MARITIME REVIEW

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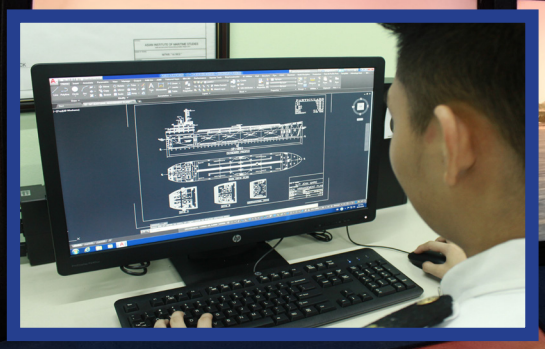

SOME OBSERVATIONS ON PHILIPPINE MARITIME EDUCATION

Also Inside:

- » Philippines to Ignore New China Maritime Law Within West Philippine Sea
- » Oceanographic and Research Vessels of the Philippines
- » Philippine Navy conducts Exercise Pagsasama 2021
- » After 45 years, A Philippine Shipping Line goes International!

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Simulator trainings, actual training drills, and computer CAD/CAM literacy play a vital role in ensuring seafarers possess the technical skills and expertise necessary to comply with international requirements. Photos courtesy of Asian Institute of Maritime Studies (AIMS) and the Maritime Academy of Asia and the Pacific (MAAP).

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Maritime Events Calendar

NOVEMBER 2021

2 – 3 ASIAN LOGISTICS AND MARITIME CONFERENCE (HONG KONG EXHIBITION CENTER, HONG KONG)
2 – 5 EUROPORT 2021 (ROTTERDAM AHOY CONVENTION CENTRE, AHOYWEG, ROTTERDAM, NETHERLANDS)
3 – 4 GLOBAL LINER SHIPPING CONFERENCE (VIRTUAL EVENT)
8 – 11 ABU DHABI INTERNATIONAL PETROLEUM EXHIBITION AND CONFERENCE (ADIPEC 2021) ABU DHABI NATIONAL EXHIBITION CENTER, AL KHALEEJ AL ARABI ST, AL RAWDAH CAPITAL CENTER, ABU DHABI, UAE
9 SMART MARITIME NETWORK DUBAI CONFERENCE (CONRAD DUBAI, SHEIKH ZAYED RD, TRADE CENTRE 1, DUBAI, UNITED ARAB EMIRATES)
9 – 11 THE MARITIME AUTONOMY AND TECHNOLOGY SHOWCASE
(MATS 2021) NATIONAL OCEANOGRAPHY CENTRE, UNIVERSITY OF SOUTHAMPTON, SOUTHAMPTON, UNITED KINGDOM
11 CHINA SHIP FINANCE SUMMIT (THE RITZ-CARLTON SHANGHAI PUDONG, SHANGHAI, CHINA)
15 – 18 NAVIGATION 2021 – THE EUROPEAN NAVIGATION CONFERENCE (ENC) - VIRTUAL EVENT
15 – 18 NAVIGATION 2021 – THE INTERNATIONAL NAVIGATION CONFER ENCE (INC) - VIRTUAL EVENT
MARITIME FORUM #168 - UNIVERSITY OF THE PHILIPPINES – INSTITUTE FOR MARITIME AFFAIRS AND LAW OF THE SEA (UP – IMLOS)
26 MARITIME FORUM #168

DECEMBER 2021

12-15 SEATRADE CRUISE GLOBAL (MIAMI, FLORIDA, USA)
1 – 3 INTERNATIONAL WORKBOAT SHOW 2021 (MORIAL CONVENTION CENTER, NEW ORLEANS, LA, USA)
7 – 8 NATURAL GAS AND LNG DYNAMICS (VIRTUAL EVENT)
7 – 10 MARINETEC CHINA 2021 (NEW INTERNATIONAL EXHIBITION CENTRE, SHANGHAI, CHINA)
8 TITBIT: MARITIME MICROGRIDS TECHNOLOGIES FOR ELECTRIFICATION OF SHIPS AND SEAPORTS - VIRTUAL EVENT
13 – 15 SEATRADE MARITIME MIDDLE EAST (DUBAI EXHIBITION CENTRE, LEHBAB STREET, DUBAI, UNITED ARAB EMIRATES)
14 – 15 IMPA LONDON 2021 (QUEEN ELIZABETH II CENTRE, WESTMINSTER, LONDON, UNITED KINGDOM)
15 – 17 INMEX SMM INDIA 2021 (NESCO CENTRE HALL, GOREGANON, MUMBAI, MAHARASHTRA, INDIA)
28 NEW YEAR CREDIT UNION EDUCATIONAL CRUISE CONFERENCE (ABOARD HOLLAND AMERICA'S MS EURODAM, KEY WEST, USA)

JANUARY 2022

TBD MARITIME FORUM #169 - DEPARTMENT OF FOREIGN AFFAIRS (DFA)
10 – 13 NOR SHIPPING 2022 (NORWAY TRADE FAIRS, MESSEVEIEN 8, LILL ESTROM, NORWAY)
22 – 23 28TH MIDDLE EAST PETROLEUM INSIDERS (FOUR SEASONS HOTEL, BAHRAIN BAY, MANAMA, BAHRAIN)
24 MARITIME FORUM #168 – UP-IMLOS
25 – 27 TRANS MIDDLE EAST (THE DIPLOMAT, RADISSON BLU HOTEL, RESIDENCE AND SPA, MANAMA, BAHRAIN)
26 SMART MARITIME NETWORK SINGAPORE CONFERENCE (MARINA SQUARE 6, RAFFLES BLVD, SINGAPORE, SINGAPORE)

FEBRUARY 2022

TBD MARITIME FORUM #170 - CEBU PORTS AUTHORITY (CPA)

MARCH 2022

TBD MARITIME FORUM #171 - MARITIME ACADEMY OF ASIA AND THE PACIFIC (MAAP)
15 – 17 OCEANOLOGY INTERNATIONAL 2022 (EXCEL LONDON, ROYAL VICTORIA DOCK, LONDON, UNITED KINGDOM)
16 – 18 ASIA PACIFIC MARITIME 2022 (MARINA BAY SANDS, SINGAPORE, SINGAPORE)
21 – 23 DOHA INTERNATIONAL MARITIME DEFENCE EXHIBITION AND CONFERENCE (DIMDEX) - DOHA EXHIBITION AND CONVENTION CENTRE (DECC), DOHA, QATAR
24 – 26 INMEX VIETNAM 2022 (SAIGON EXHIBITION AND CONVENTION CENTRE, HO CHI MINH, VIETNAM)

APRIL 2022

TBD MARITIME FORUM #172 - MARITIME INDUSTRY AUTHORITY (MARINA)
20 – 22 SEA JAPAN 2022 (TOKYO BIG SIGHT EXHIBITION CENTRE, KOTO CITY, TOKYO, JAPAN)

MAY 2022

TBD MARITIME FORUM #173 - PHILIPPINE NAVY (PN)
11 – 13 SHIPBUILD INDIA EXPO SUMMIT 2022 (BOMBAY EXHIBITION CENTER, MUMBAI, INDIA)
11 – 13 MARITIME TRANSPORT AND SHIPPING INDIA EXPO 2022 (BOMBAY EXHIBITION CENTER, MUMBAI, INDIA)
17 – 19 EUROPORT ROMANIA 2022 (ROTTERDAM AHOY, AHOYWEG, ROTTERDAM, NETHERLANDS)

