) The entire net income, after deducting not more than fifteen percent (15%) thereof for distribution of profits or declaration of dividends, which would otherwise be taxable under the provisions of Title II of the National Internal Revenue Code, is reinvested for the construction, purchase, or acquisition of vessels and related equipment and/or in the improvement or modernization of its vessels and related equipment in accordance with the regulation; and (b) The cumulative amount so reinvested shall not be withdrawn for a period of seven (7) years after the expiration of the period of income tax exemption or until the vessel or related equipment so acquired have been fully paid, whichever date comes earlier; and (ii) Any amount not so invested or withdrawn prior to the expiration of the period stipulated herein shall be subject to the corresponding income tax, including penalties, surcharges and interests."

- 6) **Republic Act No. 10668 (2015):** An Act Allowing Foreign Vessels to Transport and Co-Load Foreign Cargoes for Domestic Transshipment and For Other Purposes

Revisit the preamble and provisions of this law to increase the competitiveness of the country's maritime industry:

"It is the policy of the State: (a) To assist importers and exporters in enhancing their competitiveness in light of intensifying international trade; and (b) To lower the cost of shipping export cargoes from Philippine ports to international ports

and import cargoes from international ports for the benefit of the consumers. This Act shall apply exclusively to foreign vessels carrying foreign container vans or foreign cargoes.”

“**Section 5. Authority of the Commissioner of Customs.** – The Commissioner of Customs, upon such reasonable conditions as may be imposed, may do the following acts: (a) Authorize the conveyance of foreign cargo brought from abroad by a foreign vessel; (b) Allow a foreign vessel to take cargo intended for export at any Philippine port and convey the same upon such foreign vessel to a foreign port; and (c) Authorize the transshipment of such foreign cargo intended for import or export through another Philippine port by another foreign vessel to the cargo’s port of final destination. *Provided,* That such acts shall not diminish or impair any existing and valid government contract covering the handling of import and export cargo.”

- 7) **Presidential Decree No. 1221 (1977):** Requiring All Philippine Owned and/or Registered Vessels to Undertake Repairs and Drydocking with MARINA-Registered Ship Repair Yards

Revisit the provisions of this law to strengthen the enabling laws for the planned establishment of a maritime hub (Priority Program 5):

“**Section 2.** All Philippine-owned and/or registered vessels shall undertake all repairs, improvement, alteration, reconditioning, conversion or drydocking with MARINA-registered ship repair years, provided that the Maritime Industry Authority may exempt any such vessel from this requirement in any of the following cases:

1. When as a result of collision, grounding, heavy weather, breakdowns and other perils of the sea occurring abroad, the vessel suffers damages necessitating emergency and/or extraordinary repairs, and it is impracticable that such vessel be brought to the Philippines for the needed repairs;
  2. When on account of existing prior commitments or due to inadequacy or lack of service facilities of MARINA-registered ship repair yards, as determined by the Maritime Industry Authority, the repairs or works sought to be undertaken on the vessel cannot be accommodated by such ship repair yards;
  3. When the Philippines is not one of the vessel’s ports of call, in which case a waiver from the said requirement must be obtained from the Maritime Industry Authority;
  4. All other meritorious cases as may be determined by the Maritime Industry Authority.”
- 8) **Executive Order No. 438 (1997):** Extending the Effectivity of Any Charter or Lease Contract Pursuan to Presidential Decree No. 760 as Amended

Revisit the provision of this law on: “**Section 1. Effectivity of any charter or lease contract pursuant to PD 760, as amended.** The effectivity of any charter or lease contract entered into under the said Decree is hereby extended, provided, however, it shall not go beyond the year 2009, unless otherwise further extended by the President of the Republic of the Philippines.” The review will assess the need for further extension of this provision vis-a-vis the existing capacity of locally owned/ managed merchant ships and the country’s goal of achieving global competitiveness for the national maritime industry.

- 9) **Executive Order No. 63 (2018):** Further Strengthening the Authority of the Maritime Industry Authority as the Single Maritime Administration for the Purpose of Implementing the 1978 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, as Amended

Implement the provisions of this law more aggressively, in coordination with CHED, to ensure the professionalism and competitiveness of the Filipino seafarers.

- 10) **Republic Act No. 2067 (1958):** An Act to Integrate, Coordinate and Intensify Scientific and Technological Research and Development and to Foster Invention; To Provide Funds Therefore; And For Other Purposes

Revisit the provisions of this law to explore how the same can be applied to promote and support the planned establishment of a maritime hub, especially the component on the setting up of Maritime Training and Research Center (MTRC).

