PHILIPPINE SHIPBUILDING AND SHIP REPAIR

2021

CAPABILITY AND CAPACITY ASSESSMENT REPORT

Third Volume

Maritime Industry Authority
Shipyards Regulation Service

2021

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CAPABILITY AND CAPACITY ASSESSMENT REPORT

THE THIRD VOLUME

Maritime Industry Authority
Shipyards Regulation Service
Shipyard Development and Licensing Division

CONTENTS

Appendix 6: Memorandum Circular No. SR-2020-06 “Rules and Regulations on the Mandatory Use of 0.50% M/M Sulphur Limit on Fuel Oil for All Philippine Registered Ships in Compliance to Annex VI of MARPOL 73/78, as Amended”

Appendix 7: Memorandum Circular No. SR-2021-01 “Revised Rules and Regulations on the Tonnage Measurement of Philippine-Registered Ships”

Appendix 8: Memorandum Circular No. SR-2021-02 “Revised Rules and Regulations on Load Line Survey, Assignment, Marking and Certification for Philippine Registered Ships”

Appendix 9: Memorandum Circular No. SR-2021-03 “Revised Guidelines in the Implementation of Presidential Decree No. 1221”

Appendix 10: Memorandum Circular No. SR-2021-04 “Revised Rules and Regulations on Intact and Stability Requirement for Philippine-Registered Ships”

Appendix 11: Memorandum Circular No. SR-2021-05 “Rules and Regulations on the Implementation of Ships’ Energy Efficiency Management Plan (SEEMP) and Data Collection System (DCS) for Fuel Oil Consumption for All Philippine Registered Ships”

Appendix 12: MARINA Advisory No. 2020-92 “Control Measures on Conducting In-Water Hull Cleaning While the Ships is at Sea in All Areas Within the Philippine Waters”

Appendix 13: MARINA Advisory No. 2021-14 “Harmonization on the System of Survey and Certification of Philippine-Registered Ships”

Appendix 14: MARINA Advisory No. 2020-33 “Guidelines on the Resumption of Operations of Shipbuilding, Ship Repair, Boat Building, Afloat Ship Repair/Service Contractors, Ship Breaking Entities in Areas Under General Community Quarantine (GCQ)”

Appendix 15: MARINA Advisory No. 2020-35 “Additional Protocols on Minimum Passenger Service Standards under MC 134, 65/65A and MS 2018-18 to Prevent the Spread of COVID-19 Pandemic”

Appendix 16: Memorandum Order No. 50 “Approving the 2020 Investment Priorities Plan”

Appendix 17: Questionnaire to the Shipyards used for the 2021 SBSR Capability and Capacity Assessment Report

EXECUTIVE SUMMARY

The year 2020 was remembered as a challenging year for the Philippines. January was met by the eruption of Taal Volcano in Batangas, which caused difficulties for Metro Manila and Southern Luzon residents. Not long after this calamity, the Coronavirus Disease 2019 (COVID-19) pandemic set in and further paralyzed towns and cities—some of which had not even recovered from the Taal calamity early in the year. As a result, major industries in the country experienced losses while government engagements on the first two quarters of the year were either postponed or cancelled.

As a globalized nation, the economy of the Philippines was one of the many economies severely affected by the COVID-19 pandemic. The first half of 2020 was met by widespread lockdown, travel restrictions, and fast-rising unemployment. SMEs and large enterprises suffered losses, even prompting major commercial establishments to close shop due to irreparable financial damage.

The Philippine Maritime Industry had no exception in these challenging times. The COVID-19 outbreak caused Filipino seafarers to be stranded overseas in isolation, even falling into depression—an unfortunate event that the United Nations called a humanitarian crisis. Some Filipino seafarers were also stranded on their ships just docked at Manila Bay's anchorage. To aid in their situation, the MARINA outlined procedures on crew change and the repatriation of seafarers in accordance with safety and health standards. Aside from the seafaring sector, the lucrative shipbuilding and ship repair (SBSR) industry also experienced significant losses. community-based lockdowns ordered for the temporary closure of non-essential business establishments to limit the mobility of people. In April 2020, the Shipyards Association of the Philippines (ShAP) formally requested to the MARINA official guidelines on the operations of shipyards under community quarantine circumstances. The MARINA issued MA No. 2020-33 in May 2020 to set the official rules on the resumption of operations of SBSR entities (including SBK and ASR) under the General Community Quarantine (GCQ).

The situation in the country gradually started to normalize with the rollout of the anti-COVID-19 vaccines. As of the end of 2021, majority of the Filipinos are fully vaccinated and adjusted its alternative working scheme but the industry remains prudent as the threat of COVID-19 still exists. On a related note, the eased COVID-19 related protocols paved the way for shipyards to prioritize dry-docking activities and mobilize their workers. Shipyards are also now able to accommodate more projects with the increased number of workers allowed inside their yards.

This report provides a review on the 2021 capability and capacity of the Philippine shipyards on Shipbuilding and Ship Repair.

LIST OF TABLES AND FIGURES

TABLES

FIGURES

ABBREVIATIONS

ADLE	–	Additional Deduction for Labor Expense
AFAB	–	Authority of the Freeport Area of Bataan
AWA	–	Alternative Work Arrangement
BCDA	–	Bases Conversion and Development Authority
BOI	–	Board of Investments
BRS	–	Barry-Rogliano-Salles Group
C&C	–	Capability and Capacity
CDC	–	Clark Development Corporation
CFZ	–	Clark Freeport Zone
CSEZ	–	Clark Special Economic Zone
COVID-19	–	Coronavirus Disease 2019/ COVID Pandemic
CSC	–	Civil Service Commission
DWT	–	Deadweight
ECC	–	Environmental Compliance Certificate
EO	–	Executive Order
GAD	–	Gender and Development
GDP	–	Gross Domestic Product
GT	–	Gross Tonnage
HHIC-Phil	–	Hanjin Heavy Industries and Construction – Philippines
IPP	–	Investment Priorities Plan
ISO	–	International Organization for Standardization
ITH	–	Income Tax Holiday
ITF	–	International Transport Forum
LCT	–	Landing Craft Transport
LDA	–	Less Developed Area
MARINA	–	Maritime Industry Authority
MC	–	MARINA Memorandum Circular
MIDP	–	Maritime Industry Development Program
MRO	–	MARINA Regional Office
NCR	–	National Capital Region
OECD	–	Organization for Economic Cooperation & Development
OSH	–	Occupational Safety and Health
PD	–	Presidential Decree
PEZA	–	Philippine Export Zone Authority

PHILSECO	–	Philippine Shipbuilding and Engineering Corporation
PHP	–	Philippine Peso
PSSRR	–	Philippine Ship Safety Rules and Regulations
QMS	–	Quality Management System
RA	–	Republic Act
ROPAX	–	Roll-On, Roll-Off Passenger Ship
RORO	–	Roll-On, Roll-Off
RoW	–	Rest of the World
SBMA	–	Subic Bay Metropolitan Authority
SBSR	–	Shipbuilding and Ship Repair
ShAP	–	Shipyards Association of the Philippines
SRS	–	Shipyards Regulation Service
USD	–	United States Dollar
VAT	–	Value-Added Tax
WHO	–	World Health Organization

Chapter 1

INTRODUCTION

1.1 The Philippines Shipbuilding and Ship Repair amid COVID Pandemic

The Philippines is an archipelago of 7,641 islands. These islands stretch from the South of China to the Northern tip of Borneo. The bodies of water that surround the Philippines makes it as the ideal place to conduct maritime activities including shipbuilding and ship repair (SBSR), shipping, fishing, and navigation. Before the current state of the SBSR industry in the Philippines, the said lucrative business emerged in the country during the late 1970s, with large shipyards mainly joint ventures between local and foreign firms. At that time, the largest shipyard was the Subic Shipyard & Engineering, Inc. (formerly PHILSECO), which had its focus in ship repair works. The company was owned by a consortium of local enterprises and some Japanese and then Singaporean multinationals. Years later, aside from Japan, the other shipbuilding giant, South Korea also invested in the Philippines, which is recognized as part of the top five shipbuilding nations in the world. Tsuneishi Holdings Corporation of Japan and Hanjin Heavy Industries and Construction Group of Korea play a major role in maintaining the status of the Philippines as the fifth largest shipbuilding country worldwide. Over the years, local firms expanded their capability and capacity relative to catering different projects particularly shipbuilding and ship repair. In this regard, the SBSR industry in the Philippines is considered to be on the roll until the huge corporate bankruptcy of a Korean shipyard in 2019 and the severe impact of COVID-19 pandemic that was felt in the country and the rest of the world since 2020.

Based on the 2022 Annual Review of the BRS Group on Shipping and Shipbuilding Markets, China, Korea and Japan accounted more than 95 percent of the global orderbook by deadweight in 2021. In fact, the leading Asian shipbuilding giant improved their market share from 44.7 percent to 48.2 percent. On the other hand, South Korea continues to compete fiercely in the industry as it recorded a market share of 31.4 percent in 2021 from the previous 29.9 percent. Meanwhile, the market share of other powerhouse shipbuilding country, Japan, slipped from 20.5 percent to 15.8 percent but managed to sustain the same level of tonnage in its orderbook. The 2022 Annual Review of the BRS Group also stated that the remaining shares in the market were received by Europe with 2.3 percent while the rest of the world recorded 2.4 percent.

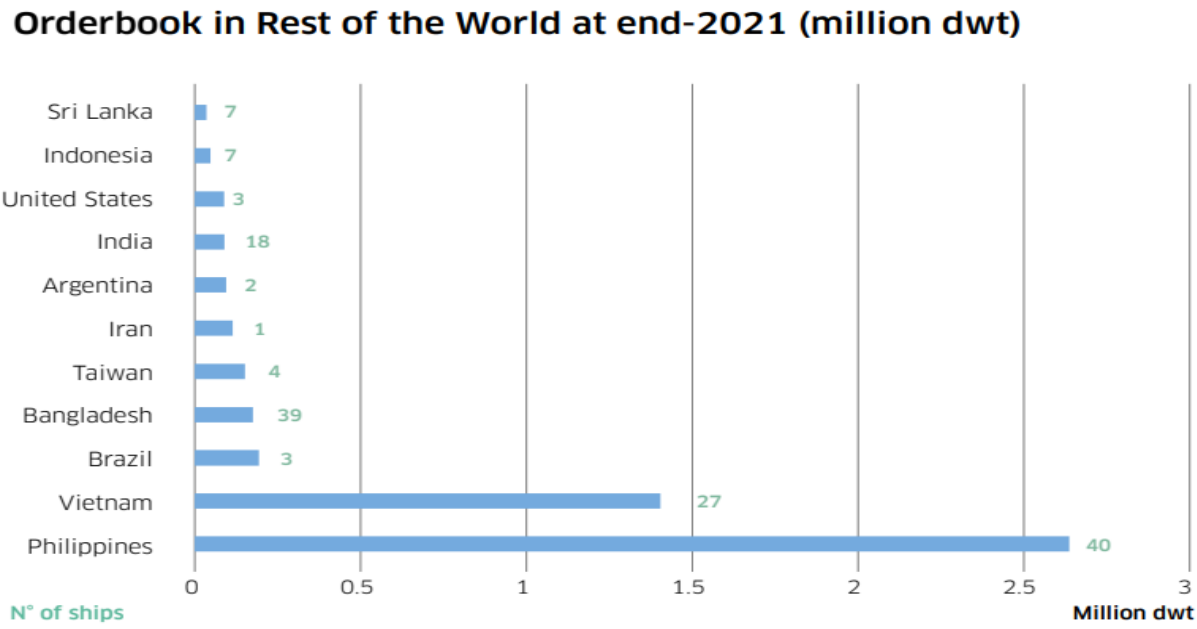
The Philippines remains as the leader of the Rest of the World (RoW) countries in terms of shipbuilding. Supported by the impressive performance of Tsuneishi Cebu and Austral Philippines yards, the top nation in the RoW category holds 53.8 percent of the total RoW orderbook in 2021. It is 1.8 percent higher compared to its 52 percent shares in 2020. Previously, the Philippines recorded 45 percent shares in 2019, 48 percent in 2018, 54 percent in 2017 and 55 percent in 2016. In this regard, it is very important to note that 66% of the current orderbook (2.7M dwt) of Tsuneishi Cebu was secured in 2021 with 1.83M dwt of orders. The new orders are only bulk carriers (19 Kamsarmax and 4 Ultramax) ordered exclusively by the Japanese owners. In the RoW category, Vietnam retained its position next to Philippines with the Hyundai Vietnam Shipbuilding (HVS) accounting the 98.3 percent of the orderbook in the said country (4 LR2s, 16 MR tankers and 1 Ultramax).

Further, the BRS Group reported that the market share of the Rest of the World is on the same level in 2020 and 2021 but the orderbook at shipyards in 2021 increased to 5.1M dwt from the previous 4.1M dwt. It was the bulk segment that dominated the RoW orderbook. The shipbuilders under the RoW category secured 3 times more orders for tankers in 2021 (1.2M dwt) than in 2020 (0.4M dwt) while the tanker orderbook of the other main shipbuilding nations decreased. The 2022 Annual Report stated that the new orders for bulkers doubled from 0.9M dwt to 1.8M dwt but it did not manage to benefit from the surge in new containership orders.

In terms of deliveries, 2.3M dwt was recorded in 2021, which is 1.2 percent and 0.4 percent lower compared to 3.5M dwt and 2.7M dwt in 2019 and 2020 respectively. On the other hand, from 1.4 in the year 2020, the ratio between the current orderbook and yearly output increased to 2.2 in 2021. The BRS Group also said that only 8 shipyards under the RoW category secured new orders in 2021. It is higher compared to 7 shipyards in 2020 but lower than 13 shipyards in 2019. The two yards that accounted the 92.7 percent of new orders in 2021 are Tsuneishi Cebu (Philippines) and Hyundai Vietnam Shipping with 57.1 percent and 35.6 percent respectively.

ROW		2020		2021	
		m dwt	Ships	m dwt	Ships
Orderbook	Market share	2.3%	6.3%	2.3%	5.1%
	Bulk	2.1	54	2.8	61
	Tanker	1.4	44	1.7	35
	Container	0.3	15	0.3	15
	All ships	**4.1**	**167**	**5.1**	**159**
Orders	Bulk	0.9	26	1.8	23
	Tanker	0.4	10	1.2	20
	Container	0.1	6	0.1	4
	All ships	**1.4**	**49**	**3.2**	**63**
Deliveries	Bulk	1.5	22	1.1	16
	Tanker	0.7	29	0.8	29
	Container	0.3	10	0.1	4
	All ships	**2.7**	**95**	**2.3**	**71**

Source: BRS 2022 Annual Review



Source: BRS 2022 Annual Review

One of the major challenges that the SBSR and other industries faced during the COVID pandemic was the recession in the Philippines in 2020. The Gross Domestic Product (GDP) of the country shrink by 9.6 percent during the said year as the economy was severely suffered due to strict protocols implemented by the government. (Philippine Star, 2022) It led the shipbuilding and ship repair entities to reconsider their plans in order to survive as new directives have dried up amid the recession. In line with this, different marine service providers postponed their expansion plans. The maritime business community said shipowners may reconsider if investing in new vessels is considered as an option. In the year 2020, shipbuilders were focused on dry-docking and repair works in relation to surviving the impact of COVID-19. Some local shipyards were originally in preparation for the construction of more modern ships but eventually turned their focus to repair works instead.

Meanwhile, some of the SBSR entities still managed to overcome the hardships due to COVID-19 and eventually add up the number of locally constructed vessels under the new normal setting.

1.2 Objectives of the SBSR Capability and Capacity Assessment

This report is an update to the 2019 Capability and Capacity Assessment Report, the second volume of the study. With that said, the objectives of this report are the following:

1. To identify and revalidate the capability and capacity of existing SBSR entities nationwide relative to building and constructing new vessels for domestic trade by comparing the data from 2019 report, 2020 situation report and the data gathering for the 2021 edition.