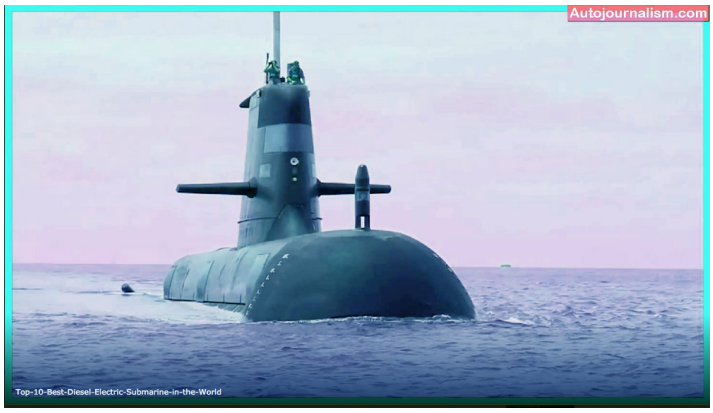
While the experiences in the two world wars identified coastal defense as one of the roles of submarines, the two other roles – harassment of enemy fleets and hunting and destroying seaborne commerce– are offensive in nature. In some cases, submarines were used to lay sea mines both for defense and offense. In those open conflicts, the strength of the submarines (stealth) is nearly equal to their weakness (vulnerability). Consequently, the use of submarines expanded underwater warfare to perform: submarine warfare, anti-submarine warfare, mine warfare and mine-countermeasures.

The nuclear age brought unparalleled advances in technology that increased the roles of the submarines. Added roles are anti-submarine platform (attack submarines), strategic weapons platform (ballistic and cruise missiles) and projection of force ashore. These roles came about because of larger dimensions, more lethal weaponry, faster speed, much-improved sensors, and deeper diving depths. They maintained their inherent strength of stealth and reduced their vulnerability due to their ability to stay submerged for long periods of time. Some modern non-nuclear powered submarines use air-independent propulsion (AIP) system to make them stealthier, thus reducing their vulnerability.

The complexity of building, operating, maintaining and upgrading military submarines is enormous. There are not many countries that build submarines, and their design depends on their own requirements. Customized orders would entail additional costs. Operating submarines requires some elements of capability –doctrine, training, inspiring leadership, high morale of the crew and support personnel, relevant combat experience, and a high level of integration between force providers and combatant commanders. The mastery of the cyber domain is a must. Maintaining submarines is not simple especially when there are no in-country shipyards willing to invest in new venture to conduct sophisticated depots (3-4 year overhaul schedule) and organizational maintenance actions, unless there is an adequate number of submarines to undergo major and minor repairs to recover and grow their capital. Upgrading submarines requires an assessment of the operational environment, sufficient budget and a robust logistics support system.

The numerous submarine accidents in the past 20 years, with much improved construction techniques and navigational systems, demonstrate the difficulty to operate and maintain submarines. The most recent involved a U.S. Navy nuclear-powered submarine, USS Connecticut, that grounded on an uncharted seamount in South China Sea in October 2021 greatly damaging her hull. This submarine would be out of service for some time. The other was the sinking of a German built diesel-powered submarine for the Indonesian Navy, KRI Nanggala 402, in 21-April-2021 in Bali Sea at 838 meters deep, killing all the 53 officers and crewmembers. Quoting a young submarine captain from a neighboring country a few years back: *"It's really scary down there. Years of training equip you with the fundamentals of operating a submarine but actual deployment, with you at the helm, is very different."*

In choosing and buying expensive defense equipment there are three factors to consider –warfighting capability, operational flexibility, and value for money. The warfighting capability refers to the offensive and defensive weapons on board designed to defeat a potential threat from inflicting harm, deter the opponent from attacking, and reduce the harm from the enemy. Operational flexibility means the defense equipment can be utilized in other missions like fleet escort, troop movements, non-combatant evacuation, search and rescue, etc., as operational necessity dictates. Value for money involves subjecting the procurement action through intensive cost benefit analysis with due consideration to the acquisition cost, life cycle cost (operational, maintenance and upgrade costs), and impact assessment on defense and security strategy.



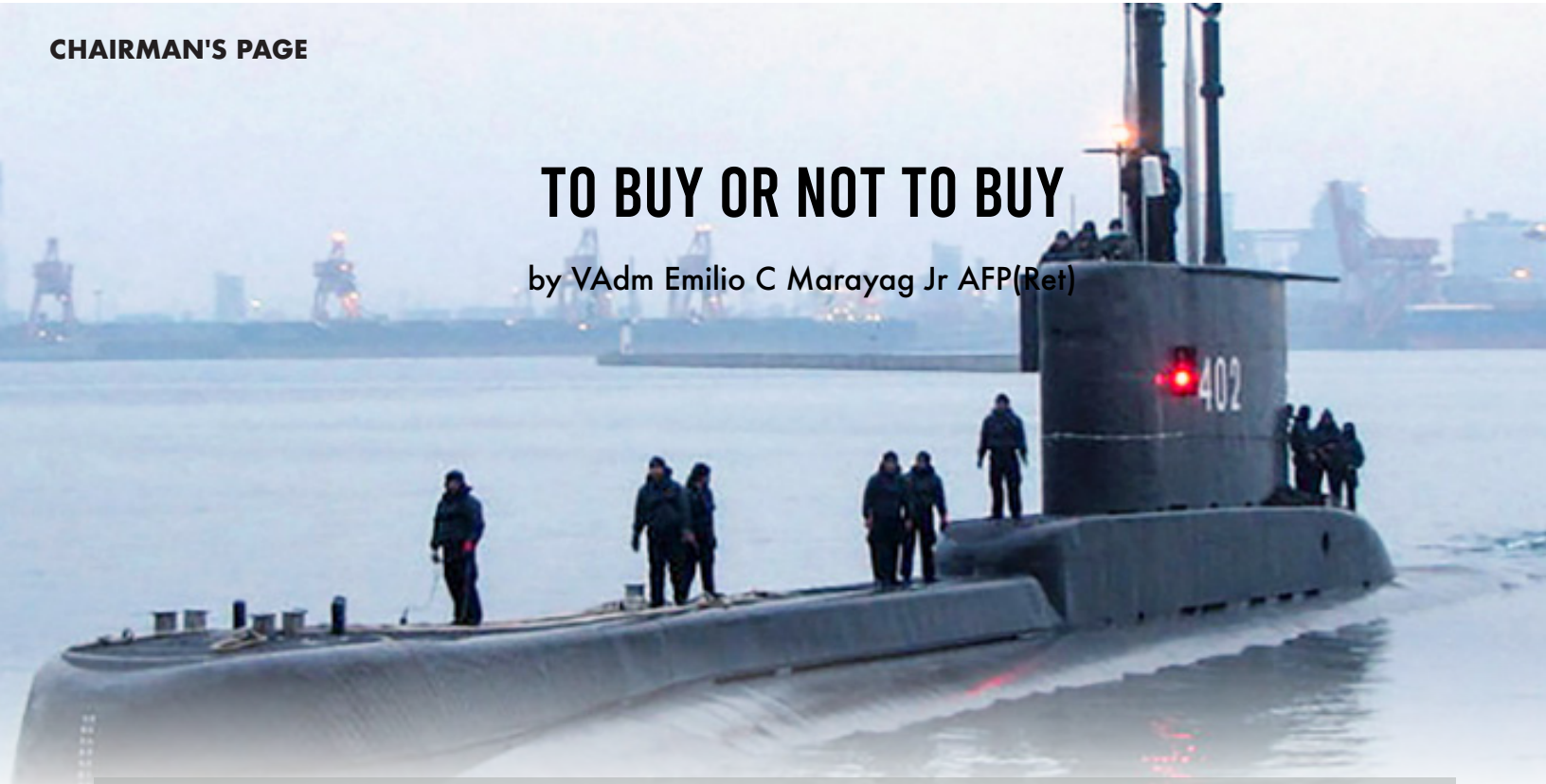
The Collins-class type 471 diesel-electric submarines were designed for the Royal Australian Navy by Swedish Shipbuilders Kockums. The first of its class, HMAS Collins 73 was commissioned in 1996. The Collins class has the capacity for up to 22 missiles and torpedoes, and up to 44 mines in place of torpedoes. There are six 533 millimeter forward torpedo tubes with air turbine pumps that discharge at the surface. Photo Credit: Top 10 Best Diesel Electric Submarines in the World.