- 11) **Republic Act No. 9483 (2007):** An Act Providing for the Implementation of the Provisions of the 1992 International Convention on Civil Liability for Oil Pollution Damage and the 1992 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, Providing Penalties for Violations Thereof, and For Other Purposes

Strictly enforce the provisions of this law, in collaboration with PCG, PPA, DENR and other government agencies, to ensure the marine environmental protection based on the following:

“**Sec. 2. Declaration of Policy.** - The State, in the protection of its marine wealth in its archipelagic waters, territorial sea and exclusive economic zone, adopts internationally accepted measures which impose strict liability for Oil Pollution Damage and ensure prompt and adequate compensation for persons who suffer such damage. This Act adopts and implements the provisions of the 1992 International Convention on Civil Liability for Oil Pollution Damage and the 1992 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage.”

- 12) **Republic Act No. 9165 (2002):** An Act Instituting the Comprehensive Dangerous Drugs Act of 2002, Repealing Republic Act No. 6425, Otherwise Known as the Dangerous Drugs Act of 1972, as Amended, Providing Funds Therefor, and For Other Purposes

Strictly enforce the provisions of this law, in collaboration with PCG, PNP, PN, PEDEA and other government agencies, to ensure the maritime security of all Philippine-registered vessels.

- 13) **Republic Act No. 8550 (1998):** An Act Providing For The Development, Management And Conservation Of The Fisheries And Aquatic Resources, Integrating All Laws Pertinent Thereto, and For Other Purposes

Revisit the relevant provisions of this law to enhance the competitiveness of both the commercial and municipal fishing business in the country; and clarify to delineate the regulatory functions between MARINA and DA/BFAR or LGUs with regard to the tonnage limit of municipal fishing vessels for systematic registration, licensing and monitoring purposes.

- 14) **Republic Act No. 9379 (2007):** An Act Defining Handline Fishing, Providing Effective Regulations Therefor, and For Other Purposes

Strictly enforce the provisions of this law, in collaboration with all government agencies specified in the same law, including the conduct of regular compliance monitoring, to ensure the safety and seaworthiness of all Philippine-registered fishing vessels.

- 15) **Republic Act No. 10654 (2014):** An Act To Prevent, Deter And Eliminate Illegal, Unreported And Unregulated Fishing, Amending Republic Act No. 8550, Otherwise Known As "The Philippine Fisheries Code Of 1998," and For Other Purposes

Strictly enforce the provisions of this law: "SEC. 2. *Declaration of Policy.* – It is hereby declared the policy of the State: ... (c) To ensure the rational and sustainable development, management and conservation of the fishery and aquatic resources in Philippine waters including the Exclusive Economic Zone (EEZ) and in the adjacent high seas, consistent with the primordial objective of maintaining a sound ecological balance, protecting and enhancing the quality of the environment. The Philippines shall pursue its commitment to international conventions and cooperate with other states and international bodies, in order to conserve and manage threatened , aquatic species, straddling and highly migratory fish stocks and other living marine resources; and SEC. 3. *Application of its Provisions.* – The provisions of this Code shall be enforced in: (a) all Philippine waters including other waters over which the Philippines has sovereignty and jurisdiction, and the country's 200-nautical mile Exclusive Economic Zone (EEZ) and continental shelf; (b) all aquatic and fishery resources whether inland, coastal or offshore fishing areas, including, but not limited to, fishponds, fish pens/cages; (c) all lands devoted to aquaculture, or businesses and activities relating to fishery, whether private or public lands; and (d) all Philippine flagged fishing vessels operating in areas governed by a Regional Fisheries Management Organization (RFMO), in the high seas, or in waters of other coastal states."

- 16) **Executive Order No. 154 (2013):** Adopting a National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported, and Unregulated Fishing, and for Other Purposes

Revisit the existing National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported, and Unregulated Fishing (NPOA-IUU) to strengthen linkages between this Plan and Priority Program 4 in coordination with the National Committee created under this legal instrument for the implementation of NPOA-IUU.

In addition, the specific priority programs will carry out a review, enhancement and/or harmonization of all maritime administrative orders, memorandum circulars and related issuances by the different government agencies through the proposed MIDP National Policy and Implementation Coordination Committee (MNPICC) and its Technical Working Group (TWG), as discussed in the main text of this MIDP, to institute a more integrated policy environment for the successful implementation of the programs. Ongoing efforts being done by MARINA to revise and update the Philippine Merchant Marine Rules and Regulations (PMMRR) and Philippine Fishing Vessels Rules and Regulations (PFVRR), among others, will be completed and implemented in 2019.