2. To determine the common and/or unique problems in shipbuilding by illustrating the difficulties involved in acquiring necessary resources and actual production; and,

3. To identify the measures that would accelerate the development of MARINA-registered and licensed shipyards in building and repairing ships, and also in improving the current state of the shipyard facilities.

1.3 Legal Basis of the SBSR Capability and Capacity Assessment

The Maritime Industry Authority (MARINA) has a mandate to conduct annual capacity and capability assessment of all registered SBSR entities in accordance with Section 20 of the Republic Act No. 9295 otherwise known as the Domestic Shipping Development Act of 2004. The assessment is in line with the construction of new vessels below 500 GT. Under RA 9295, an evaluation is part of the requirements to determine if MARINA-registered shipyards have the capability to produce ships below 500 GT that would meet the domestic demand.

SBSR Capability and Capacity Assessment also serves to achieve the objective of having a reassessment in the capability status of shipyards and to appraise quality in order to identify room for improvement in their system so as to coincide with MARINA's advancement goals.

Based on Executive Order No. 588 issued on 2006, shipbuilding is part of the modernization program of the government. The said order fueled the importance of this assessment and reassessment conducted by the Agency. Prior to the order was the Presidential Decree No. 1059 enacted on 1976, stating the regulation of the operations of shipbuilding and ship repair yards. This gave MARINA the authority to oversee the operations and pre-production which includes planning, and to prevent looming competition between the facilities.

In relation to the repairs and alterations of ships, Presidential Decree No. 1221 was signed in order to produce a framework for dry-docking Philippine-registered ships. In effect, the MARINA is the final arbiter that determines if a shipyard is capable of performing repairs.

Also, to encourage investments in the shipbuilding and ship repair industry, RA 9295 was enacted. These investments would support the expansion and modernization of the Philippine domestic merchant marine fleet and its adherence to safety standards which will ensure the seaworthiness of all seaborne structures. Shipyard owners and operators would be qualified for grant of tax incentives from acquiring equipment and high-grade materials for shipbuilding so long as they comply with the regulations for modernization.

The said law was passed in 2004 and stated that the tax exemption will be effective up to 10 years upon implementation of the law. Here lies the challenge to entice owners, operators, and even investors to be motivated in the modernization of their facilities and shipbuilding

capabilities, especially companies that were established after the effectivity of the incentives expired.

This, in itself, is crucial for the shipbuilding industry, which serves as the reason this study is conducted. In line with this, the online survey or the methodology of the study aims to analyze construction, procedures, materials, and facilities, and skilled work force of shipyards qualified for shipbuilding.

Chapter 2
METHODOLOGY

2.1 Assessment Approach

The Maritime Industry Authority (MARINA) through the Shipyards Regulation Service (SRS) develops and implements systems and standards relating to uniformity and competency of all the shipyards in the country. This is to ensure the efficiency and quality of ships being constructed, dry-docked and repaired.

The online survey was conducted to assess the existing capability and capacity of all the shipyards registered & licensed in MARINA. This is the third year that the Agency conducted an SBSR Capability and Capacity Assessment. Back in 2017, the procedure used is on-site data-gathering while an online survey was introduced as the method for the 2019 edition of SBSR Capability and Capacity Assessment due to the community quarantine rules set by the government amid the COVID pandemic. For 2021, the SRS conducted an online survey again with the help of the MARINA Regional Offices (MROs) to gather the necessary information from different shipyards. The survey tackles significant factors in shipyard operations, from which the SRS will derive an assessment on the capability and capacity of shipyards in constructing and repairing ships. In 2021, there are 116 registered & licensed shipyards and all of those are considered as subjects of this study.

Relating to the ability to perform ship construction and repair, it is very important to classify the capability and capacity of a shipyard. In 2018, shipyard classification has been modified to Class A, B, C per Memorandum Circular 2018-02.

In terms of capability, the shipyard would be measured by the following:

1. Size of manpower utilized to operate the shipyard;
2. Size and state of the facility, and equipment and machinery;
3. Availability of supplies and raw materials used for construction and repair;
4. Records of construction and repair, specifically the types and sizes of all ships processed; and,
5. Production performance.

Also, it would be deemed necessary to identify if a certain shipyard is locally-owned or a foreign entity. Further, a comprehensive review of acquired materials and equipment would be integral to the assessment as it will ascertain the capability of a shipyard in terms of constructing and repairing (structural and equipment repair) ships. It includes the type of machines and equipment (welding, cutting, etc.) and raw materials (steel, wood, etc.). Further, the said capability assessment includes the yard area and facility, where ships are launched and dry-docked.

It is vital to take a look at the records of each shipyard as it indicates the relationship between the presently acquired materials or equipment for the operation and the ships constructed/repaired.

The following questions should be answered based on the said relationship:

1. Is the shipyard operating under minimal requirements for equipment?
2. Is the equipment new or old? Are they bought by the company or outsourced?
3. Are the materials enough to sustain operations per ship? Are there reserves?

In relation to manpower, the very important thing to determine is the ratio of skilled personnel and the personnel who deliver other specific functions such as support and logistics. For example, it comes into question the following:

1. Is the number of skilled personnel enough to perform shipyard operations? Are they performing to expectations?

Another aspect that this assessment takes note is the finances that keeps the shipyards operational. The survey seeks to answer the following questions:

1. Is the current procedural and structural organization of the shipyard effective?
2. Is the shipyard capable of operating in the short-term or long-term, depending on present performance?

As the survey covers the aforementioned aspects of the shipyards, other factors might come into play. Upon completing the data required, implications will come later and a conclusion will be made.

2.2 Scope of the Assessment Report

The scope of the assessment, in accordance with Administrative Order No. 14-21 on the Guidelines for the Conduct of the Shipbuilding and Ship Repair (SBSR) Capability & Capacity Assessment[1] approved May 26, 2021, limits in measuring the capability and capacity of entities duly registered with MARINA as shipbuilder and ship repairer. This study covered the passenger ships, cargo ships, tanker ships, tugboats, fishing vessels and similar assets (e.g. service boats) built by the MARINA-registered & licensed shipyards.

This study does not include entities solely registered and licensed as boat builders, afloat ship repairers, or ship breakers.

In line with this, the tables and figures in this report present the 2021 data, unless stated otherwise.

2.3 Limitations of the Assessment Report

Back in the year 2020, a contagious respiratory disease caused by the SARS-CoV-2 virus was discovered by the World Health Organization in Wuhan City, China. The disease was known as COVID-19 that have spread rapidly to different countries and eventually declared as global pandemic. In line with this, the Philippine Government declared a State of Public Health Emergency and implemented various restrictions on the mobility of the people, goods and services. The government agencies also implemented alternative work arrangement (AWA) schemes in accordance with MC No. 10, s. 2020 of the Civil Service Commission (CSC), which provides guidelines for AWA in the public sector.

Operating on a skeletal workforce, the MARINA-SRS conducted the survey for the 2021 Capability and Capacity Assessment remotely with the help of the MARINA Regional Offices. The SRS used the services of Jotform, an online application that enables its users to create online forms, collect responses directly in email and create fillable PDF forms. The questionnaire was distributed to 116 shipbuilding and ship repair entities using the Jotform.

Despite of extending the deadline of submission for numerous times, by December 2022, the SRS only received responses from 17 out of 116 shipyards nationwide. After so many attempts to make a follow-up to the MROs regarding those shipyards who have not answered the survey, the SRS decided to develop the capability and capacity assessment report based on the existing data from the 2019 volume; 2020 situation report; the data from the 17 shipyards that accomplished the survey forms; and, the existing 2021 data or records from the MROs.

[1] The Administrative Order was developed in order to make the procedure and process of the biennial Assessment as per Section 20 of RA 9295 that mandates the MARINA to conduct the capacity and capability assessment of all registered SBSR entities to build new vessels below 500 GT, that will make the preparation of the Assessment Report punctual, systematic, and more efficient.

Chapter 3
PH SBSR INDUSTRY PROFILE

3.1 Philippine Shipbuilding and Ship Repair (SBSR) Yards

According to Organization for Economic Cooperation and Development (OECD), ocean shipping is the main transport mode for global trade. In fact, around 90 percent of traded goods are carried over the waves. Maritime transport plays a crucial role in different activities towards economic development. The OECD and the International Transport Forum (ITF) are working to chart the course leading to a more efficient and sustainable maritime transport.

In this regard, it is very important to identify the main components of the shipbuilding and ship repair industry relative to determining the capability and capacity of each shipyard. Among the components of the said industry are facilities, equipment, materials and workforce (technical and skilled). Shipbuilding requires a big production capacity that makes most shipyards to outsource equipment and manpower. It is typical for shipyards to avail project-based services where the contractors are being hired only during the construction of vessels. Also, there are shipyards that lease facilities such as building yard, which is part of their main yard facilities.

Table 1. Number of MARINA-Registered & Licensed Shipyards as of 2020

SBSR Category	Classification	Number	Capacity Limitation
Shipbuilding & Ship Repair (SBSR) under MC No. 2018-02 and MC No. SR-2019-01.	Class A	9	Capable of building and repairing big ships with minimum length of at least 130 meters
	Class B	17	Capable of building and repairing ships with a maximum length of 129 meters
	Class C	89	Capable of building and repairing ships with a maximum length of 80 meters
Total Number of Shipyards Nationwide		**115**	

Source: Shipyards Regulation Service, MARINA

Table 1 shows that there are 115 shipyards registered & licensed by MARINA as of 2020. Out of the 115 shipyards, 8% or nine are classified as Class A; 15% or seventeen are classified as Class B; and 77% or 89 are classified as Class C. These are registered and licensed under MC No. 2018-02 and MC No. SR-2019-01. The latter memorandum was issued in 2019 as a set of revised guidelines on the registration and licensing of shipyards.

The percentage distribution of MARINA-registered & licensed shipyards based on category is shown in Figure 1.

Figure 1: Percentage Distribution of MARINA-Registered & Licensed Shipyards by Category as of 2020

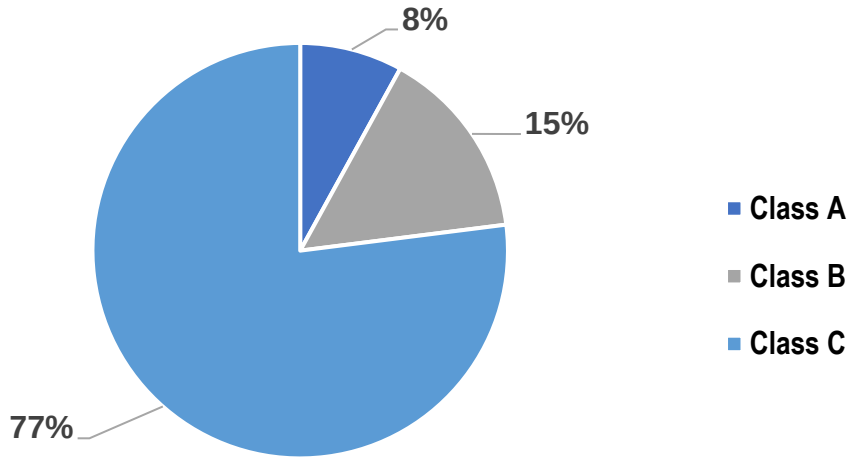


Table 2: Number of MARINA-Registered & Licensed Shipyards per Region as of 2020

MARINA Offices	Class A	Class B	Class C	Total
NCR & Region III (MARINA Central Office)	3	7	36	46
La Union (MRO I & II)	1	1	0	2
Batangas (MRO IV)	2	0	4	6
Legaspi (MRO V)	0	0	1	1
Iloilo (MRO VI)	1	0	6	7
Cebu (MRO VII)	2	5	14	21
Tacloban (MRO VIII)	0	1	0	1
Zamboanga (MRO IX)	0	0	8	8
Cagayan De Oro (MRO X)	0	0	1	1
Davao (MRO XI)	0	0	1	1
General Santos (MRO XII)	0	2	16	18
Surigao (MRO XIII)	0	1	2	3
TOTAL	**9**	**17**	**89**	**115**

Source: Shipyards Regulation Service, MARINA

Table 2 shows the number of shipyards registered & licensed by MARINA per region as of 2020. Out of 115 shipyards, the MARINA Regional Office-NCR including Region III has 46 shipyards under their jurisdiction, the greatest number among all the regions. It also has the largest number of Class A and Class B shipyards with 3 and 7 shipyards respectively. Meanwhile, MARINA Regional Offices V, VIII, X and XI only monitor one shipyard each. Shipyards across the country are almost evenly distributed as shown in the location map below. Shipbuilding projects are now prevalent in Luzon, Visayas and Mindanao.

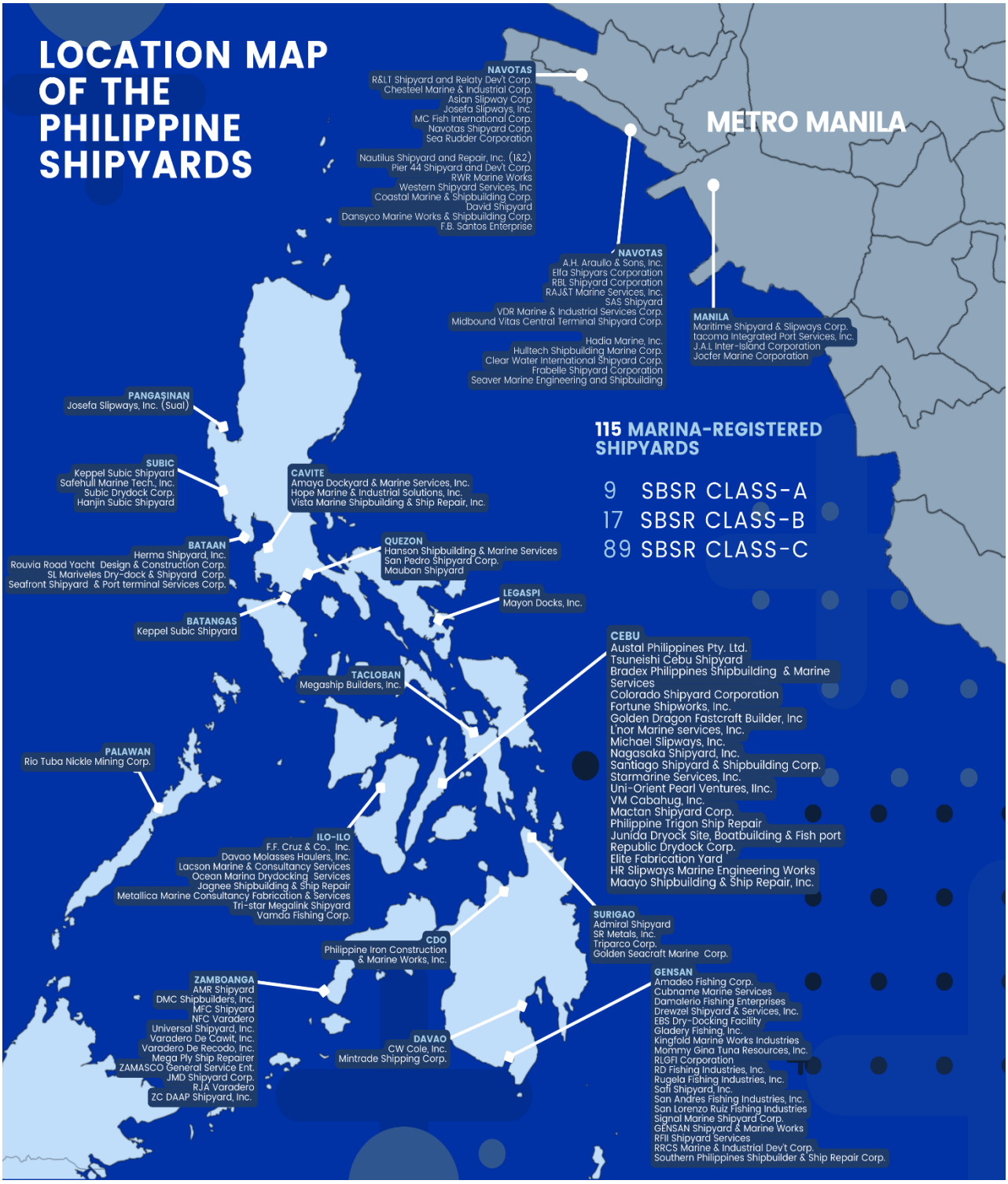
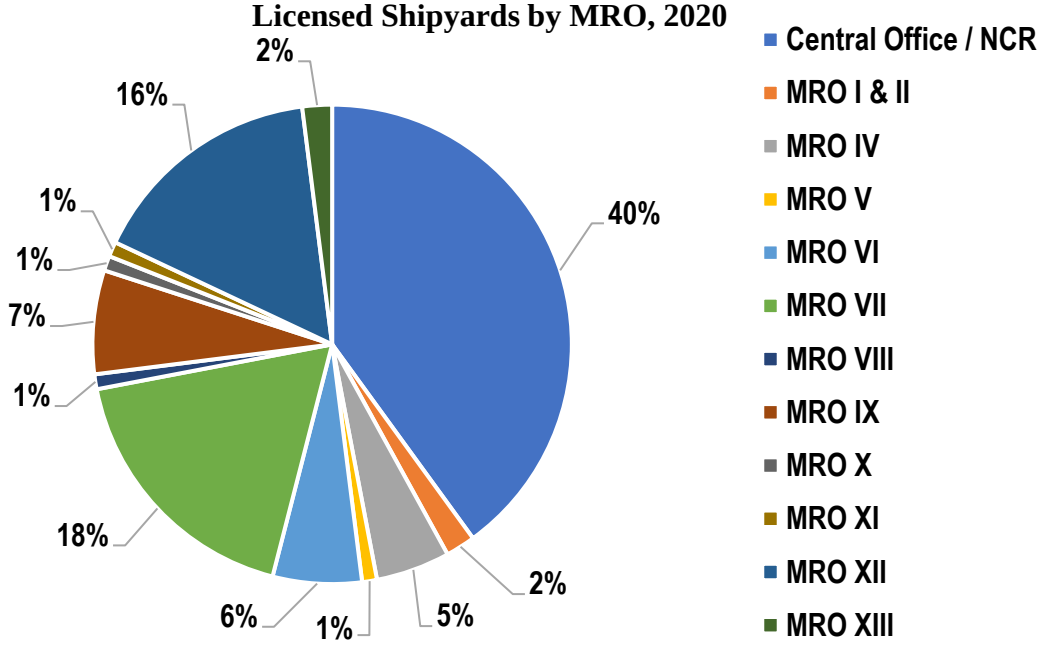