As Director of Naval Modernization Office in the late 1990s, I had formed a team to subject high value naval capability proposals to the above factors. A good example was the proposal to procure used 3 French corvettes. Applying the meager yearly increases on the naval budget over the years and the projected costs of operating and maintaining those vessels, with no upgrade, the Navy would have to decommission half of its fleet over time, to support the new acquisitions. Also at that time, the Navy Chief Admiral Eduardo Ma. Santos created two study groups –Submarine Warfare and Mine Warfare Capability– but limited resources and the inward-looking mindset of political and military leaders prevented the development of such capabilities. The subsequent abolition of the modernization offices and weapons systems boards consequently scattered valuable databases and well-trained personnel on defense capability acquisition and upgrade.

Given the heightened awareness on external defense and security, it would be of help to fully develop a strong defense industry, strengthen the relationship with the nation's only ally and selected partners, and exert more diplomatic efforts to form an effective regional security mechanism, including the accession and ratification of UN global arms control agreements –UN Register of Conventional Arms and the UN Arms Trade Treaty. Creating a peaceful, prosperous, and stable ASEAN would depend largely on the regional balance of power, both military and economic.

TO BUY OR NOT TO BUY

by VAdm Emilio C Marayag Jr AFP(Ret)



German-built diesel-powered submarine KRI Nanggala 402 was commissioned in 1981 and refitted by Korean DSME in 2012. She sunk on April 21, 2021 during a torpedo drill. Photo Credit: AFP.

Over the past few decades many nations in Southeast Asia, including the ASEAN, have increased their defense budgets to procure and upgrade weapons systems. Some accounts indicate that the increase in the regional defense spending is two to three times the world average. Interestingly most of the weapons acquisitions are for their air and naval forces that are incredibly more expensive than the armaments for land forces.

Some of the reasons for the surge of defense spending are China's aggressive behavior, absence of a workable regional security architecture with some partners doubting U.S. commitments, continuing territorial conflict, and national prestige. China's establishment of island fortifications in the Spratlys and its deployment of a large fishing militia in areas beyond its maritime zones defined by the UNCLOS threaten freedom of navigation and the use and exploitation of maritime resources of several affected coastal states. Likewise, the development of a strong mechanism to govern the relations of the ASEAN member-states for *"confidence building measure, preventive diplomacy, and political and security cooperation"* has not been realized for some time.

The 2013 Lahad Datu intrusion in Sabah illustrates the failure to resolve the situation peacefully through a regional mechanism. Further, some states have lasting territorial disputes including delineation of territorial and maritime boundaries between and among themselves. Finally, many countries buy new armaments or upgrade their inventory to gain, preserve or enhance national prestige.

Among the many weapons systems that tend to increase risk of escalation of open conflict is the military submarine. Vietnam acquired half a dozen Russian submarines equipped with anti-ship missiles, cruise missiles and anti-submarine torpedoes. Indonesia plans to augment its naval fleet with 12 Russian submarines come 2024. Malaysia operates two French-made submarines while Singapore has four submarines, two each from Norway and Germany. Thailand intends to buy in the next few tears two Chinese-made submarines after retiring its four Japanese-built submarines in 1951. The Philippines decided to postpone its planned acquisition due to the pandemic.

Many years ago, a senior Philippine defense official viewed submarines as an offensive weapon citing a Constitutional provision that the nation *"renounces war as an instrument of national policy."* In many ways, he was correct. The first recorded submarine attack was during the American Revolutionary War in 1776 when submersible Turtle successfully evaded detection and nearly attacked with an explosive to the hull of British warship Eagle but failed. On the other hand, the first submarine that sank a ship was Hunley, used by the Confederates during the American Civil War in 1864, when it managed to approach undetected the Union ship Housatonic and rammed the warship with a spar torpedo causing it to sink.

In two ensuing world wars, the Germans exploited the use of submarines, dubbed U-boats or undersea craft, by attacking convoys of merchant ships owned by the enemy and other commercial vessels laden with contraband intended for the enemy. To counter the U-boats, the British armed a part of its merchant fleet, known as Q-boats, designed to lure the U-boats into making surface attacks to initiate armed engagement. The Germans responded by conducting unrestricted submarine warfare against Allied shipping in spite of the rules stipulated by Hague Conventions of 1899 and 1907 citing impossibility to identify bonafide commercial ships from the Q-boats. The Germans employed the *"wolf pack"* tactics to destroy convoys from the U.S. to the European theater. The Americans also performed unrestricted warfare against Japanese merchant ships in the Pacific that Admiral Karl Donitz cited when on trial at the Nuremberg for submarine attacks on merchant vessels during WW2.

(Marina) back in November 2019 submitted the required documents in order to show proof of compliance to EMSA on the country's maritime schools and training facilities standards and for implementing reforms under Executive Order 63.

However, should the Philippines fail during the final audit, more than 30,000 of the region's seafarers will be banned to service onboard European-flagged vessels.

European Commission's Assessment

EU Ambassador to Manila Luc Véron said the European Commission would conduct an assessment for six months after it received the 2020 inspection report of the European Maritime Safety Agency (EMSA) on March 1.

"The European Commission will now undertake the assessment. This starts a six-month formal process that will be concluded by an EU decision on extending or terminating the recognition. Such a decision will be consulted with the EU Member States."

More Improvements Coming Soon

The Philippine Association of Maritime Institutions (PAMI), unfazed by the challenges brought about by the Covid-19 pandemic, remains naively optimistic that the state of affairs in the maritime education sector will improve in the coming days.

PAMI's confidence is founded on the goodwill established among the various stakeholders of maritime education, both in government and the industry. The regular consultations initiated by the Maritime Industry Authority (MARINA), the Commission on Higher Education (CHED), Congress, PAMI, and other industry stakeholders demonstrate their earnest efforts to cooperate in resolving the problems confronting the sector. There is an obvious departure from the approach of drawing a clear barrier between the regulator and the regulated community which hardly resolved outstanding industry issues.

PAMI's bringing together MARINA, the MARINO Party-list, the Joint Manning Group (JMG) and the Philippine Inter-island Shipping Association (PISA) was but one of the many initiatives where these stakeholders tried to put together their thoughts on the challenges confronting Philippine maritime education, not limited to those resulting out of the pandemic, but more so to provide valuable inputs for strategic planning.

MARINA Administrator, RADM Robert Empedrad confirmed his commitment to continuously engage the stakeholders as the agency deals with the immediate concerns of the country's maritime education. Known for his disposition to listen, Administrator Empedrad has gained the respect and acknowledgment of many in the maritime education sector. From one who once worked at MARINA, he revived in me the pride of having a Head of an agency who values his staff and personnel through generous acknowledgment of their contribution. Yet, he affirms his uncompromising policy of zero-tolerance on corruption.

MARINO Party-list represented in the Convention by Cong. Macnel Lusotan is PAMI's partner in the House of Representatives. Cong. Lusotan gave updates on the status of House Bill No. 272 on the Magna Carta for Filipino Seafarers which was approved by the Lower House and subsequently endorsed to the Senate in January 2021. Although HB No. 272 has deleted many extraneous provisions in the previously drafted bill, the provision requiring maritime higher education institutions to demonstrate that over the last three years, at least 60% of their maritime students who were able to secure cadet berths have been ominously retained.

Cong. Lusotan cited a draft bill on Maritime Education Act which the MARINO Party-list will sponsor in the Lower House. *"Without me concurring with legislating the carrying capacity for cadet berths, the MARINO Party-list could help by calling for the deletion of the aforementioned provision of HB No. 272, possibly during the bicameral meeting on the Magna Carta for Filipino Seafarers and instead propose the consideration of said provision in the discussions of the draft Maritime Education Act,"* Cong. Lusotan said.

Insights shared by JMG's Mr. Eric Marquez and PISA's Atty. Peter Aguilar were enlightening as well as encouraging even as the shipping and manning sectors are coping with the disruption created by the pandemic. They clearly articulated industry support for expanding the capacity for cadet berths and cited the current circumstances obtaining in both international and domestic shipping which gives the maritime education sector in general, and PAMI in particular, valuable advice when dealing with the issue of onboard training.

At the Senate, it is reassuring as Senator Christopher Lawrence Go expressed his support for the maritime industry in his opening address to the PAMI Convention. Indeed, the PAMI annual convention is not just an ordinary event for the Association member-institutions; it is an event that allowed PAMI to have a meaningful dialogue with their partners in government and the private sector.

It is good that there is a roadmap for our seafarers, but there is a lot of work to be done as we are a Maritime Nation. But while we are trying our best at everything for the green economy, we must not forget the blue economy.

It is true that we need to up the ante in Maritime education, not only because of seafaring, but more so because we are a maritime nation with a formidable population, with a rich potential for maritime human resources in various fields.

The naval architecture course has a few takers, but the few who take it excel abroad like Darwin Morano, a Filipino Naval Architect recognized for his design in building UAE's patrol craft.

In my article about Amending the National Defense Act: Philippine Navy, I talked about re-channeling our resources from the Philippine Army to other branches like the PAF and PN. We keep talking about a Self-Reliant Defense Posture yet we still import ships, and just about everything.

We can build our own ships, but we cannot even produce license plates and Protective Equipment because of the track record requirement of the procurement law.

To be specific, the Eligibility Criterion is under Section 23.11.1 (2) of the Implementing Rules and Regulations Part-A (IRR-A) of Republic Act 9184 (R.A. 9184).

But with the ongoing controversy concerning a favored firm that came out of nowhere winning a bid despite established competitors. Although having an established bidder has more benefits, the concern is it can become a barrier to new entrants who would consequently have to resort to the "who you know in business" strategy to move forward.

Once our manufacturing sector vastly improves we would no longer be a breakdown maintenance nation which means a lack of preventive maintenance, and we repair only when it is broken, believing more in the logic behind "Why fix something if it ain't broke?" than on necessary preventive maintenance.

That is the sad plight of Philippine maintenance culture in general. I am thinking if we should be proud if we managed to

SOME OBSERVATIONS ON PHILIPPINE MARITIME EDUCATION

by Karl M Garcia

The pandemic was really a disruptive game changer. Even before the pandemic sent home most of our seafarers in 2020; their number has been dwindling the years prior. From close to 470,000 in 2019 it dropped 54% in 2020 to about 217,000. Deployment in 2018 dropped by more than 100,000.

While the number of Philippine seafarers is dwindling, the number of seafarers coming from India is increasing and that is no small matter. The Philippines has been very much aware of this competition coming from India in that they have been aiming to have 20% of their population to be deployed as seafarers.

Many of our seafarers have lost their jobs to Indian, Indonesian, Eastern European and even Myanmar seafarers for so many reasons including that Filipinos are getting to be expensive.

Here is an excerpt from a retired seafarer who runs a Manning agency:

"Owners are shifting to other supplying countries like Myanmar, Indonesia, India and other Eastern European countries due to economic reasons. But we assumed that there are various reasons and/or due to the increasing legal cost in employing Filipino crew as complained by the Protection and Indemnity P&I Insurance and owners," said Morales, a retired captain who oversees several manning agencies.

Filipino rates for skilled seafarers are estimated to cost $1,000 each per month, compared with $600 to $800 per month in Indonesia.

Morales also said the new Social Security System (SSS) Law would give ship-owners more reason to abandon the country.

"In this new SSS Law, manning agents are considered employers, jointly and solely liable with criminal liability in the event its obligation to this law is violated. The manning industry will eventually die in the near future," Morales claimed.

Our seafarers contribute 22% of our OFW remittances. A seaman remits 80% of his salary leaving just a little for himself and yet reports show they are short-changed even further.

The Seafarer Training Industry and the EMSA Audit

The Philippines has a huge privately-run seafarer training industry that churns out 25,000 to 30,000 graduates of whom only 20% make it to sea and serve on board an international vessel. There is also the standing warning from the EU –should we not pass the safety standards set, our seafarers will be banned in the EU.

EMSA's requirement to limit the number of cadets doing OBT

I have written about safety of lives at sea. But one of the recommendations or directives of the EU is to limit the cadet's onboard training. Shipboard training has always been an issue due to lack of domestic ships that can be used for training.

According to one report: It would be the end of the line for many maritime schools in the country should the proposed corrective actions presented during the national workshop by the Maritime Industry Authority (MARINA) be implemented next school year, Sabino Czar Manglicmot, 2nd president of the Philippine Association of Maritime Institutions (PAMI) warned.

It was disclosed on the workshop's first day that EMSA noted significant numbers of cadets on ships. *"The team found cases in which 11, 16 or even 37 deck cadets were onboard those ships, on which there were only two deck officers and the master,"* the EMSA Report said.

This practice of having more than 10 cadets undergoing OBT (Onboard Training) on a ship in the inter-island trade has become common in recent years as the sector's answer to severe lack of berths for students who have completed their academic requirements and, thus, are eligible to proceed to shipboard training.

Another issue is that our domestic fleet does not lack in number of ships, but we lack ships that weigh at least 500 tons. For the period of 2011-2015 40% of domestic cargo ships weighed less than 500 tons. If some lower their tonnage to lower berthing fees, that would be another issue. MARINA must strictly implement re-admeasurements (tonnage measurement).

Also, majority of our fleet are fishing vessels are said to be unsuitable for onboard training. Since most of our fishing vessels are not used to catch fish but only carry the catch of the sea, maybe they could be reclassified as cargo vessels.

Whether it is true or not that domestic ship-owners reduce the tonnage of a vessel to pay lesser fees, resulting to a lack of available vessels that can provide OBT, seafarer training facilities, many of which are ill-equipped, produce too many graduates. This has been the recommendation of **EMSA** (European Maritime Safety Agency Audit) a since 2006, but we have yet to comply.

EMSA Audit

Much has been reported by EMSA about how Maritime Schools need to shape up our Maritime training to comply with **STCW** (Standards of Training, Certification, and Watch keeping) or Shape out.

The Philippines was first inspected and re-assessed in 2006, when it was found not meeting the STCW requirements.