Figure 2

The percentage distribution of MARINA-registered shipyards by MRO is shown in Figure 2.

Figure 3: Percentage Distribution of MARINA-Registered & Licensed Shipyards by MRO, 2020



Source: Shipyards Regulation Service, MARINA

3.2 Shipyard Facility Profile

The shipyard facilities nationwide are classified as Class A, Class B and Class C depending on its building / dry-docking capacity in terms of length (by meter) based on MC No. 2018-02 and MC SR-2019-01:

- **Class A** shipyard is capable of building and repairing ships with a minimum length of at least 130 meters;
- **Class B** shipyard is defined as shipyard with a maximum length of 129 meters limit in shipbuilding and ship repair; and,
- **Class C** is classified as shipyard that has the capability of building and repairing ships with a maximum length of 80 meters.

In 2020, there is no significant changes in the shipyard facility profile in the Philippines. In this regard, the number of main yard facilities nationwide remains at 186. Based on the 2020 Philippine Shipbuilding and Ship Repair Situation Report, 66 percent of the total main yard facilities need to undergo rehabilitation. Most of these facilities are owned by Class C shipyards. On the other hand, the larger assets including synchrolifts, graving docks, and floating docks are mostly owned by Class A and Class B SBSR entities. The number of Shipyard Facilities by Class per Capacity in the year 2020 is being shown in Table 3.

Table 3: Number of Shipyard Facilities by Class per Capacity in DWT in 2020

SBSR Category		Slipway (DWT/No.)	Floating Dock (DWT/No.)	Graving Dock (DWT/No.)	Synchrolift or Liftdock (DWT/No.)	Building Yard (m^2/No.)
Classification	**Capacity (DWT)**					
Class A	Above 20,000	100,000 (1)	18,000 (1)	550,000 (1)	7,500 (1)	29,143 (1)
		19,500 (1)	4,000 (1)	200,000 (1)	6,000 (1)	28,500 (1)
		2,400 (1)	1,600 (1)	40,000 (1)		19,840 (1)
		no info (4)	500 (1)	15,000 (1)		
			no info (3)			
	Sub Total	**7**	**7**	**4**	**2**	**3**
Class B	19,999 - 3,000	20,500 (3)	12,000 (1)	35,000 (1)	0	6,200 (1)
		10,000 (6)	5,974 (1)			3,800 (1)
		5,500 (2)	4,000 (2)			3,120 (1)
		5,000 (2)	2,833 (1)			3,000 (1)
		4,900 (3)				1,500 (1)
		4,500 (1)				500 (1)
		3,000 (1)				450 (1)
		2,999 (1)				300 (1)
		2,100 (2)				250 (1)
		2,000 (2)				
		500 (1)				
	Sub Total	**24**	**5**	**1**	**0**	**9**
Class C	Below 3,000	5,580 (3)	2,700 (1)	0	No info (1)	6,000 (1)
		5,000 (3)	1,096 (1)			3,000 (3)
		4,100 (3)				2,500 (1)
		3,700 (2)				2,100 (1)
		3,000 (7)				2,000 (1)
		2,900 (1)				1,800 (1)
		2,700 (2)				1,310 (1)
		2,500 (1)				1,200 (2)
		2,000 (1)				1,160 (1)
		1,800 (5)				1,050 (1)
		1,700 (2)				1,000 (2)
		1,501 (2)				900 (1)
		1,500 (3)				820 (1)
		1,300 (3)				800 (2)
		1,000 (6)				700 (1)
		900 (3)				600 (1)
		750 (1)				567 (1)
		700 (4)				500 (4)
		600 (1)				400 (1)
		500 (4)				330 (1)
		400 (2)				250 (1)
		350 (1)				200 (4)
		300 (6)				160 (1)
		250 (1)				150 (1)
		200 (6)				100 (3)
		160 (2)				80 (1)
		150 (3)				30 (1)
		100 (3)				
	Sub Total	**81**	**2**	**0**	**1**	**40**
TOTAL NUMBER		**112**	**14**	**5**	**3**	**52**
GRAND TOTAL		**186**				

Source: Shipyards Regulation Service, MARINA

The five MARINA-registered & licensed shipyards that utilize graving docks are presented in Table 4. No graving docks were constructed or acquired by any MARINA-registered & licensed shipyard in 2018 and 2019.

Table 4: Capacity of Shipyard Facilities with Graving Dock per Region

Name of Shipyard	Classification	Capacity (DWT)	Location
1. Keppel Subic Shipyard, Inc.	Class A	550,000	Zambales
2. Tsuneishi Heavy Industries (Cebu), Inc.	Class A	200,000	Cebu
3. Keppel Philippines Marine, Inc,	Class A	40,000	Batangas
4. Herma Shipyard Inc.	Class A	15,000	Bataan
5. Mactan Shipyard Corp.	Class B	35,000	Cebu

Source: Shipyards Regulation Service, MARINA

Meanwhile, Table 5 shows the Capacity of Shipyard Facilities with Floating Dock per Region based on the 2019 edition of the study. In 2018, one of the floating docks of Subic Drydock Corp. (10,000 DWT capacity) sank and it was scheduled for deletion in 2020. On the other hand, Golden Dragon Fast Craft Builders, Inc., acquired a floating dock between 2018-2019, with a loading capacity of 100 T.

Table 5: Capacity of Shipyard Facilities with Floating Dock per Region

Name of Shipyard	Classification	Capacity (DWT)	Location
1. Subic Drydock Corporation	Class A	18,000 4,000	Zambales
2. Tsuneishi Heavy Industries (Cebu), Inc.	Class A	8500	Cebu
3. Herma Shipyard, Inc.	Class A	1600	Bataan
4. F.F. Cruz & Co., Inc.	Class A	500	Ilo-Ilo
5. Gensan Shipyard & Machine Works	Class B	2500 1500	General Santos City
6. Frabelle Shipyard Inc.	Class B	5974	Navotas City- NCR
7. Signal Marine Shipyard Corporation	Class B		General Santos City
8. Golden Dragon Fast Craft Builders, Inc.	Class C	100 T (No data on DWT)	Cebu

Source: Shipyards Regulation Service, MARINA

Further, as of 2019, here are the shipyards in the Philippines that utilize synchrolift/ liftdock in their operations.

Table 6: Capacity of Shipyard Facilities with Synchrolift/ Liftdock per Region

Name of Shipyard	Classification	Capacity (DWT)	Location
1. Keppel Philippines Marine, Inc.	Class A	6,000 (Liftdock)	Batangas
2. Philippine Iron Construction & Marine Works, Inc.	Class A	7,500	Cagayan De Oro
3. Golden Dragon Fast Craft Builders, Inc.	Class C	70 T (No data on DWT)	Cebu

Source: Shipyards Regulation Service, MARINA

3.3 SBSR Operational Performance

- Shipbuilding Activities

Despite of lockdown in the Philippines in 2020 due to COVID-19, the MARINA-registered & licensed shipyards still managed to construct 344 ships with a cumulative size of 763,095.28 GT both for domestic use and for export.

Table 7: Total Number and Size of Ships Constructed for Domestic Use in 2020

Type of Service	Number	Total Size (GT)	Average Size (GT)
ROPAX	9	11,013.18	1,223.68
Fast Craft	28	698.46	24.94
LCT	36	23,696.5	658.23
Barge	12	6,354.63	529.55
Tugs	15	1,467.5	97.33
Fishing	131	1,963.64	14.98
Others	93	3,560.73	38.28
TOTAL	**324**	**48,754.64**	**150.47**

Source: Shipyards Regulation Service, MARINA

Out of 344 ships built by the SBSR entities in the year 2020, three hundred twenty-four (324) vessels with a collective size of 48,754.64 GT were constructed for domestic use. LCTs make up most of these figures, with 36 ships that tallied 23,696.5 GT in size. Based on the data, the LCTs in 2020 has an average size of 658.23 GT.

It is important to take note that there are no available data gathered from the MRO IX. Based on the 2020 Philippine SBSR Situation Report, the average size of ships produced for domestic use during the said year is 150.47 GT.

Table 8: Total Number and Size of Ships Constructed for Export in 2020

Type of Service	Number	Total Size (GT)	Average Size (GT)
Fast Craft	1	6,940.64	6,940.64
Bulk Carrier	18	705,500	39,194.44
Container Carrier	1	1,900	1,900
TOTAL	**20**	**714,340.64**	**35,717.03**

Source: Shipyards Regulation Service, MARINA

For exportation, a total of 20 ships were constructed during 2020 amid the pandemic. All of the vessels for export were built by the shipyards located in Central Visayas. The total size of ships constructed in 2020 for export is 714,340.64 GT. Based on the data, bulk carriers comprised most of the ships built for export, with a total of 18 units and a cumulative size of 705,500 GT. Also, there is no data collected from the MRO IX.

3.4 Ship Repair and Maintenance Activities

The large volume of dry-dock and repair activities in the Philippines are considered as result of the increased shipping activities in the domestic trade and in the East Asian Region. In accordance with law and for the sake of safety, vessels engaged in maritime activities like fishing and active in domestic trade are required to be dry-docked in local shipyards and inspected by the government authorities led by the MARINA.

Based on the Philippine Ship Safety Rules and Regulations (PSSRR), passenger ships are required to be dry-docked annually and the rest of the fleet every two years. Despite of the existing law, not all the ships are being dry-docked on time by the local shipyards due to the following reasons:

- Some shipyards' capacities, particularly those with sophisticated facilities are fully utilized in dry-docking/ repairing of foreign and large domestic ships;
- Other companies have dedicated facilities for dry-docking and repairing of their own ships primarily those engaged in deep sea fishing activities.
- Only few are left to service the rest of the fleet, mostly specialized in the maintenance and repair of small ships.

In addition, under the ship preventive maintenance system of a shipping company, there are also orders to conduct overhauling, alteration, conversion and reconditioning of ships. Based on Table 9, the data shows that there were 205 ships dry-docked and 319 vessels repaired in 2020 by different shipyards registered under the MARINA Regional Office-NCR.

Table 9: Ships Dry-docked and Repaired in Shipyards under the Central Office/ NCR as of 2020

SBSR Category	No. of Ships Dry-docked	No. of Ships Repaired
Class A	75	0
Class B	81	0
Class C	49	319
TOTAL	**205**	**319**

Source: Shipyards Regulation Service, MARINA

3.5 SBSR Human Resources Profile

Back in 2019, the shipyards in the country employed 13,479 personnel. Out of the more than 13,000 employees, 12,529 are male workers while 950 are female. The huge gap between these figures is detailed in Table 10. In view of promoting gender equality and creating a gender-inclusive working environment, the MARINA has streamlined Gender and Development (GAD) in MC 2018-02 and MC SR-2019-01. Women are encouraged to be a part of activities or disciplines as long as it is in line with their knowledge and skills.

Table 10: Number of Employed Personnel by SBSR Entities Classification in 2019

SBSR Classification	Managerial		Administrative		Technical		Skilled		Semi-Skilled		Total
	M	F	M	F	M	F	M	F	M	F	
Class A	108	47	161	195	415	70	2909	75	1437	19	5436
Class B	59	4	83	67	148	6	541	6	70	3	987
Class C	1944	16	235	379	731	21	3132	28	556	14	7056
TOTAL	**2111**	**67**	**479**	**641**	**1294**	**97**	**6582**	**109**	**2063**	**36**	**13479**

Source: Shipyards Regulation Service, MARINA

3.6 SBSR Capitalization

The paid-up capitalization of MARINA-registered & licensed shipyards in the year 2020 was recorded at PHP10,241,503,167. The total amount is a combination of local and foreign capital.

Table 11: Total SBSR Capitalization as of 2020

REGION	CATEGORY			TOTAL (IN PHP)
	SBSR – A	SBSR – B	SBSR – C	
LUZON				
National Capital Region and Region III	1,336,459,607	166,068,875	620,580,909	2,123,109,391
Region I&II	50,000,000	25,000,000	N/A	75,000,000
Region IV	2,600,826,822	N/A	2,625,434,990	5,250,869,980
Region V	N/A	N/A	10,000,000	10,000,000
VISAYAS				
Region VI	50,000,000	N/A	21,000,000	71,000,000
Region VII	450,000,000	110,500,000	927,521,080	1,488,021,080
Region VIII	N/A	60,000,000	N/A	60,000,000
MINDANAO				
Region IX	N/A	N/A	115,500,000	115,000,000
Region X	N/A	N/A	124,677,884	124,677,884
Region XI	N/A	N/A	10,500,000	10,500,000
Region XII	N/A	85,465,000	695,468,000	780,933,000
Region XIII	N/A	140,000,000	15,500,000	155,500,000
TOTAL (IN PHP)	**4,487,286,429**	**587,033,875**	**5,167,182,863**	**10,241,503,167**

Source: Shipyards Regulation Service, MARINA

Chapter 4
ANALYSIS OF DATA

4.1 SBSR Capability and Capacity

In 2020, there were 115 MARINA-registered & licensed shipyards amid the discovery of COVID-19. A year after the onset of pandemic, one more SBSR entity were registered & licensed by the Agency and a total of 116 shipyards recorded nationwide.