The final audit conducted by the EMSA lasted until March 2020. During this period, EMSA conducted several inspections, such as visits to the Maritime Industry Authority (MARINA), Commission on Higher Education (CHED), three assessment centers and 9 maritime higher education institutions (MHEIs) at Manila, Zambales, Cebu, Tagbilaran, and Iloilo areas.

"The inspections are aimed at verification of the system in place and include visits to the maritime administrations and maritime education and training institutions. In a country such as the Philippines, the number of these institutions is around 100, consequently, a representative sample is chosen" said the EU to Manila Bulletin.

In the previous EMSA audits, it was reported that the Filipino seafarers did not meet the STCW requirements. In fact, the March 2017 audit stated there were 42 areas of concern found. The Philippine authorities were required to submit 3 separate reports showing how these had been addressed.

In light of the situation, the Maritime Industry Authority

not exhaustive nor is it exclusive.

Expanding the concept of maritime education beyond seafaring and the STCW convention, therefore, is the logical way forward for an archipelago desiring to optimize the benefits generated by the blue economy.

In closing, we must recognize that we are a maritime nation, and thus Maritime Domain Awareness is a must for us.

Seafaring has been in our rich history, but our Blue economy needs more than just seafarers. For the Philippine archipelago, the blue economy stretches through numerous fields of interests, including marine science, marine biotechnology, oceanography, naval architecture, coastal management, marine resource conservation and including but not limited to maritime administration, and port operations and management.

Expanding the concept of maritime education beyond seafaring and the STCW convention, therefore, is the logical way forward for an archipelago desiring to optimize the benefits generated by the blue economy.

Maritime education that embraces the blue economy initiative widens the options in developing the country's human capital. Students who may not have the aptitude for a shipboard career or those who for reasons beyond their control fail to complete the merchant marine programs, i.e., lack of berths for a cadetship, may instead seize the opportunity offered in other maritime-related professions. This means that any attempt to develop and promote maritime education, either by legislative or executive act, must not limit the fields of discipline to BS Marine Transportation or BS Marine Engineering or any associated shipboard programs.

A look at what courses are offered at major universities

Our more than a hundred Maritime Education institutions offer only seafaring courses of BS 'this and that.' Having focused our resources for a green economy it is about time to focus on the Blue economy.

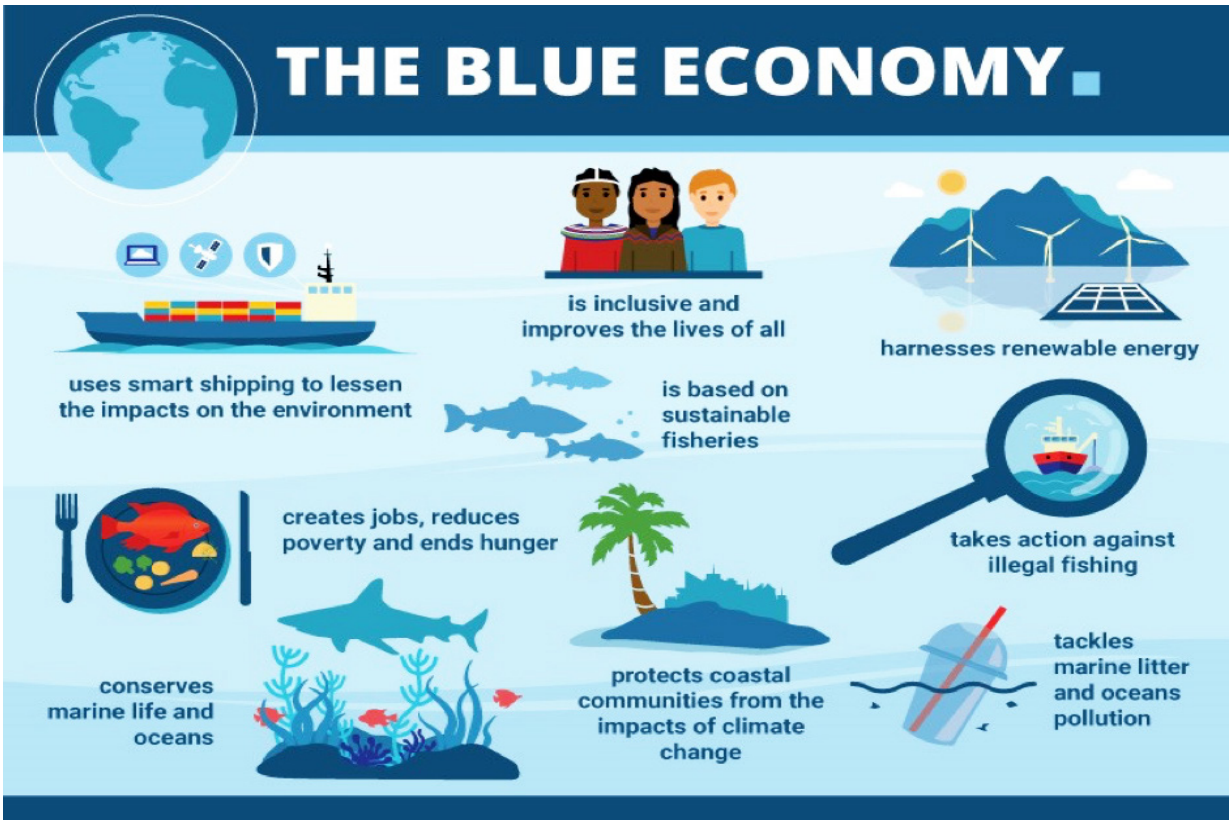
The National Marine policy entails **Ocean Governance** and **Ocean management**. These two fields require human capital. Our Maritime education institutions should incorporate these in their curricula. Our major universities such as UP, DLSU, and ADMU offer courses in BS Biology with specializations in Marine Science as well as Environmental Science. Many other marine courses can be taught in existing maritime schools and major universities.

We have been providing the world seafarers for the longest time, the rest of the world has been catching up with the world's second most populous nation interested in providing seafarers –a sleeping giant has awoken.

We are not abandoning deployment, but we also need manpower in other maritime related fields, from shipbuilding and marine biology to ocean governance and management. It is about time to transform a number of our seafarer schools to a total Maritime School offering what is already offered in big universities on Marine and Environmental Science.

For the lack of Domestic ships for Onboard Training, if we can unleash the potential of our available Naval Architects by allowing entry for new local ship builders, then the lack of ships will be addressed and there would be more room for cadets to have Onboard Training. We could also build our own international vessels.

About the Author:
Karl M Garcia's interest in Maritime concerns were developed while observing his dad through the years in his capacity as a retired Navy officer who supervised the Navy's first phase of modernization and once led the Committee on the separation of the PCG from the PN. Karl joined his father later as a consultant to Senators Biazon and Trillanes. Karl holds a BS Computer Science degree from AMA Computer University, and an MBA from DLSU Graduate School of Business.



keep WW2 war ships and boats afloat.
Aside from the track record issues, there are a lot more:

Dwindling Workforce in Shipyards.

ShAP (Shipping Association of the Philippines) highlights the dwindling workforce at the shipyards. Careers in artisanal "trades" have declined as "call center" and other white collar jobs become more popular. ShAP's presentation further notes there is a dearth of naval architects and marine engineers (the latter is not to be confused with the merchant marine engineers) to fill the local demand for their expertise. Overseas employment opportunities beckon as an attractive option, although some of the licensed professionals and skilled workers have stayed to work in local shipyards and help construct those "proudly Philippine-built ships."