Table 12. Number of MARINA-Registered & Licensed Shipyards as of 2021

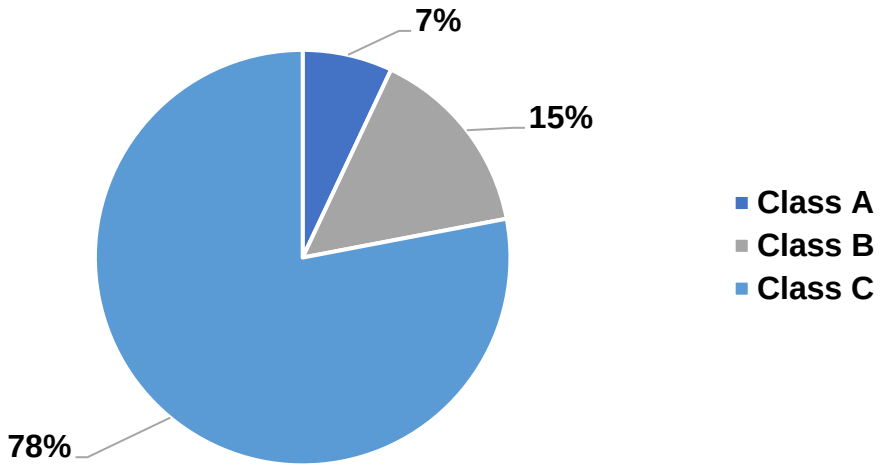
SBSR Category	Classification	Number	Capacity Limitation
Shipbuilder & Ship Repair (SBSR) under MC No. 2018-02 and MC No. SR-2019-01.	Class A	8	Capable of building and repairing big ships with minimum length of at least 130 meters
	Class B	18	Capable of building and repairing ships with a maximum length of 129 meters
	Class C	90	Capable of building and repairing ships with a maximum length of 80 meters
Total Number of Shipyards Nationwide		**116**	

Source: Shipyards Regulation Service, MARINA

Table 12 shows that there are 116 SBSR entities registered by MARINA as of 2021. Out of the 116 shipyards, 7% or eight are classified as Class A; 15% or eighteen are classified as Class B; and 78% or 90 are classified as Class C. These are registered and licensed under MC No. 2018-02 and MC No. SR-2019-01. The latter memorandum was issued in 2019 as a set of additional guidelines on the registration and licensing of shipyards.

The percentage distribution of MARINA-registered & licensed shipyards based on category is shown in Figure 4.

Figure 4: Percentage Distribution of MARINA-Registered & Licensed Shipyards by Category as of 2021



Source: Shipyards Regulation Service, MARINA

Table 13: Number of MARINA-Registered & Licensed Shipyards per Region as of 2021

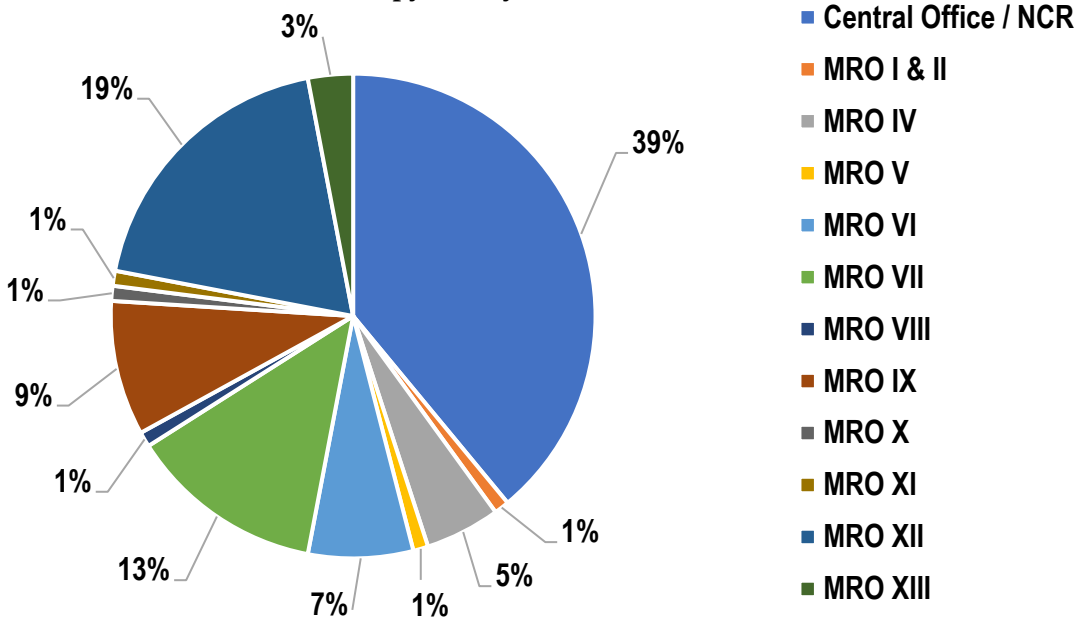
MARINA Offices	CLASS A	CLASS B	CLASS C	TOTAL
NCR & Region III (MARINA Central Office)	3	8	34	45
La Union (MRO I & II)	0	1	0	1
Batangas (MRO IV)	2	0	4	6
Legaspi (MRO V)	0	0	1	1
Iloilo (MRO VI)	1	0	7	8
Cebu (MRO VII)	1	4	10	15
Tacloban (MRO VIII)	0	1	0	1
Zamboanga (MRO IX)	0	0	11	11
Cagayan De Oro (MRO X)	0	0	1	1
Davao (MRO XI)	0	0	1	1
General Santos (MRO XII)	1	3	18	22
Surigao (MRO XIII)	0	1	3	4
TOTAL	**8**	**18**	**90**	**116**

Source: Shipyards Regulation Service, MARINA

Table 13 shows the number of SBSR entities registered & licensed by MARINA per region as of 2021. Out of 116 shipyards, the MARINA Regional Office-NCR has 45 SBSR entities or the largest number of shipyards under its jurisdiction nationwide. It also has the greatest number of Class A and Class B shipyards with 3 and 8 SBSR entities respectively. Meanwhile, the least number of shipyards under their jurisdiction are MRO I & II, MRO V, MRO VIII, MRO X and MRO XI with only one SBSR entity each.

The percentage distribution of MARINA-registered & licensed shipyards by MRO is shown in Figure 5.

Figure 5: Percentage Distribution of MARINA-Registered & Licensed Shipyards by MRO, 2021

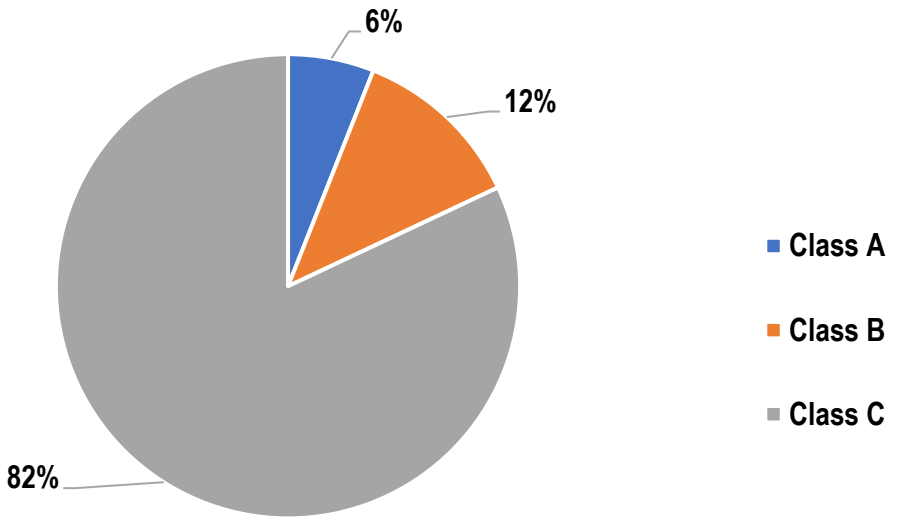


Source: Shipyards Regulation Service, MARINA

Out of 116 shipyards, only seventeen (17) shipyards responded to the survey prepared by SRS-MARINA using the Jotform, an online application that enables its users to create online forms, collect responses directly in email and create fillable PDF forms. 17 shipyards or 15% of the total number of SBSR entities as of 2021 answered the survey. It is lower than the 22 percent and 51 percent turnout of the 2019 and 2017 SBSR Capability and Capacity Assessment Reports respectively. As shown in Figure 6, out of the 17 shipyards that participated in the survey for the 2021 edition of the study, one shipyard or 6 percent is classified as Class A, 2 shipyards or 12 percent are Class B and 14 shipyards or 82 percent are Class C.

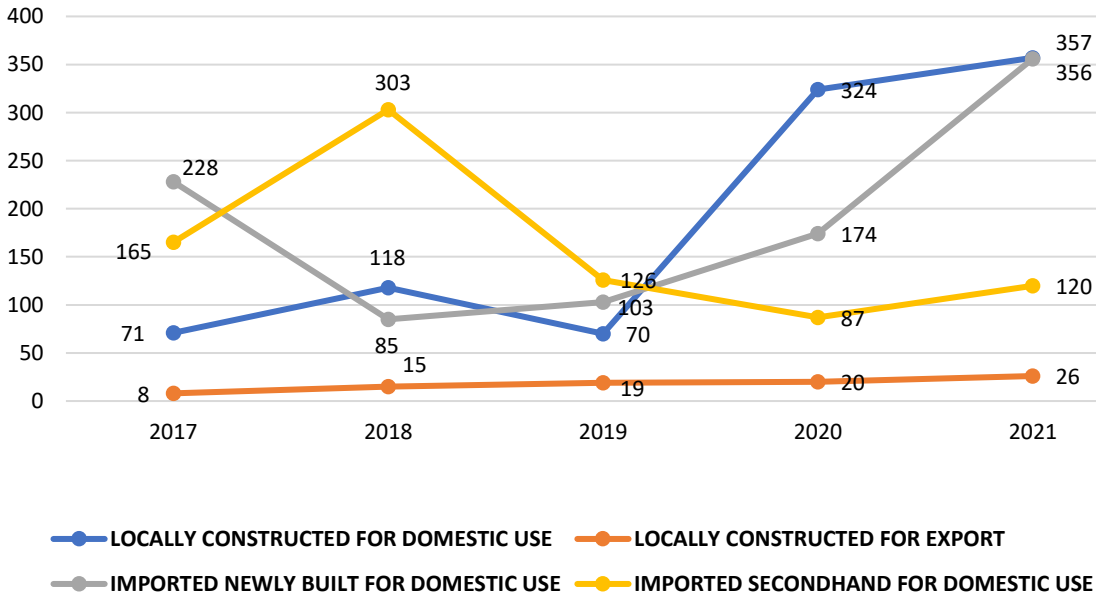
As mentioned in Chapter 2, the COVID-19 related factors are considered to be a part of the reason for low turnout. Meanwhile, the Shipyards Regulation Service still used the limited data in producing the 2021 Assessment.

Figure 6: Percentage Distribution of Shipyards that Participated in the 2021 Capability and Capacity Assessment by Category



Source: Shipyards Regulation Service, MARINA

Figure 7: Total Number of Ships Acquired for Domestic Use and for Export through Local Construction and Importation from 2017 to 2021



Source: Shipyards Regulation Service, MARINA

Figure 7 shows the total number of ships acquired for domestic use and for export through local construction and importation from 2017 to 2021. In 2021, the greatest number of locally constructed ships for five years was tallied by the MARINA with a total of 383 ships. Out of the 383 ships, 357 were built for domestic utilization while 26 were for exportation.

Based on the data, since 2017 to 2021, the number of locally constructed ships for export increased yearly. There are 8 locally constructed ships for export in 2017 while 26 ships in 2021. In regard to the number of the locally constructed ships for domestic use, the greatest number of units produced in the last five years was recorded in the year 2021 with 357 ships while the lowest number was in 2019 with 70 ships.

Meanwhile, there was a significant decrease on the number of imported newly built ships for domestic use in the year 2018. From 228 ships in 2017, the number of imported newly built ships for domestic use was recorded at 85 in 2018. Since then, the number of these ships continued to increase from 103 ships in the year 2019 to 356 ships in 2021.

Further, back in the year 2018, the number of imported secondhand ships for domestic use reached its peak, tallying 303 vessels. It is important to take note that the number decreased to 126 ships in 2019. The significant decrease in the number of imported secondhand ships for domestic use may be attributed to the rules on the importation of vessels under MARINA MC 2017-04. The passenger ships to be imported should be more than 500GT and younger than 20 years of age. In 2021, out of the 356 imported ships for domestic use, 349 ships or 98 percent are miscellaneous ships which are mostly recreational boats.

Table 14: Total Number of Locally Constructed Ships for Domestic Use and for Export in 2020 and 2021

Year	Domestic Use	For Export
2020	324	20
2021	357	26

Source: Shipyards Regulation Service, MARINA

Despite of the nationwide lockdown implemented in 2020 due to COVID-19, as shown in Table 14, the MARINA still tallied a total of 344 locally constructed ships that year including 324 ships for domestic use and 20 ships for export. It also seems that local shipyards took advantage of the gradual lifting of COVID-19 protocols in 2021, resulting to higher number of locally constructed ships with a total of 383 ships including 357 for domestic and 26 for export.

Table 15: Size Comparison between the Locally Constructed Ships for Domestic Use and for Export in 2020 and 2021

Year	For Domestic Use	For Export	Total
2020	48,754 GT	714,340 GT	763,094 GT
2021	15,177 GT	1,800,000 GT	1,815,177 GT

Source: Shipyards Regulation Service, MARINA

Table 15 shows the size comparison between the locally constructed ships for domestic use and for export in 2020 and 2021. Based on the data, the locally constructed ships in 2021 were tallied at 1,815,177 GT in size, higher than the 763,084 GT recorded in 2020.

As shown in Table 14, the number of locally constructed ships for domestic use in the year 2021 is higher compared to 2020. However, the total size of the locally constructed ships for domestic use in 2021 was recorded at 15,177 GT, which is lower than the 48,754 GT in 2020.

For export, the size of the locally constructed ships in 2021 was tallied at 1.8 million GT, higher than the 714,340 GT in 2020.

Shown in Figure 8 is the breakdown of the locally constructed ships for domestic use in 2021 per region. MRO IX recorded the greatest number of locally constructed ships for domestic use with a total of 134 ships, followed by MRO V with 68 ships and MRO XII with 67 ships.

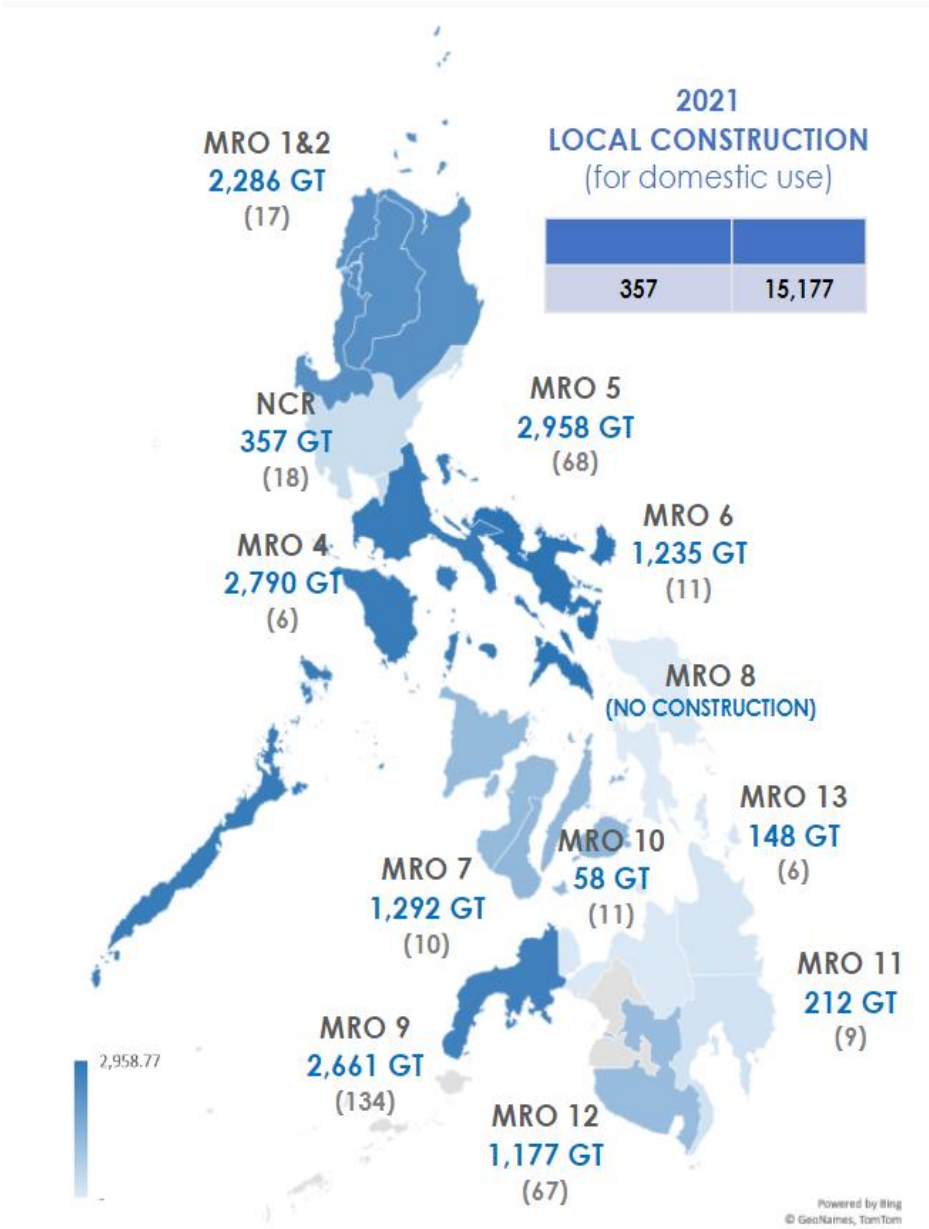


Figure 8: Shipyards Locator Map for Local Construction (Domestic Use)

The MRO IX recorded the greatest number of locally constructed ships for domestic use in 2021 with a total of 134 ships but it is not on the top of the list in terms of the breakdown of sizes. Shown in Figure 9, the locally constructed ships for domestic use in Region 5 have a total size of 2,958 GT, followed by Region 4 with 2,790 GT then Region 9 with 2,661 GT.