Aside from efforts of keeping shipyard manpower in the country, ShAP expresses optimism on the opportunity offered by the K-12 curriculum in producing a bigger number of young job-ready labor force that could work at the shipyard. However, attracting these senior high-school graduates will largely depend on generating their interest in building a career at a shipyard. Application of technology may be a come-on; still, employment opportunities for shipyard workers are hardly known or advertised. Career orientation events for high school graduating classes usually do not mention naval architecture nor are information flyers citing anecdotal successes relating to the profession distributed. Moreover, activities at the shipyard are hardly considered newsworthy, except when accidents occur or occasionally, a ship is launched at a Philippine shipyard. ShAP must realize there is need to be more visible. Make the wider population know that opportunities abound at the shipyards!

More Challenges

Aside from insufficient manpower, Philippine shipyards are struggling to overcome bigger issues and challenges relating to materials, machinery, methods and money, factors that determine a shipyard's competitiveness.

Steel constitutes the most part of a ship's structure and is sourced from overseas; so are ship engines, propellers and generators. High handling costs, duties and taxes imposed on these materials add to the cost of building ships locally. On the other hand, tax incentives are extended to those who import ships, thus making locally-built ships lose out even in the inter-island shipping market. A case in point is Republic Act 9337 that amended the Internal Revenue Code (IRC) of 1997 and exempts domestic ship-owners from paying value added tax on importation of vessels, engines, supplies and equipment, a privilege not enjoyed by those who construct ships for domestic shipping. Closely reading Section 109 (S) of the IRC may provide a different construction of what the law provides, although generally tax legislation is to be strictly interpreted in favor of the taxing authority and that exactly was done.

Ship-owners are expected to source their ships where they can get the best bargain. Understandably linked to this and which ShAP recognizes, is the limited financial capacity of its customers –the ship-owners. It is therefore not surprising for shipbuilders to make an appeal on behalf of local ship-owners for the expansion of the country's ship financing facilities.

For a country that professes to be a maritime nation, one expects to see a robust and flourishing shipbuilding sector. This does not seem so. Second-hand ships acquired from Asian neighbors plying in domestic waters continue to thrive, never mind if these are rendered unseaworthy as these undergo re-configuration or are allowed to serve in routes different from their intended areas of operation, i.e., in calm seas or protected waters.

Thus, issues of unseaworthy ships pop up and the use of imported second-hand ships re-surface whenever maritime casualties occur. Many fact-finding inquiries were conducted for the many maritime accidents. Yet capacitating local shipyards to build fit-for-purpose ships for inter-island shipping was rarely cited as an option to enhancing maritime safety.

The issues and challenges confronting the shipbuilding sector are not new. One can only surmise government recognized the important role of the sector in realizing the country's aspiration of socio-economic development as to identify it as one major component of the Philippine maritime industry. Such was clearly stipulated under Presidential Decree 474 that created the Maritime Industry Authority (MARINA). After four decades, the same problems appear although articulated in different formulations.

One can sense from the challenge that ShAP throws to government and concerned stakeholders a feeling of exasperation, but the association is not giving up in convincing government to take the side of Filipino shipbuilders. After doing so for the longest time, ShAP is still willing to give it another shot. The reason being, the Government may finally take notice!

Senator Richard Gordon recognized the need to add Naval Architecture in the curriculum. Senator Gordon also noted, *"Building our own ships would be cheaper and it would give our naval architectural designers a chance to get what we want. Dapat maglagay na tayo ng sarili nating capability to build our own ships. Building our own ships would be cheaper and it would give our naval architectural designers a chance to get what we want. Dapat maglagay na tayo ng sarili nating capability to build our own ships."*

Stepping Up

The Maritime Industry Authority (MARINA) and the Society of Naval Architects and Marine Engineers (SONAME) have stepped up the efforts to strengthen the technical capacity in shipbuilding, recycling, and audits.

MARINA Administrator Robert A. Empedrad said the partnership with SONAME, entails capacity-building measures for MARINA's technical personnel. At present, MARINA has 45 registered naval architects nationwide who formulate technical standards for shipbuilding, ship repair, and ship recycling. SONAME, a regular member of the Marina Board, has been collaborating with MARINA in providing capacity building activities for its naval architects and other engineers involved in the regulation of the country's shipbuilding, ship repair, and ship recycling industry.

Transforming Maritime Education

The seafaring sector figures prominently in the country's blue economy agenda. For the Philippine archipelago, the blue economy stretches through numerous fields of interests but is possibly considered inconsequential and therefore shoved into the sidelines. Economic activities of the ocean and for which the application of specific expertise is crucial include marine science, marine biotechnology, oceanography, naval architecture, offshore resource extraction operations, coastal management, marine resource conservation and including but not limited to maritime administration, and port operations and management. The list is

are capable of 10 to 3,000 meters depth survey with complete state of the art navigation and hydrographic research systems. Even during their commissioning, the vessels were being eyed *to conduct surveys on the Philippine Rise (BENHAM RISE).*

The largest vessel in our IOR Fleet is the former 2,516-ton RV Melville of the Scripps Institution of Oceanography; she was acquired by the USN on 01-August-1969 as the USNS Melville (T-AGOR-14). She was named after the arctic explorer RADM George Wallace Melville USN. Upon transfer to the Philippine Navy, she was renamed BRP *Gregorio Velasquez* (AGR-702), after a famous Filipino National Scientist known for his works in the field of Phycology, the study of algae.

Our Oceanographic capability is furthered by civilian or academically manned specialized vessels such as the UP-Visayas MV *Pampano* acquired from Japan in 1962, followed by MV *Albacore* in 1972. In 1981, a Japanese donated a 481-ton research vessel that was added to the UP fleet, and was christened RV *Sardinella*.

Dedicated units and agencies in the field of Oceanography exist's in the Philippine Navy and the Academe as characterized by the Former Ocean and Littoral Affairs Group (OLAG), now the Naval Meteorological and Oceanographic Center (NAVMETOC), NAMRIA's National Coast Data Center, and the University of the Philippines Marine Institute (UP-MSI).

In this brief article, I have highlighted our Research and Oceanographic vessels, I have touched lightly on their capabilities and equipment for security reasons, though each vessel has its own specialized function that could augment each other and are well capable of conducting surveys in support of our FOREIGN POLICY and NATIONAL SOVEREIGNTY, and it is worth noting that right from the start it was the UNITED STATES that assisted us in developing and establishing our Oceanographic Capability.

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About the Author:
CDR Mark R Condeno is Deputy Administrative Officer, Philippine Korean Friendship Center and Museum Curator, PEFTOK Korean War Memorial Hall Museum under the Dept of National Defense-Philippine Veterans Affairs Office. In 2007, he was Research Officer at the Office of the Naval Historian, PN; and Projects Officer at the Maritime Historical Branch of the Fleet-Marine Warfare Center, PN. He earned a BS Architecture at Palawan State University. In 1997, he completed the Basic Naval Reserve Officers Training Course, PN; and is with Bravo Class of 1999, PCG Auxiliary Officer's Indoctrination Course. In 2002, he took the Aerospace Power Course at Air University, USAF. In 2008, he took the Military History Operations Course at U.S. Defense Technical Information Center. He is with Class 26 of Executive Course on National Security, at the National Defense College of the Philippines. He has been published in PAF Review, PAF Perspective, PN Journal, PN Digest, Rough Deck Log, CITEMAR6, USNI Proceedings, Asiaweek, USAF Air & Space Power Journal, and CIMSEC.