On the other hand, shown in Figure 9, all of the 26 locally constructed ships for export in 2021 are recorded by MRO VII. The 26 locally constructed ships for export in 2021 with a total size of 1.8 million GT were all recorded by the MRO VII.

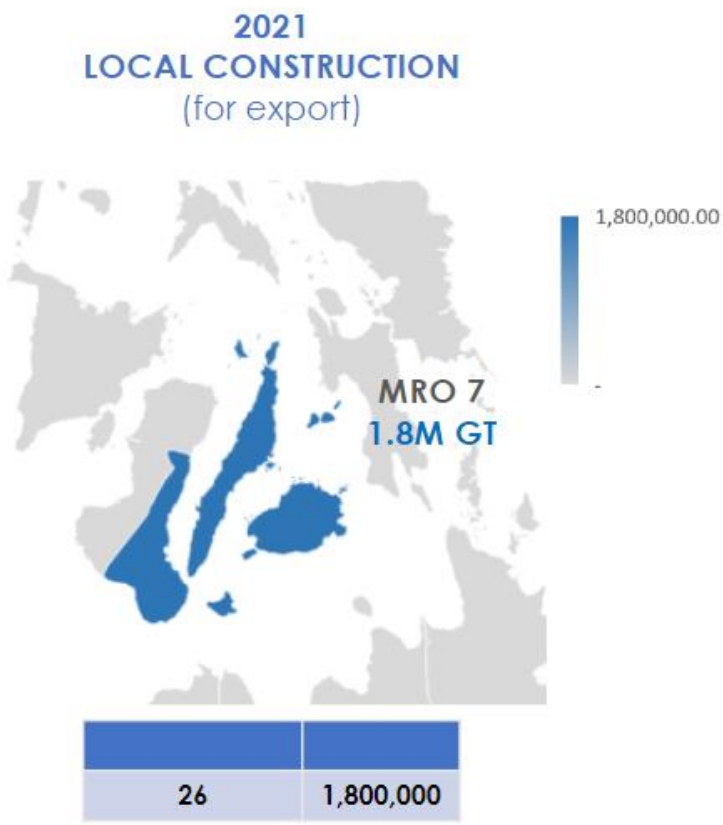
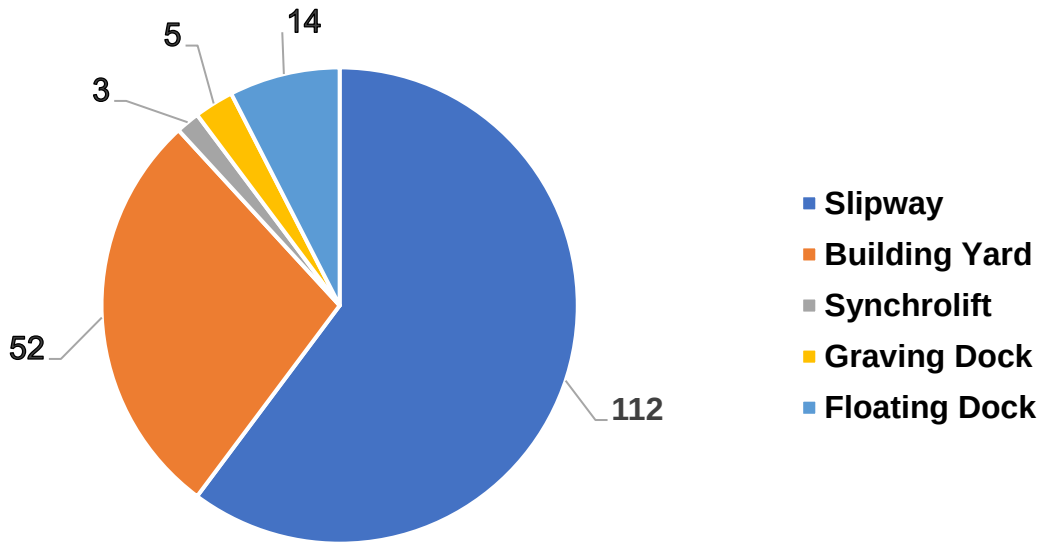


Figure 9: Shipyards Locator Map for Local Construction (Exportation)

4.1.1 Shipyard Facilities

Back in the year 2020, the SRS did not record any significant changes in shipyard facility profile in the Philippines. In line with this, the number of main yard facilities remains at 186. Around 66 percent of the said facilities need rehabilitation while most of the larger assets such as synchrolifts, graving docks, and floating docks are owned by Class A and Class B shipyards. It is very crucial to determine the current state of the main yard facilities relative to the capability and capacity of the entire SBSR industry nationwide. Shown in Figure 11 is the facility breakdown by type.

Figure 10: Facility Breakdown by Type as of 2020



Source: Shipyards Regulation Service, MARINA

4.1.1.1 Slipways are most commonly used yard facility for shipbuilding, ship repair and dry-docking. Out of the 186 main yard facilities, 112 are slipways. Based on the 2020 Philippine SBSR Situation Report, majority of the slipways in the country need to undergo rehabilitation. The average capacity of slipways in the country is about 5,551 DWT. There are shipyards with more than one slipway such as the Philippine Trigon Shipyard Corp. which has four of the said facility.

4.1.1.2 Building Yard is usually an area of land where a ship can be docked, commonly by using blocks. The said main yard facility makes more use of other equipment such as cranes, rollers, etc. The 2019 SBSR Capability and Capacity Assessment stated that out of 186 facilities, 52 are building yards with a cumulative size of 137,610 m². There are some instances like in the case of Jocfer Marine Corporation, building yards require a large number of rollers.

4.1.1.3 Floating Dock is the third main yard facility with the greatest number of units in the country. Out of 186 shipyard facilities, there are 14 floating docks in the shipbuilding and ship repair industry and it has an average capacity of 5,154 DWT. The mechanism of floating docks requires flotation through the use of a ramp to stabilize the ship or, in some cases, the use of other flotation device to dry-dock or launch a vessel. The said facility is considered as a method by the SBSR entities to haul or to dock ships. Generally, floating dock is cheaper to maintain compared to graving dock. Most of the floating docks in the Philippines are imported. The number of floating docks in the country is shown in Chapter 3.

4.1.1.4 Graving Dock is a narrow basin within a shipyard where the vessel is docked while the facility is drained of water before ship repair or any other ship service can commence. Once the service is finished, the facility is then filled with water until the ship is afloat and ready to be launched. With an average capacity of 168,000 DWT, there are five graving docks being

used in the Philippine SBSR industry. Most of the graving docks in the country are owned by Class A shipyards as presented in Chapter 3.

4.1.1.5 Synchrolifts or Liftdocks is one of the main yard facilities of Class A shipyards. There are three shipyards in the Philippines that utilize synchrolifts or liftdocks including Keppel Batangas Shipyard, Philippine Iron Construction and Marine Works, and Golden Dragon Fast Craft Builders. Synchrolifts and liftdocks is a system where a vessel is maneuvered by submerged cradles and is hoisted from the water by a set of synchronized hoists or winches.

4.1.2 Dry-docking and Launching System

The shipyards either leased or owned a **ship carriage system** relative to ensuring their facilities to be usable. This system may consist of cradles with either rails or rollers. Some shipyards accompany the ship carriage system with side transfer mechanisms. In the case of RD Fishing Industry, it has side transfer cradles with dimensions complimentary to the dimensions of the cradles.

Meanwhile, **inflatable rubbers or airbags** are now being used by most Class C shipyards to launch ships for facilities without slipways or similar. The use of airbags or other inflatables in dry-docking ships are included in unconventional methods. Under MC No. 2018-02 and MC No. SR-2019-01, the documented procedures for safe operation and the compliance to international standards are required for shipyard owners who use airbags.

Also, the SBSR entities utilize **pulling system** or the system equipment usually seen in slipways or facilities that mechanically pull ships for dry-docking. The type of facility a shipyard possesses is the factor considered in the pulling mechanisms that were being employed. For instance, some shipyards also use tug boats, mostly for launching the ship onto the water.

Lifting system may consist of hydraulic jack, air compressor, forklift, travel lift, crane, or chain blocks. **For the transfer system,** it may consist of bogie train, transporter, conveyor, and travel lift among others, although these are commonly used by the larger shipyards only. However, travel lifts are sometimes used by Class C shipyards.

Further, the shipyards find it necessary to obtain materials required in assuring safety and efficiency of the systems in place. **Support tools and materials** include keel blocks, bilge blocks, and side blocks made out of concrete, wood, or steel. There are cases where SBSR entities acquire equipment made from all these materials. Keel and bilge blocks are usually used in building yards, where ship construction and repair are made in bare land without the use of mechanical facilities like slipways. It serves as support and balance to a ship. Essential to some shipyard facilities are mooring bitts, specifically quays, piers, and repair berths. Other support materials include cleats and mooring posts.

Also, the placement of equipment which are vital in operations are included to the working areas of shipyards. Majority of the SBSR entities use a gantry or an overhead structure that supports equipment like **cranes.**

4.1.3 Working Areas and Workshop

Under the MC No. 2018-02 and MC SR-2019-01, the shipyards are required to have adequate space to accommodate fabrication and assembly area, and a machine shop. Other workshops and work areas not required as minimum but are essential to shipyards are the sandblasting area. Land berths and transfer areas and other workshops used by shipyards such as warehouses where other activities are carried out.

4.1.4 Workshop Machinery and Equipment

Most of the shipyards have their own equipment, mainly welding machines, that are considered as necessities in shipbuilding and ship repair. These are required under MC No. 2018-02 and MC SR-2019-01.

Other shipyards also use a lathe machine equipment to shape metal pieces, commonly ship parts. Other workshop machinery also includes milling machine, bending machine, and grinding machine.

4.1.5 Shipyard Operations

4.1.5.1 Shipbuilding

With the increase on the number of locally constructed ships in 2021, the Philippine SBSR entities proved its strong capability and capacity in shipbuilding despite of various restrictions implemented due to COVID-19 pandemic. Local shipyards are capable of constructing ships for different types of service thanks to its workforce, facilities and tools. As shown in Table 16, out of 357 locally constructed ships in 2021, fishing boats is the type of service with the greatest number of units built with a total of 214 ships. The total size of locally constructed fishing ships is 3,212 GT with an average size of 15 GT. The maximum size of fishing vessel locally constructed is 112 GT by Kingford Marine Works Industries in General Santos City.

For domestic utilization, even though fishing is the type of service with greatest number of units, cargo has the largest total size with 6,398 GT and the average is 164 GT. The maximum size of cargo ship built in 2021 by Golden Dragon Fastcraft Builder, Inc. in Cebu is 1,077GT.

For passenger ships, out of the 31 vessels, the average size of ship constructed is 101 GT. The maximum size of passenger ship constructed in 2021 is 854 GT by San Pedro Shipyard in Quezon Province. While the maximum size of tanker constructed in 2021 is 2,232 GT by Herma Shipyard, Inc. in Mariveles, Bataan.

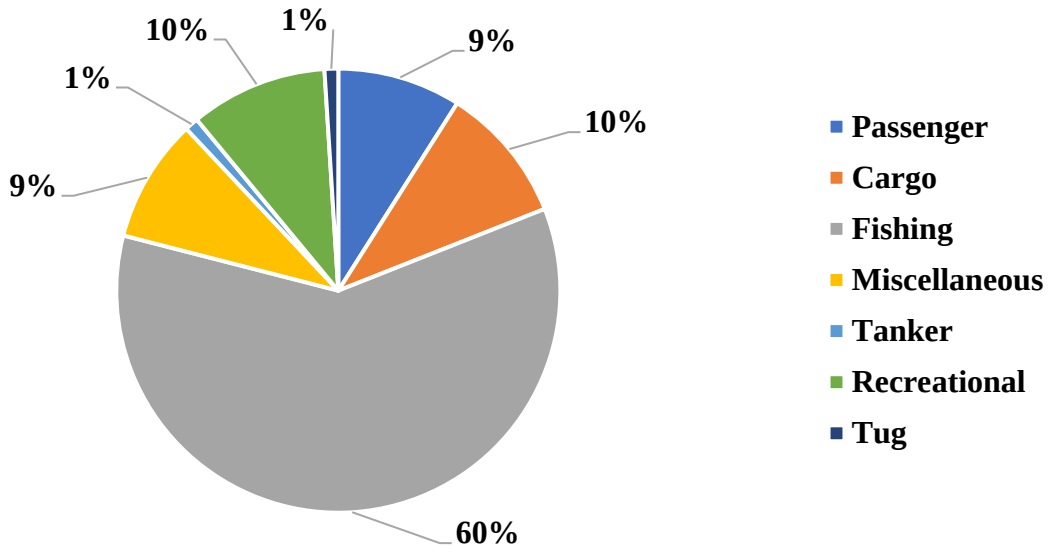
Table 16: Number and Sizes of Locally Constructed Ships for Domestic Use per Type of Service in 2021

Type of Ships	Number	Total Size (GT)	Average Size (GT)
PASSENGER	31	3,133.11	101
CARGO	39	**6,398.62**	164
FISHING	**214**	3,212.12	15
MISCELLANEOUS	31	225.60	1
TANKER	2	1,786.00	**893**
RECREATIONAL	36	99.84	3
TUG	4	322.19	81
TOTAL	**357**	**15,177.48**	

Source: Shipyards Regulation Service, MARINA

Meanwhile, Figure 11 shows the percentage distribution of the number of locally constructed ships for domestic use per type of service in 2021.

Figure 11: Percentage Distribution of the Number of Locally Constructed Ships for Domestic Use per Type of Service in 2021



Source: Shipyards Regulation Service, MARINA

SL Mariveles Shipyard and Dry-docking Corporation in Bataan has constructed a total of 13 ships with a total size of 2,085 GT all cargo vessels and topped the highest production of ships for domestic use in 2021. This was followed by Golden Dragon Fastcraft Builder in Cebu with a total production size of 1,248 GT and Herma Shipyard Inc. in Bataan at 1,114 GT.

In regard to the locally constructed ships for export in 2021, all of it are cargo vessel and the total size was recorded at 1.8 million GT as shown in Table 17. Most of the ships for export were constructed by Tsuneishi Heavy Industries (Cebu), Inc. and Austal Philippines Pty. Ltd. both shipyards are located in Cebu.

Table 17: Number and Sizes of the Locally Constructed Ships for Export per Type of Service in 2021

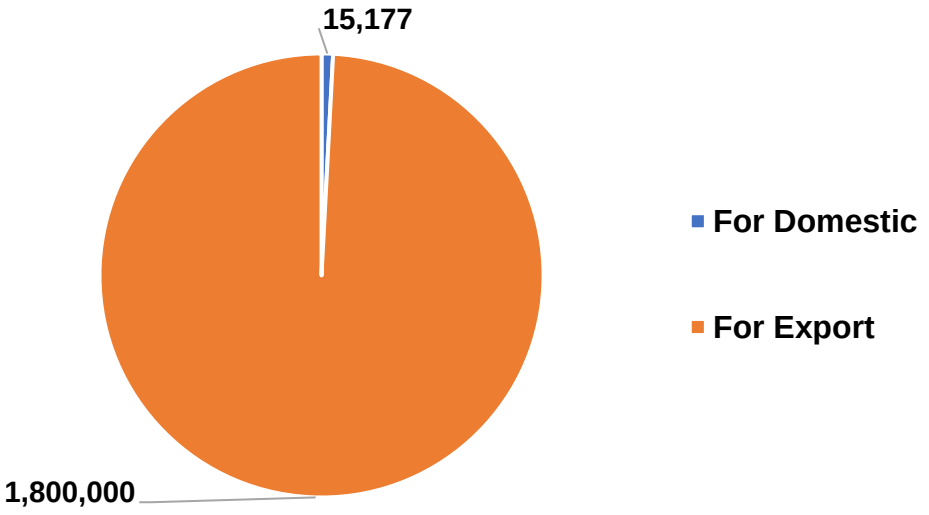
Type of Ship	Number	Total Size (GT)	Average Size (GT)
CARGO	26	1,800,000	**69,231**

Source: Shipyards Regulation Service, MARINA

The MARINA tallied a total of 383 locally constructed ships for domestic use and for export in 2021 with a total size of 1,815,000 GT that includes 15,177 GT of the 357 locally constructed ships for domestic use and 1.8-million GT of the 26 cargo vessels constructed for exportation.

Shown in Figure 12 is the comparison between the total size of locally constructed ships for domestic use and for export in 2021.

Figure 12: Comparison between the Sizes of Locally Constructed Ships for Domestic Use and for Export (in GT) in 2021



Source: Shipyards Regulation Service, MARINA

4.1.5.2 Ship Repair

Based on the result of the survey for 2021 Capability and Capacity Assessment Report, 13 out of 17 shipyards participated in the survey, engaged in ship repair in the year 2020. It is equivalent to 76.47 percent, which is almost the same percentage recorded in the 2019 edition of this study. Based on the 2019 Capability and Capacity Assessment Report, 20 shipyards or 76.92 percent of the SBSR entities that participated in the survey that year also engaged to ship repair activities.

For the third volume of the Assessment Report, among the repair activities conducted by the shipyards are replating, rudder works, propulsion works, overhauling among others.

4.1.6 Shipyard Management Systems

There are certificates that MARINA-registered shipyards must present in order to secure a license to operate. A shipyard should be able to submit a valid Environmental Compliance Certification (ECC) from the Department of Environment and Natural Resources (DENR) and Occupational Safety and Health (OSH) accreditation from the Department of Labor and Employment (DOLE). Among others that shipyard should possess is a Fire Safety Inspection Certification and a copy of its ISO 9001:2015 QMS Certificate.

In order to raise the competence and credibility of the Philippine SBSR facilities on the worldwide level, the MARINA requires shipyards to have an ISO 9001:2015 QMS Certificate. It certifies that a business consistently provides efficient customer service and implements effective business processes.

As per MC SR-2019-01, Class C shipyards in the country must comply with the ISO 9001:2015 by 05 January 2022. However, based on the data submitted to different MARINA Regional Offices, only 26 out of the 116 shipyards in the Philippines are ISO 9001:2015 certified as of 2021. There are 13 other shipyards that are still in coordination with ISO consulting groups or are in the process of completing their requirements while 77 have not taken any actions at least to the knowledge of the MARINA. Shown in Table 18 is the status of compliance of MARINA-registered shipyards with the ISO 9001:2015 requirement in 2021 by region.

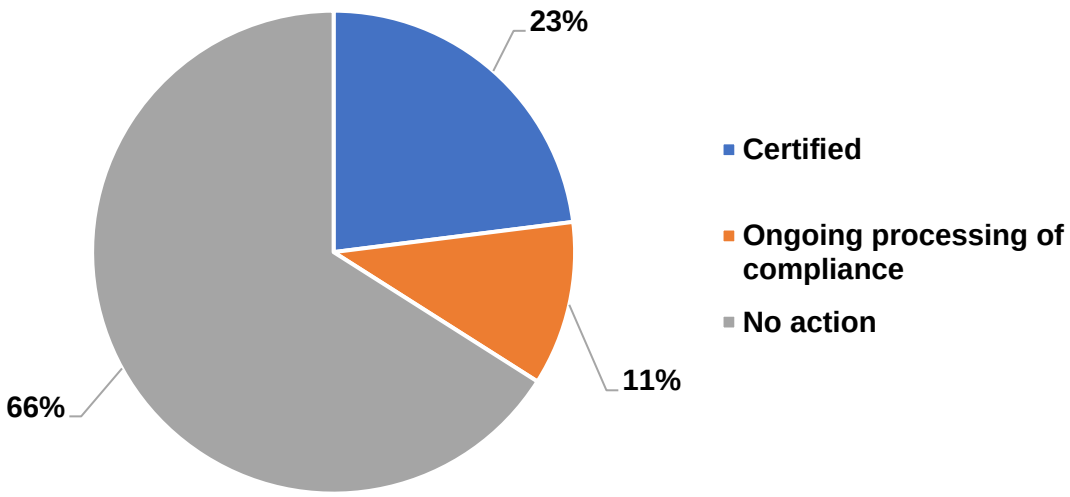
Table 18: Status of the Compliance of MARINA-registered Shipyards with the ISO 9001:2015 Certification Requirement in 2021 by Region

Office	ISO Certified	Ongoing	No action taken	Total
NCR	14	5	26	45
MRO I & II (La Union)	0	0	1	1
MRO IV (Batangas)	2	2	2	6
MRO V (Legaspi)	0	0	1	1
MRO VI (Iloilo)	1	0	7	8
MRO VII (Cebu)	5	2	8	15
MRO VIII (Tacloban)	0	0	1	1
MRO IX (Zamboanga)	1	3	7	11
MRO X (Cagayan de Oro)	1	0	0	1
MRO XI (Davao)	1	0	0	1
MRO XII (General Santos)	1	1	20	22
MRO XIII (Surigao)	0	0	4	4
TOTAL	**26**	**13**	**77**	**116**

Source: Shipyards Regulation Service, MARINA

The percentage distribution of the status of shipyards' ISO 9001:2015 certification as of 2021 is shown in Figure 13.

Figure 13: Percentage Distribution of the Status of Shipyards' ISO 9001:2015 Certification as of 2021



Source: Shipyards Regulation Service, MARINA

Figure 13 shows that as of 2021, 23 percent of the 116 shipyards have ISO 9001:2015 certification, 11 percent are still on process of their compliance while 66 percent have not taken any action at least to the knowledge of the MARINA.

Shown in Table 19, out of the 26 shipyards with ISO 9001:2015 certification, four (4) are Class A shipyards, five (5) are Class B shipyards while seventeen (17) are Class C shipyards.

Table 19: Number of the MARINA-Registered & Licensed Shipyards with ISO 9001:2015 Certification as of 2021 by Category

Class A	Class B	Class C	Total
4	5	17	**26**

Source: Shipyards Regulation Service, MARINA

4.1.7 Financial Stability

With only 17 out of 116 MARINA-registered and licensed shipyards participated in the online survey via Jotform, it is inadequate to draw a proper assessment on the financial stability of the SBSR entities in the Philippines as of 2020. Meanwhile, the SRS decided to use the limited data, which are the responses from the 17 shipyards to take a look at the financial performance

of the 15 percent of the total number of SBSR entities in the country. Out of the 17 shipyards, seven (7) SBSR entities or 41 percent reported a breakeven financial performance, six (6) or 35 percent reported loss while four (4) or 24 percent gained amid the pandemic.

Among the contributing factors that the shipyards mentioned, which led them to gain in financial performance are the increase in sales, improved production efficiency and improved collection of credit accounts.

As expected, the pandemic hurt a lot of businesses including some shipyards resulting loss in financial performance. The SBSR entities mentioned that among the contributing factors are the decrease in sales or local market sales, as well as the increase in fuel costs and utilities and the higher interest rates. Using the limited data gathered by the SRS from participating shipyards, it was reiterated that the businesses under the SBSR sector had no exception from the severe economic impact of the lockdown implemented due to COVID-19 in 2020.

4.1.8 Management and Personnel Capability

As expected, there is a big decrease in the number of employees in shipbuilding and ship repair industry in 2020 and 2021 amid the COVID pandemic. Based on the data gathered by the MARINA, there are 8,801 workers employed by the shipyards in 2021, it is equivalent to 34.7-percent decrease compared to the manpower in 2019. Based on the Second Volume of the SBSR Capability and Capacity Assessment Report, back in the year 2019, there were 13,479 personnel in the SBSR industry. Shown in Table 20 is the number of SBSR employed personnel by region in 2021.

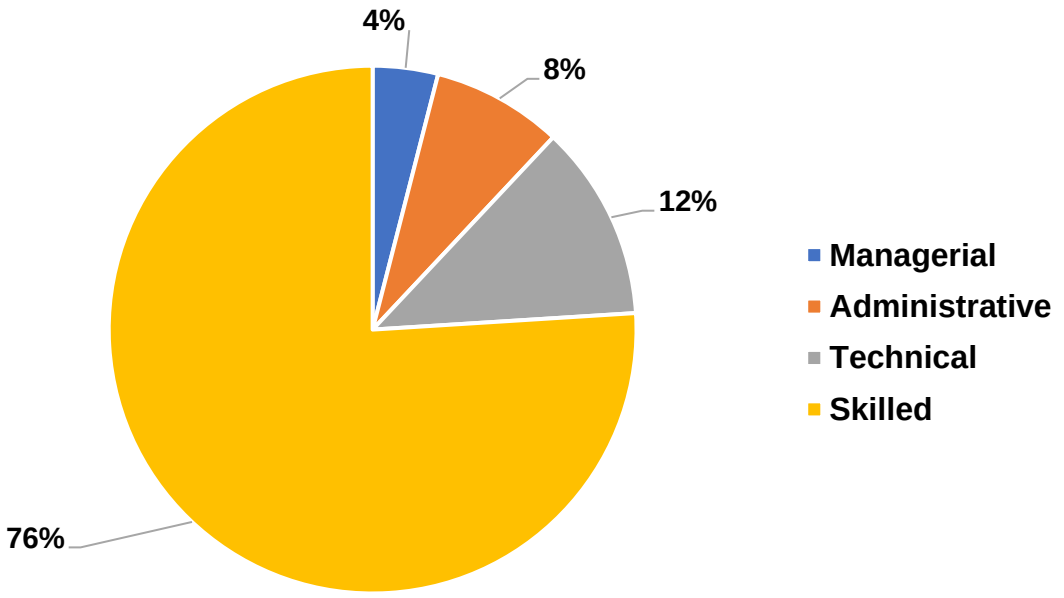
Table 20: Number of SBSR Employed Personnel by Region in 2021

OFFICE	Managerial	Administrative	TECHNICAL		SKILLED		TOTAL
			Permanent	Contractual	Permanent	Contractual	
NCR	158	314	318	56	1941	305	3092
MRO I & II	2	20	2	3	10	20	57
MRO IV	26	113	143	27	419	247	975
MRO V	2	2	6	10	3	0	23
MRO VI	17	38	62	10	128	142	397
MRO VII	44	60	151	38	427	370	1090
MRO VIII	2	5	6	0	0	19	32
MRO IX	12	21	29	5	269	0	336
MRO X	5	4	13	0	9	32	63
MRO XI	3	4	2	2	13	24	48
MRO XII	70	133	108	43	1998	200	2552
MRO XIII	4	5	14	2	107	4	136
TOTAL	**345**	**719**	**854**	**196**	**5324**	**1363**	**8801**

Source: Shipyards Regulation Service, MARINA

Figure 14 shows the percentage distribution of occupational categories in the shipbuilding and ship repair industry as of 2021.

Figure 14: Percentage Distribution of SBSR Personnel by Occupational Category as of 2021



Source: Shipyards Regulation Service, MARINA

Skilled workers account the most percentage in the SBSR workforce in the country. With a total of 6,687 personnel as of 2021, skilled workers such as welders, solderers and the like account 76 percent of the total manpower in the SBSR sector. The other occupational categories include managerial, administrative and technical.

At the outbreak of COVID-19 pandemic in 2020, shipyards have only 10 to 20% of their staff reporting for work, mostly just for station-keeping and few to no technical personnel on site. Shipbuilding and ship repairs in progress have stopped. However, for foreign-owned shipyards, staff reporting to work is 70 to 80%. Personnel that perform crucial works, who are mostly LGU dependents, cannot travel to the yard so final checkout or owner's crew cannot take over ships, this is very dire for new construction. All major work has stopped since supplier technicians who oversee work cannot be present due to travel restrictions. The MARINA issued Advisory No. 2020-33 in May 2020 to set the official rules on the resumption of operations of SBSR entities (including SBK and ASR) under the General Community Quarantine (GCQ) and IATF Alert Level No. 1.

Aside from the severe impact of COVID-19 pandemic, the significant decrease on the SBSR workforce from 2019 to 2021 may be attributed to the bankruptcy of Hanjin Heavy Industries and Construction Philippines[2] in 2019. Hanjin was the biggest foreign investor in the Subic

[2] A Korean shipbuilding company based in the country.

Bay Freeport Zone. Unfortunately, the failing revenues of the company served as one of the reasons to not sustain its operations under the burden of heavy debt.

On the other hand, back in the year 2019, male workers were dominant over female personnel in terms of the number of male and female employees in the SBSR sector. Based on the 2019 SBSR Capability and Capacity Assessment Report, 93 percent or 12,529 out of the 13,479 personnel that year are male employees. Over the years, the shipyards inserted efforts and initiatives to promote gender equality in their companies.

The result of the survey for the 2021 SBSR Capability and Capacity Assessment Report shows that among the efforts and initiatives of the shipyards regarding the said matter are conducting gender awareness seminars for employees; orientation or briefing for new hires on proper workplace etiquette relative to gender sensitivity and awareness; and by encouraging individuals of all genders to apply in job postings.

4.1.9 SBSR CAPITALIZATION

The paid-up capitalization of MARINA-registered shipyards in the year 2021 was recorded at PHP 15,546,371,509.92. It is higher compared to the total capitalization of shipyards in 2020 that was tallied at PHP 10,241,503,167.

Table 21: Total of SBSR Entities Capitalization as of 2021

OFFICE	PAID-UP CAPITALIZATION
MRO NCR	1,975,852,182.00
MRO I & II	227,101,135.00
MRO IV	5,232,761,812.00
MRO V	10,000,000.00
MRO VI	1,652,000,000.00
MRO VII	4,996,369,154.92
MRO VIII	60,000,000.00
MRO IX	115,500,000.00
MRO X	195,030,976.00
MRO XI	10,500,000.00
MRO XII	945,240,000.00
MRO XIII	126,016,250.00
TOTAL	**PHP 15,546,371,509.92**

Source: Shipyards Regulation Service, MARINA

Chapter 5
GOVERNMENT POLICIES AND INCENTIVES

5.1 Updating of MARINA SBSR Related-Policies

In accordance with the latest developments in several national and international laws, the Maritime Industry Authority (MARINA) reviews and amends existing policies. In 2020 and 2021, the Agency issued shipbuilding and ship repair related policies with the integration of measures on ensuring the quality of service in accordance with Administrative Order No. 01-21, "Guidelines on the Development and Improvement of Technical Policies of the Shipyards Regulation Service and Maritime Safety Service." The following are the objectives considered on drafting SBSR policies:

1. to be consistent with the United Nations Sustainable Development Goals;
2. to integrate with the programs under the Maritime Industry Development Plan (MIDP); and
3. to align with relevant policies prescribed by concerned government agencies such as Gender and Development among other.