***BRP Gregorio Velasquez** (AGR-702) from Philippine Navy Facebook Page (Official Philippine Navy Photograph).*

OCEANOGRAPHIC AND RESEARCH VESSELS OF THE PHILIPPINES

by CDR Mark R Condeno

As the jurisdiction to the BENHAM RISE was finally given to the Philippines in 2017, unknown to many the Philippines has an Oceanographic and Research Capability that dates back from the 1900's until the present.

In December 1900, the US Coast and Geodetic Survey (USCGS) sent personnel to Manila to establish the sub-office of the USCGS in the Philippines. In 1901, the USCGS took over the job of map making in the Philippines but it was in 06 September 1901 when Act 222 was issued that the Philippine Government had its first official survey office established. The Bureau of Coast and Geodetic Survey (BCGS) was one of the first bureaus created by the US Philippines Commission thru Act 222. It was under the executive control of the Department of Commerce and Police. The BCGS was later renamed Philippine Coast and Geodetic Survey, then reverted back to BCGS, and then renamed several times afterwards!

It was under American Supervision until World War II, as survey ships were incorporated into the U.S. Army Transportation Corps (USATC) and into the OFFSHORE PATROL RESERVE (forerunner of the Philippine Navy Reserve Force) which also includes the 44-Ship fleet of the then Philippine Coast Guard.

These ships along with our Three Torpedo Boats showed their prowess in sea warfare against the invading Japanese Forces. After the war, The United States Army assisted in re-establishing the Coast & Geodetic Survey with its First Filipino Director CAPT ANDRES HIZON taking command.

The country's Oceanographic Fleet consists of 13 Surface vessels that provide Marine Science and Applied Research Capability. Apart from their primary functions, they support the Country's national sovereignty through the technical data they provide and produce such as navigational charts, maps, hydrographic surveys, checks on buoys and tides, topographic mapping, and magnetic and oceanographic surveys.

The Philippine Navy, Department of Agriculture-BFAR, and Department of Environment and Natural Resources and National Mapping and Resource Information Authority (NAMRIA) are the agencies that possess these vessels.

Academic Institutions such as the University of the Philippines-Visayas also has a number of Oceanographic and Survey vessels in their fleet.

One of our earliest Research and Survey Vessels is the RPS/BRP *ATYIMBA* (IMO NO.6913948) built and acquired in 1969; she had a Gross Tonnage of 680 tons. She was followed by RPS/BRP *ARLUNYA* and RPS/BRP *ARINYA*. The Three ships are under the Bureau of Coast and Geodetic Survey (BCGS), which was later merged with two other agencies and became NAMRIA. They were augmented by another BFAR Research Vessel, the 419-ton RPS Researcher acquired in 1966.

In 21-February-1984, the mines and geo-sciences bureau acquired the 697-ton RPS Explorer with President Ferdinand Marcos accepting the vessel from the Japanese Government.

In 1993, The Philippine Navy acquired 2 Intelligence Research Vessels BRP *Fort San Antonio* (AGS-700) and BRP Fort Abad (AGS-701), both vessels still in active service, while in 1998 NAMRIA acquired from Spain the 1,170 tons each BRP *Hydrographer Presbitero* and in 1999 BRP *Hydrographer Ventura*, making them the largest Oceanographic vessels in our fleet until the arrival of BRP *Gregorio Velasquez* (AGR-702) in April 2016. They were named after key Officers of the agency during their early days, CAPT Jayme V Presbitero and CAPT Antonio P Ventura.

On the other hand, and third largest vessel in our Oceanographic fleet is the Department of Agriculture's-BFAR MV DA-BFAR a 1,156-ton ORV; she is 8 meters longer than the 2 NAMRIA vessels.

In June 2015, the NAMRIA fleet was boosted with the commissioning of the two modern Catamaran type Hydrographic Vessels, namely BRP Hydrographer CAPT ANDRES HIZON and BRP Hydrographer *COMMODORE CAYETANO PALMA*. These ships

RPS Atyimba, International Hydrographic Organization Document on the Philippines Annex II-97 IHO Member States, https://journals.lib.unb.ca/.../article/download/23010/26707.

enemy forces in sight. At 1438, a blaring sound "Clear ship for action" was sounded. At 1439, light cruiser Galatea signaled battlecruiser *Lion* on the enemy having more than just torpedo boats and light cruisers. At 1451, the smoke seemed to hide 7 vessels. At 1452, Beatty swung S-SE to SE. At 1488, Admiral Jellicoe on his flagship *Iron Duke* learned of Galatea's earlier sightings. At 1501, Beatty swung SE-E. At 1513, he veered E-NE. Minutes later, *New Zealand* reported 5 enemy ships. The German ships sighted the enemy at 1515. The Germans had long dreamed of this battle and victory.

German light cruiser Elbing replied the only enemy forces are in the NW horizon. Vice Admiral Hipper's force turned NW and opened fire at 1518, endangering British battlecruisers New Zealand and Indefatigable. At 1526, Admiral Jellicoe sailed 70 miles NW of Beatty's battle cruiser fleet.

There was an early blunder on the British side. Admiral Jellicoe was told that Admiral Scheer was still in his base on the Jade River. Admiral Jellicoe assumed from the message that the entire German fleet would not battle, and Admiral Reinhard Scheer would only venture out to cover Vice Admiral Hipper's return. Since Vice Admiral Beatty, commander of the British Battle Cruiser Squadron, was 70 miles farther out to sea and traveling a more southerly route than Jellicoe, this meant Beatty most likely would engage the enemy first. Thus, Jellicoe proceeded at a leisurely 15 knots toward a rendezvous with Beatty, which was scheduled at 1530 off the coast of Denmark. Both Vice Admirals Beatty's and Hipper's ships spotted a Danish tramp steamer, *N.J.Fjord.* German light cruiser Elbing sent two torpedo boats *B109 & B110* to investigate. British light cruisers *Galatea and Phaeton* broke off from Beatty's force to get a better look at the lone steamer. Both scouting pairs reported sighting an enemy ship.

At 1535, Vice Admiral Hipper reversed course to SE. At 1536, Beatty gave an order to cut back drastically to starboard to follow Hipper. Beatty wanted Hipper to himself.

At 1539, the German gunnery chiefs received orders to prepare for fire, from the left and to recalculate their ranging as the distance to enemy ships narrowed. At 1542, the battlecruisers were in a tight formation of 500 meters between ships. By 1545, the two forces were just 9.5 miles apart. Hipper decreed a battle turn to S-SE. The turns were done in precise perfection in innumerable pre-war maneuvers.

At 1548, British Flag Captain Ernle Chatfield, relayed the order to Chief Gunnery Officer Gerald Longhurst to open fire as the British ships were clearly visible against the skyline. But German battlecruiser Lützow was first to open fire on British battlecruiser Lion. At 1551, only then were Queen *Mary, Tiger, New Zealand,* and *Indefatigable* able to fire in position.