The subsidiary SBSR related regulations formulated by the Agency in 2020 and 2021 were focused on marine environment protection that would help in the overall improvement and development of the shipbuilding and ship repair industry in the Philippines. Among the SBSR related regulations are as follows:

5.1.1 Memorandum Circular SR-2020-01 on the Rules and Regulations Relating to Registration and Licensing of Shipbreaking/ Ship Recycling Facilities and for Other Purposes.

The SRS formulated the policy to revise MC 95 guidelines relating to the licensing of shipbreaking entities (please see Appendix 1). The circular relates to component 3 of Program 5 of the MIDP on upgrading and expanding local shipyards and related facilities. For 25 years, through this Circular, MC 95 has been revisited and updated to preserve its legality and efficiency through changing legislation and environment and to conform to the new/ latest developments as well as to address the current needs of the SBK/SRC industry. This policy sought to address and resolve issues and concerns relating to industrial pollution coming from shipbreaking/ ship recycling activities. This policy provided clear guidelines on its registration and licensing of shipbreaking/ ship recycling entities with measures to control and prevent industrial pollution. Also, a separate and distinct MARINA MC was formulated for the development and enhancement of the quality of services undertaken by Shipbreaking/ Ship Recycling Entities.

5.1.2 Memorandum Circular SR-2020-02 on the Rules and Regulations on the Construction of Tank and Installation of Equipment to Collect, Store and Treat Sewage from Ships in Compliance to ANNEX IV of MARPOL 73/78, as amended.

To fully implement the mandatory IMO instruments, the SRS formulated this circular that relates to component 1 of Program 5 of the MIDP that aims to promote the Philippine flag registry and to strengthen the maritime administration through ratification and implementation of international maritime instruments and restructuring of MARINA. The policy also cut across all the MIPD Programs (please see Appendix 2). The Philippines, as a member state and party to the MARPOL 73/78 Convention, has the obligation to make it part of its national law. Implementation of MARPOL 73/78 is one of the items that will be assessed under the Mandatory IMO Member State Audit Scheme (IMSAS). This policy sought to address and resolve gaps, issues and concerns relating to the implementation of MARPOL 73/78 as amended particularly on sewage problems coming from ships. The Circular also complements other policies of other agencies that prescribed the prevention of pollution by sewage from ships. Such policies being implemented by PCG, PPA and other concerned government agencies.

5.1.3 Memorandum Circular SR-2020-03 on the Rules on the Construction and Certification of Fiberglass Reinforced Plastic (FRP) Vessels.

The Circular aims to improve and enhance boat construction standards in the country (please see Appendix 3). The SRS has formulated this circular that cuts across five (5) programs of the MIDP such as programs 1, 2, 3, 4 and 5. The policy provided clear rules on the construction and certification of FRP vessels as well as supplemented MC 2015-07 on the construction, alteration, conversion and modification of vessels. Introduced new/ latest developments on FRP boatbuilding technology as well as the current needs of the boatbuilding industry, as contained on relevant ISO standards and other related conventions, codes and standards. It also aims to encourage the development of the boatbuilding industry; strengthen and support the expansion and modernization of the Philippine domestic merchant fleet and its strict adherence to safety standards which will ensure the seaworthiness of all sea-borne structures; and, ensure that all our vessels constructed in the Philippines using FRP materials are in accordance with the safety and environmental standards imposed by the Administration.

5.1.4 Memorandum Circular SR-2020-04 on the Rules and Regulations on the Application of Anti-fouling Paints and Systems in All Philippine Registered Ships' in Compliance to the International Convention on the Control of Harmful Anti-fouling Systems in Ships otherwise known as AFS Convention.

To fully and effectively implement IMO instruments particularly the AFS Convention, the SRS formulated this Circular that relates to component 1 of Program 5 of the MIDP to promote Philippine flag registry and to strengthen the maritime administration through ratification and implementation of international maritime instruments and restructuring of MARINA. The policy also cuts across all the MIDP Programs (please see Appendix 4). This policy sought to address and resolve issues and concerns relating to the harmful environmental effects of organotin compounds which act as biocides (a poisonous substance like pesticide) in anti-fouling systems to prevent the attachment of unwanted organisms. These compounds persist in the water, killing sea life, harming the environment and possibly entering the food chain.

5.1.5 Memorandum Circular SR-2020-05 on the Rules and Regulations on the Control and Management of Ships' Ballast Water and Sediments in Compliance to the Ballast Water Management Convention.

To fully and effectively implement IMO instruments particularly the BWM Convention, the SRS formulated this Circular that relates to component 1 of Program 5 of the MIDP to promote Philippine flag registry and to strengthen the maritime administration through ratification and implementation of international maritime instruments and restructuring of MARINA. The policy also cut across all the MIDP Programs (please see Appendix 5). This policy sought to address and resolve issues and concerns relating to the alarming rate of increase of bio-invasions due to the uncontrolled spread of non-indigenous species coming from ships' ballast water and sediments. These destroy our marine ecosystems through the introduction of alien species to new environments.

5.1.6 Memorandum Circular SR-2020-06 on the Rules and Regulations on the Mandatory Use of 0.50% m/m Sulphur Limit on Fuel Oil for All Philippine Ships in Compliance to Annex VI of MARPOL 73/78, as amended.

To fully and effectively implement IMO instruments particularly the IMO 2020 Sulphur Cap, the SRS drafted this Circular that relates to component 1 of Program 5 of the MIDP to promote Philippine flag registry and to strengthen the maritime administration through ratification and implementation of international maritime instruments and restructuring of MARINA. The policy also cut across all the MIDP Programs (please see Appendix 6). This policy sought to address and resolve issues and concerns relating to the emission of Sulphur Oxides (SOx) from ships as a result of the fuel used to power it.

5.1.7 Memorandum Circular SR-2021-01 on the Revised Rules and Regulations on the Tonnage Measurement of Philippine-Registered Ships (Amending MC 2007-04).

This amendment to MC 2007-04 aims to ensure that all Philippine-registered ships are admeasured/re-admeasured in accordance with the International Convention on Tonnage Measurement of Ships, 1969 as amended. The revised circular specifies the types of vessels

that are exempted from admeasurement/re-admeasurement, among other additional and/or revised provisions (please see Appendix 7). The SRS reviewed and updated the existing Circular on TMS based on ITC 1969 Convention, its system, application and coverage to ensure that tonnage measurement of ships are accurately calculated/ computed in accordance with the IMO TM.5/Circ.6 and its applicability. The SRS also ensured that the Circular is consistent with the IMO Instruments of Implementation (III Code) which is relevant to the IMSAS Audit in 2022; the MIDP Program 5, promoting the Philippine flag registry and strengthening the maritime administration through ratification and implementation of international maritime instruments; and, RA 10698 (Naval Architecture Law). The process was also streamlined and integrated the IDSIS Online Application System for tonnage measurement of ships.

5.1.8 Memorandum Circular SR-2021-02 on the Revised Rules & Regulations on Load Line Survey, Assignment, Marking, & Certification for Philippine-Registered Ships (Amending MC 2007-03).

This amendment to MC 2007-03 aims to provide the said rules and regulations in accordance with the International Load Line Convention 1966 and its Protocol 1988, as amended (please see Appendix 8). The SRS reviewed and updated the existing Circular on Load Line based on the ILLC 1966 Convention and its protocol 1988, its system, application and coverage to ensure that load line assignment of ships are accurately calculated/ computed in accordance with the IMO Load Line Convention. The SRS also ensured that the Circular is consistent with the IMO Instruments of Implementation (III Code) which is relevant to the IMSAS Audit in 2022; the MIDP Program 5, promoting the Philippine flag registry and strengthening the maritime administration through ratification and implementation of international maritime instruments; and, RA 10698 (Naval Architecture Law). The revised Circular also sets the process on harmonizing the survey and the issuance of Load Line Certificate and Ship Safety Certificates of Philippine-registered ships in domestic trade.

5.1.9 Memorandum Circular SR-2021-03 on the Revised Guidelines on the Implementation of Presidential Decree No. 1221.

This Circular aims to provide guidelines in the implementation of the PD 1221 particularly on the grant of exemption/waiver to Philippine-owned and/or registered ship from the requirement under PD 1221 (please see Appendix 9). The law requires all Philippine-registered ships to be repairs, alteration, improvement, modification, reconditioning, conversion and/or dry-docking only with MARINA-registered & licensed ship repair yards to fully utilize the services of the 116 shipyards across the country and promote competitiveness of PH-registered ships by providing flexibility to their operations. The policy aims to promote the PH ship repair industry; enhance domestic capability for ship repair and maintenance in order to conserve the needed foreign exchange reserves of the country; and generate local employment. Also, to strengthen the implementation of the Philippine Ship Safety Rules and Regulations (PSSRR) with respect to inspection and dry-docking of ships by providing supplementary regulations relative to inspection and dry-docking.

5.1.10 Memorandum Circular SR-2021-04 on the Revised Rules and Regulations on the Intact Stability Requirement for Philippine-Registered Ships (Amending MC 2007-05).

The purpose of the revised circular is to foster the safe operation of Philippine- registered ships covered, by requiring compliance with the herein prescribed intact stability requirement, standards and criteria, thereby minimizing the risk to such ships, their personnel on board and to the marine environment (please see Appendix 10). It also serves the purpose of supplementing the implementation of the Code on Intact Stability 2008, and its amendments, to Philippine-registered ships. The SRS reviewed and updated the existing Circular on Intact Stability based on the latest Intact Stability Code (ISC) 2008 and its amendments and SOLAS requirements. The SRS also ensured that the revised Circular is consistent with the IMO Instruments of Implementation (III code) which is relevant to the IMSAS Audit in 2022; and, with RA 10698 (Naval Architecture Law).

5.1.11 Memorandum Circular SR-2021-05 on the Rules & Regulations on the Implementation of Ships' Energy Efficiency Management Plan (SEEMP) and Data Collection System (DCS) for Fuel Oil Consumption for All Philippine Registered Ships.

This new circular provides an approach for improving ship and fleet energy efficiency over time and some options to be considered for optimizing the performance of the ship (please see Appendix 11). It aims to establish a mechanism for a company and/or a ship to improve the energy efficiency of a ship's operation in a cost-effective manner. The SEEMP has to be developed for a specific ship per IMO guidelines Resolution MEPC.213(63): 2012. Furthermore, it also aims to ensure effective control of all sources of marine pollution and to take all practicable steps to reduce air pollutions and greenhouse gases from ships. The SRS also ensured that the Circular is consistent with the IMO Instruments of Implementation (III Code) which is relevant to the IMSAS Audit in 2022 and the MIDP Program 5, promoting the Philippine flag registry and strengthening the maritime administration through ratification and implementation of international maritime instruments.

5.1.12 MARINA Advisory No. 2020-92 on the Control Measures on Conducting In-Water Hull Cleaning While the Ship is at Sea in All Areas Within the Philippine Waters.

In line with the initiative of the Administration to promote the effective control of all sources of marine pollution and to take all practicable steps to prevent pollution of the sea and eliminate the spread of non-indigenous marine species, this Advisory will prescribe precautionary measures to control all in-water hull cleaning activities while the ship is at sea within Philippine waters in order to protect the marine environment and human health from its adverse effects (please see Appendix 12).

5.1.13 MARINA Advisory No. 2021-14 on the Harmonization on the System of Survey and Certification of Philippine-Registered Domestic Ships dated 12 March 2021.

This is in line with MARINA's effort to harmonize the conduct of survey/ inspection of the SRS & MSS particularly on load line and ship safety respectively in order to maximize the time and minimize the cost incurred by the shipping companies during the conduct of MARINA survey/inspection. This Advisory shall also provide general framework for the MARINA surveyor/ inspector in the SRS and MSS to base their arrangements and schedules for carrying out surveys/ inspections (please see Appendix 13).

In 2020, during the outbreak of the COVID-19 Pandemic in the Philippines, MARINA has officially issued guidelines on the operations of shipyards under community quarantine circumstances and other related issuances.

5.1.14 MARINA Advisory No. 2020-33 on the Guidelines on the Resumption of operations of SBSR, BBR, ASR/SC, SBK Entities in Areas under General Community Quarantine (GCQ).

Due to COVID-19, the SRS drafted the "New Normal" standard procedures for the operations of SBSR entities in view of the transition of some areas from ECQ to GCQ and the strict guidelines provided by the Inter-Agency Task Force on Emerging Infectious Diseases (IATF-EID) (please see Appendix 14). Shipyards/ Boatyards/ Workshops in areas under GCQ shall perform certain services depending on the urgency, such as major dry-docking works; emergency repairs that will endanger the lives of crew on-board if not immediately performed; and other similar works. Shipbuilding activities that were suspended or deferred due to the ECQ shall be allowed to resume.

5.1.15 MARINA Advisory No. 2020-35 on Additional Protocols on Minimum Passenger Service Standards under MC 134, MC 65/65A and MS 2018-18 to Prevent the Spread if COVID-19 Pandemic.

The SRS drafted additional protocols on passenger ships/boats to strictly observe social distancing among passengers as per guidelines provided by the Inter-Agency Task Force (IATF) (please see Appendix 15). These additional standard procedures are implemented and observed in compliance with the issuance of Certificate of Compliance under MC 134, 65/65A and MS 2018-18 and MARINA Advisory No. 2020-29 dated 30 April 2020.

5.2 SBSR Related-Investment Incentive Laws

Fiscal and non-fiscal incentives are provided by the Government of the Philippines to prospective local or foreign ventures in order to encourage investments in the country. The Investments Promotion Agencies that are involved in the SBSR industry align their investment

rules with the provisions of the Omnibus Investments Code of 1987 or Executive Order No. 226. These Agencies also refer to the policies and procedures adopted by the Board of Investments (BOI) in implementing the incentives. The Investments Promotion Agencies involved in the shipbuilding and ship repair industry include but not limited to BOI and Philippine Export Zone Authority (PEZA).

5.2.1 Incentives Offered by the Board of Investments (BOI)

In order to harmonize the provisions of the basic laws on investments, the "Omnibus Investments Code of 1987", as amended, was passed through the Executive Order No. 226. Under the Investment Priorities Plan (IPP) the priority economic activities of the government that qualify for fiscal incentives are being listed.

The 2017 IPP, that was implemented from 2017 to 2019, shall be reviewed annually. Shipbuilding along with motor vehicles, aerospace parts and components, and chemicals were included in the preferred areas of investments. The following incentives are enjoyed by the registered enterprises:

5.2.1.1 **Tax Exemptions -** BOI-registered shipyards may be entitled to income tax holiday (ITH), duty-free importation of required supplies and spare parts, and exemption from wharfage dues and any export tax, impost, and fees on non-traditional export products, subject to conditions. Under certain conditions, one bonus year of ITH may be given to new registered pioneer and non-pioneer enterprises, expansion enterprises, and those located in Less Developed Areas (LDAs).

5.2.1.2 **Tax Credits -** The amount equivalent to the national internal revenue taxes and duties paid on raw materials, supplies, and semi-manufactured products used in the manufacture of export products may be deducted from the tax liabilities of a registered shipyard or enterprise.

5.2.1.3 **Additional Deduction for Labor Expense (ADLE)** - The ADLE may be granted to the shipyard registered with BOI if it meets a prescribed capital-to-labor ratio, and is equivalent to 50% of the wages of additional skilled and unskilled workers in its workforce; 100% if the facility is located in an LDA. ADLE cannot be availed of in conjunction with the ITH.

5.2.1.4 **Additional Deduction for Necessary and Major Infrastructure Work -** The amount equivalent to the expenses incurred in the development of necessary and major infrastructure works may be deducted from taxable income, provided that the shipyard or facility is located in an LDA or in an area lacking in infrastructure and public facilities.

5.2.1.5 **Non-Fiscal Incentives** - A shipyard registered with the BOI may employ foreign nationals in supervisory, technical, or advisory positions for five years from the date of registration. Other non-fiscal incentives include simplified customs procedures

for the importation of equipment, spare parts, raw materials, and supplies and exports of processed products; importation of consigned equipment for a period of 10 years from the date of registration, subject to posting of a re-export bond; and the privilege to operate a bonded manufacturing/trading warehouse subject to Customs rules and regulations.

Based on the Second Volume of this study, only Gensan Shipyard registered a ship repair project with BOI for the period of 2018 to 2019. In this regard, the lack of awareness is attributed to the low number of shipyards availing the incentives offered by BOI for the SBSR industry.

Meanwhile, the COVID pandemic did not serve as hindrance for the government in reviewing the IPP. Back in December 2020, the new IPP became effective through the Memorandum Order No. 50. Under the 2020 IPP, all qualified activities relating to the fight against COVID-19 are included in the preferred activities for investment. These include the essential goods and essential services amid the pandemic. Among considered as essential goods are medicines, medical equipment and devices, personal protective equipment (PPE), surgical equipment and supplies, laboratory equipment and its reagents, as well as raw materials, semi-finished/ intermediate goods and machinery and equipment for use in the production or manufacture of essential goods. On the other hand, the essential services at that time are crematoriums, health waste treatment and disposal, laboratories, test facilities, hospitals and quarantine facilities.

Various incentives under Omnibus Investments Code may be granted to the said activities upon its registration with the BOI. In line with granting of incentives, the BOI is directed to ensure the attainment of and consistency with the national goals under RA No. 11469 (Bayanihan to Heal as One Act) and RA No. 11494 (Bayanihan to Recover as One Act). Also, the list of preferred areas of investments under the 2020 IPP includes all qualified manufacturing activities including Agro-Processing; Agriculture, Fishery and Forestry; Strategic Services like the Telecommunications; Healthcare and Disaster Risk Reduction Management Services; Mass Housing; Infrastructure and Logistics such as the Local Government Unit-Public Private Partnerships (LGU- PPPs); Innovation Drivers; Inclusive Business Models; Environment or Climate Change-related projects; and Energy.

Further, the 2020 IPP covers investments in activities supportive of programs to generate employment opportunities outside of congested urban areas, such as but not limited to the "Balik Probinsya Program" or any similar program that may be implemented by the Government of the Philippines. This IPP also includes a list of priority investment areas for the Bangsamoro Autonomous Region in Muslim Mindanao. **(Please see Appendix 16).**

5.2.2 Incentives Offered by the Philippine Export Zone Authority (PEZA)

Under RA 7916, the Philippine Export Zone Authority (PEZA) was created relative to encouraging and promoting the establishment and development of economic zone in selected areas in the Philippines. This is in relation to achieving sound and balanced industrial,

economic and social development. Based on the 2019 edition of this study, among the shipyards registered by PEZA are Tsuneishi Heavy Industries, Keppel Subic Shipyard, Keppel Batangas Shipyard and Austal Philippines.

The said enterprises and other entities located in the ecozones and administered by PEZA are entitled to the following:

5.2.2.1 All incentives under EO 226 including income tax holiday;

5.2.2.2 Preferential final tax of five percent (5%) of gross income in lieu of all national and local taxes, after the ITH period (alternatively, this incentive may be waived by the registered enterprise subject to certain conditions);

5.2.2.3 Tax and duty-free importation of capital equipment, spare parts, raw materials, and supplies, which are needed in the registered activity; and

5.2.2.4 Tax credits for exporters using local materials as inputs under RA 7844 or the Export Development Act of 1994.

5.2.3 Incentives Offered by the Bases Conversion and Development Authority (BCDA) and Subic Bay Metropolitan Authority (SBMA)

The Bases Conversion and Development Authority (BCDA) and the Subic Bay Metropolitan Authority (SBMA) were created through RA 7227 for the purpose of adopting, preparing and implementing a comprehensive development program relative to the conversion of the Clark and Subic military reservations and their surrounding communities into special economic zones. The creation of BCDA and SBMA is also in line with the promotion of social and economic development.

SBMA is a concerned administrative body in the maritime and naval sectors, as it is mandated to oversee the implementation of the development programs of the Subic Bay Naval Station and its nearby communities. Meanwhile, the BCDA considers the Clark Development Corporation (CDC) as its operating and implementing arm in order to manage the Clark Special Economic Zone (CSEZ) and the Clark Freeport Zone (CFZ).

5.2.3.1 Fiscal Incentives - Monetary incentives to shipyards located in the areas include a final 5%-tax on gross income earned, and tax and duty-free importation of raw materials and capital equipment.

5.2.3.2 Non-Fiscal Incentives - Investors are entitled to a permanent residency status for their spouses and dependent children less than 21 years of age provided that they have continuing investments of not less than USD250,000. Further, the enterprises in these areas may be allowed to employ foreign nationals, subject to certain conditions.

These incentives for export-oriented shipbuilding are being enjoyed by the shipyards in the SBMA including Safehull Marine Technologies Inc., Subic Drydock Corp., and the former HHIC-PHIL. in Subic.

5.2.4 Incentives Offered by the Freeport Area of Bataan (FAB)

The special economic zone known as the Freeport Area of Bataan (FAB) is headed by the Authority of the Freeport Area of Bataan (AFAB) under the Office of the President. The said special economic zone was previously managed by PEZA, and different industries are located in the area including manufacturing, wholesale and retail trade, accommodation and food service, power generation and utilities, estate development, and information and communication.

Herma Shipyard Inc. and SL Mariveles Dry-docking Shipyard Corp. are located in the FAB and entitled of the following:

5.2.4.1 Income Tax Holiday from four (4) to eight (8) years;

5.2.4.2 5% tax in lieu of local and national taxes after the ITH period have lapsed;

5.2.4.3 Duty-free importation of capital equipment, raw materials, consumer goods, and personal items;

5.2.4.4 Exemption from wharfage dues, export taxes, impost and fees;

5.2.4.5 Domestic sales allowance of up to 30% of total sales;

5.2.4.6 Special visas for investors.

Chapter 6
CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

6.1.1 2021 SBSR Capability and Capacity

In terms of the quantity of locally constructed ships for domestic use and for exportation in 2020 and 2021, these years are considered more productive for the SBSR industry compared to 2019. Despite of the COVID-19 protocols, this assessment shows that there was a continuous increase in the number of locally constructed ships both for domestic use and for export from 2019 to 2021. In line with this, it can be said that the Philippine shipbuilding production got better over the years and could be more productive if there are no COVID-19 restrictions in place, and if the shipyards were equipped with much modern facilities along with the improved support from the government.

The third volume of the SBSR Capability and Capacity Assessment Report has concluded that even though there were greater number of locally constructed ships for domestic use in 2021, the pandemic year of 2020 recorded the greater total size (GT) of locally constructed ships for domestic use.

Based on Table 22, the 2021 SBSR Capability and Capacity Assessment, in terms of the average size in GT for the locally constructed ships for domestic use, the passenger ships constructed in 2020 have an average of 317 GT while the cargo ships have an average of 626 GT, which are higher compared to the average size of passenger ships and cargo ships in the year 2021 with 101 GT and 164 GT respectively. The maximum size of passenger ships built in 2020 is 317 GT less than the 2021 which is 854 GT. Meanwhile, the maximum size for cargo ships in 2021 came from the "KAMI GST," which is 1,077 GT in size and it was built by the Golden Dragon Fast Craft Builders Inc. The "KAMI GST" has a greater size compared to the maximum size of cargo ships in 2020 which was recorded at 650 GT.

Further, the average size of fishing vessels in 2021 was recorded at 15 GT, which is the same compared to the average size of fishing vessels in 2020. In this regard, the study shows that there is still a room for improvement in the design and construction of fishing vessels, but it is important to take note that the output on this type of service also depends on the demand in the

local market. Over the years, shipyards proved that they are capable of constructing industrial fishing vessels that are safer and can carry more catch.

Also, it has been determined that shipyards in 2021 are capable of building ships particularly tanker with a maximum size of 1,114 GT with an average size of the locally constructed ships for domestic use at 893 GT. No new tankers built locally in 2020 were recorded.

Table 22: 2021 SBSR Capability and Capacity Assessment

SHIP TYPE	LOCALLY-BUILT SHIPS FOR DOMESTIC USE				IMPORTED SHIPS			
	AVE. SIZE (GT)		MAX. SIZE (GT)		AVE. SIZE (GT)		MAX. SIZE (GT)	
	2020	2021	2020	2021	2020	2021	2020	2021
PASSENGER	317	101	317	854	527	9933	2017	27285
CARGO	626	164	650	1077	1118	2306	9957	10050
TANKER	0	893	0	1114	0	0	0	0
TUGS	97	81	250	248	187	231	488	1197
FISHING	15	15	130	122	121	421	176	995

Source: Shipyards Regulation Service, MARINA

The following are the other findings and observations in the 2021 SBSR Capability and Capacity Assessment Report:

1. Most of the shipyards turned their focus to ship repair instead of shipbuilding due to COVID-19 restrictions;
2. Around 98 percent of the imported newly built ships for domestic use in 2021 are categorized with miscellaneous as its type of service which covers recreational boats with maximum size of 83 GT. It was noted that there are no imported tankers acquired for the year 2020 and 2021, on the other hand, all of the tankers acquired in 2021 were built by the local shipyards;
3. Just like in 2019 & 2020, export remains as strength of Philippine shipbuilding in 2021; and,
4. The severe impact of COVID-19 and the bankruptcy of Hanjin Heavy Industries and Construction Philippines may be attributed to the decrease of SBSR workforce as of 2021.

Also, this study conclude that four shipyards were on top of their performance despite of the difficulties brought by the pandemic. In terms of the locally constructed ships for domestic and for export in 2021, **Tsuneishi Cebu Shipyard** was able to build 26 ships with a total size of 1.8 million GT, followed by the **SL Mariveles Shipyard and Drydocking Corp.** that built 13 ships with a total size of 2,085 GT. The third shipyard in the top performing list for 2021 is **Golden Dragon Fastcraft Builders, Inc.** with 2 ships and 1,248 GT in size, then followed by the **Herma Shipyard** that built 1 ship with 1,114 GT in size.

Meanwhile, based on the 2020 Inventory of Importation of Ships, "Iris Miko" formerly known as "Karin Rambow" that was acquired by the **Iris Logistic Inc.** recorded the maximum size for cargo ships with 9,957 GT in size. For imported passenger ships in 2020, “Lite Ferry Nine” that was acquired by Lite Shipping Corp. recorded the maximum GT at 2,017 GT in size.

For the year 2021, “Stena Nova” that was acquired by the 2GO Group, Inc. recorded the maximum size for passenger ships with 27,285 GT. While the cargo ship with the maximum size of 10,050 GT was acquired by the Fujitrans Logistics Philippines, Inc.

6.1.2 Challenges

6.1.2.1 COVID-19 Pandemic. Several challenges pose risks to the development and improvement of the SBSR industry. In 2020 and 2021, the virus known as SARS COV-2 spread rapidly that led the World Health Organization (WHO) to declare a global pandemic, which resulted to the implementation of various restrictions. The COVID-19 related protocols led to the temporary closure of industries including the businesses in the shipbuilding and ship repair sector. It affected its operation that led to losses in the financial performance of different companies. However, in April 2020, the ShAP formally requested to the MARINA official guidelines on the operations of shipyards under community quarantine circumstances. The MARINA issued MA No. 2020-33 in May 2020 to set the official rules on the resumption of operations of SBSR entities under the General Community Quarantine (GCQ) and IATF Alert Level 1.

6.1.2.2 Lack of Manpower. Due to the COVID-19 pandemic and the corporate bankruptcy of Hanjin Heavy Industries and Construction Philippines, there was a significant decrease in the workforce of the SBSR sector. Aside from this, the shipbuilding and ship repair industry has no exception to the emigration of highly trained technical and skilled workers just like in other industries in the country. This is in line with the workers seeking for better career opportunities that include higher salary, which would eventually help them in the development or improvement of their way of living.

Also, in relation to this, thousands of shipyard workers are also threatened to lose their jobs and there are several shipyard facilities that might be displaced due to the proposed **Seafront City Reclamation Project** in Barangay Tayud, Consolacion, Cebu. The said project that was proposed by the Local Government of Consolacion, in partnership with the La Consolacion Seafront Development Corporation, aims to reclaim around 235.8-hectare of seawater including the foreshore area to transform into a tourism hub. The MARINA described the controversial project as ultimately detrimental to the Philippine maritime industry despite of the genuine effort of the Municipality to promote development and progress for its constituents in the locality. The Agency point out that there are twenty (20) shipyard facilities in Cebu,

twelve (12) of which are located in Barangay Tayud, and the project may displace seven (7) shipyards which cater to around sixty to seventy percent (60-70%) of the ship repair and maintenance needed in the Visayas and Mindanao region. Further, the shipyards in the proposed reclamation site serviced a total of 335 vessels in 2019 and 278 vessels in 2020 covering both drydocking and afloat repairs services. More significantly, these shipyards also provide crucial services to government clients such as the Philippine Navy and the Philippine Coast Guard.

6.1.2.3 Outmoded Facilities. In general, the advanced or updated facilities, equipment, tools and machinery belong to the Class A shipyards or shipyards with foreign partners. Around 66 percent of the total main yard facilities nationwide need rehabilitation and/or upgrading. Also, additional skills training is needed for workers in Class C shipyards.

6.1.2.4 Continuous Importation of Ships. In 2021, the MARINA recorded a total of 356 imported newly built ships for domestic use. Although, it was found out that 98 percent or 349 out of the 356 ships are categorized as miscellaneous which covers recreational boats.

6.1.2.5 Environmental Hazards. The Shipping industry is considered as one of the major contributors to climate change - with more than three (3) percent of global carbon dioxide emissions attributed to ocean-going ships. In this regard, the MARINA formulated regulations for the ships including the shipbuilding and ship repair sector which are focused in protecting marine environment. Also, the entities from private sector should play a vital role in shaping the Philippine maritime industry into an environmentally-conscious trade.

6.2 Recommendations

The analysis of the data and information gathered for this assessment has led to the following recommendations:

6.2.1 Effectively implement the programs and policies under the Maritime Industry Development Program (MIDP) to address different environmental issues in the shipbuilding and ship repair sector. Also, it is recommended to pursue the key strategic project under Program 5 of the MIDP especially those for the upgrading/ expansion of shipyards in the country.

6.2.2 Adopt the whole of government approach in revisiting relevant government laws and policies that regulate the SBSR industry of the country particularly in the review of Executive Order No. 558, strengthening the Philippine SBSR Sector and instituting measures to promote its growth and development.

6.2.3 Raise awareness on the incentives offered by the BOI and other relevant government agencies to the SBSR sector. Prioritize these incentives offered by the relevant

government agencies for acquiring ships through local construction. PEZA to also provide incentives to non-PEZA local shipyards in able to accelerate the fleet modernization programs.

6.2.4 Conduct a collaboration between the MARINA and the Local Government of Consolacion in Cebu in order to enhance the proposed reclamation area in Brgy. Tayud into a maritime hub where the shipyard and the existing maritime ancillary services will be modernized and co-exist with the new developments in the area thus creating more local jobs and enticing investors to the municipality.

6.2.5 Conduct a face-to-face survey to shipyards for the 2023 Capability and Capacity Assessment Report to gather more precise data.

6.2.6 Develop an updated database system on the capability of SBSR sector in relation to making laws and policies.

6.2.7 Provide more training to the SBSR workers and hire more competent and qualified workforce to at least bring back the number of workers before the pandemic.

In general, the third volume of the assessment report shows that local shipyards have now the capability and capacity to construct ships for domestic use up to 1000 gross tons on the average which serves as a proof that the local shipyards in the Philippine SBSR Sector are improving and gearing up its competence towards the path of being ready to compete in the global market in the near future.

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APPENDICES