At 1551-52, Hipper opened fire every 7 seconds which was ear-splitting and stupefying to all. At 1552, German battle cruiser Von der Tann fired at battlecruiser *Indefatigable* for 4 minutes. *Indefatigable* fired back but missed. At 1555, Beatty radioed his position to Jellicoe and the 13th flotilla that *"the opportunity is favorable for attacking."* At 1559, German Gunnery Officer Commander KK Mahrholz fired 8-9 salvos at battlecruiser *Indefatigable* until she exploded. At 1578, Beatty's battle cruisers fired back. Battlecruiser Queen Mary hit German battlecruiser *Seydlitz*. At 1600, battlecruiser Derfflinger hit battlecruiser *Princess Royal*. Like *Lion*, she took 2-3 early hits and later 3-4 more. Battlecruiser Tiger was also hit. At 1602, German battlecruiser *Von der Tann* attacked *Indefatigable* with 4 gun salvos and 3 shells that pierced the stern and exploded lethally until her demise. At 1605, sensing a disaster, Jellicoe ordered the 3rd Battle Cruiser Squadron to proceed immediately to provide support to Beatty. From 1600-07, *Lützow* hit Lion over 6 times. *Lion* hit *Lützow* over 4 times. *Battlecruiser Indefatigable* met her demise taking 1,010 men with her. At 1609, a British shell hit battlecruiser *Von der Tann*, and another into battlecruiser *Moltke* at 1616.

The Germans rained down hellish fire on Beatty's five ships, until salvation arrived at 1610 through Rear Admiral Hugh Evan-Thomas's 5th Squadron of battleships. But Hipper shifted back his attention to close in on Beatty.

At 1615, Jellicoe's ideal "actual hits" translated into a mediocre 6 scores in 27 minutes, despite firing 800 shells. In contrast, the German fire was 4x more accurate with 25 hits. British ordnance had not improved since Dogger Bank in 1915.

Two battlecruiser shells broke up although ineffectually at 1616, making Hipper declare "Commence Fire!" At 1618, another command was to confuse the British gunners, "Line Ahead!" At 1620, Scheer's westward course was to envelope Beatty, but quickly changed directions back to north at 1621 after learning that the British Grand Fleet dreadnoughts and Evans-Thomas' 5th Squadron had joined the action. Earlier, he was eager to present Beatty and Evan-Thomas a rude surprise.

Von der Tann and Moltke were hit 6 more times during 1620-1630; at 1626, *Queen Mary* was badly hit by Seydlitz. Although the distance was still great and the German line was cloaked in smoke, Evan-Thomas's 4 ships were able to inflict enough damage on the German vessels to relieve the immediate pressure on Beatty, who smartly altered his course when Evan-Thomas had joined the battle. Hipper did the same. But these fleets, which had drifted out of each other's sight, would come back and resume firing.

At 1630, Vice Admiral Beatty was almost due South, 7.5 miles SW of German Vice Admiral Hipper's fleet, who had steered away to the East. Beatty's battlecruiser fleet's will to win was strong and "permeated every man under his command," Navigating Officer William Scott Chalmers, said.

Scheer's High Seas Fleet was sighted by a British patrol to the south at 1635. Beatty ordered his ships northward, to lure the Germans toward Admiral Jellicoe's approaching Grand Fleet.

By 1640, in terms of casualties, 2 German vessels and 1 British vessel were lost, and hundreds of casualties on both sides. Of the several torpedoes fired at capital ships, all missed except one, which slammed into *Seydlitz*, jarring it violently. Tactically, the British fleet had a clear lead in destroyer action.

Lion's signal at 1645 having sighted enemy battleships bearing SE seemed difficult for Evan-Thomas to believe until German battlecruiser *Lützow* hit dreadnought Barham at 1646. Beatty's light-cruiser squadron had been left behind and was just resuming scouting positions in front of larger ships. From this vantage point, they could see the entire German High Seas Fleet. In another 10 - 20 minutes, Beatty's 8 capital ships would have been outnumbered 21 to 8. Without the light cruisers in the British vanguard, the whole battle would have truly been a disaster for the British. Beatty's turn had left Evan-Thomas in position to inflict damage on the Germans with his huge 1,900-pound artillery shells. But Evan-Thomas, 7 miles away, could not see Beatty's message flags, nor did any of the ships signal him by searchlight. He knew of Beatty's change of course when he passed *Lion* going in the opposite direction. Beatty had his signal man contact Evan-Thomas. The message flags went up at 1648 and were not taken

BOOK REVIEW: CLASH OF THE CAPITAL SHIPS -FROM THE YORKSHIRE RAID TO THE JUTLANDS

by Vicky Viray-Mendoza

INTRODUCTION. *The Battle of Jutland to the British or Skagerrak to the Germans set the two largest fleets of World War I, the Grand Fleet of Great Britain and the High Seas Fleet of Imperial Germany, against each other on 31-May to 1-June-1916. It was the largest clash of capital ships in World War I. The battle involved over 100,000 British and German seamen, of which 8,825 fought and died in the 2-day battle. A total of 250 warships, of which 25 warships sunk, fighting a brutal naval engagement. They battled for control of the North Sea for global economic trade. Both navies claimed victory. Although the British suffered more losses, it was not enough to cripple the numerical superiority of the British navy in the North Sea.*

BACKGROUND. News of British Vice Admiral Frederick **Sturdee's** annihilation of Graf Spee's German East Asiatic Squadron off Port Stanley in the Falkland Islands had reached the Admiralty days before the Battle of Jutland. This news was, however, wrapped with anxiety as many British people warned that the German Navy would surely settle the score. The probability was quite certain, and as the days passed, nervous victor of the Battle of the Falklands could not avoid hearing the cry for retribution echoing from across the Channel. General Herbert Horatio **Kitchener**, Secretary of State for War, was convinced this invasion would occur on November 17 or 20 that he stationed 300,000 men to do maneuvers in eastern England's Weybourne Hope, the bulk of his 25 divisions training for the Western front. He waited, but nothing happened. Admiral John **Fisher**, the First Sea Lord of the Admiralty, Chief of Naval Staff, founder of the modernized Royal Navy with its revolutionary dreadnought battleships and battlecruisers, thought the Germans were coming too. However, when the best lunar and tidal conditions passed a few days later, he shifted the invasion plans to the next days when there would be a waning moon and high tide at dawn around December 8. One could definitely see the difference between army and navy tactics that even on the planning stage, the angle of the sun, the phase of the moon, the height of the tides, calm or rough waters, misty or thick fog, and the darkness before dawn all play a major part in determining the approach of attack. Admiral **John Jellicoe** was Commander-in-Chief of the Royal Navy and his second in command was Vice Admiral **David Beatty**. The German Commander-in-Chief was Admiral **Reinhard Scheer** and his second in command was Vice Admiral **Franz von Hipper**. One day, Churchill said that Admiral **John Jellicoe** was the only person capable of losing the war in a single afternoon. Churchill's choice was rather Jellicoe's Vice Admiral **David Beatty** as Commander-in-Chief of the Royal Navy.

CLASH OF THE STEEL CASTLES. The British ships were built for speed and power, thus their battlecruisers were thinly armored, but with guns ranging from 12 to 15-inches. The German ships had smaller 11 to 12-inch guns. Only two German ships had larger 15-inch guns, but had thicker armor, and better marksmen. The Germans had practiced for night battles; the British had not, not even for target practice. They synchronized light and gunfire, blinding the British navy.

On 31-May-1916, at 1420, light cruiser Galatea hoisted the signal flag for "Enemy in sight, westward. Urgent, 2 cruisers, probably hostile, in sight bearing S-SE, 8 miles, am closing." At 1420, when Admiral John Jellicoe's Grand Fleet squadrons from Scapa Flow were still 65 miles away to the north, Vice Admiral David Beatty's advance guard of light cruisers, 5 miles ahead of his heavier ships, and Vice Admiral Franz von Hipper's scouting ships learned of one another's proximity. The lines were drawn up for battle. In the next 50 minutes, the British Fleet would suffer severely. When Beatty's battlecruisers sailed up to the enemy, the German cruisers, in turn, sustained much damage.

At 1400, Vice Admiral Beatty's fleet consisted of 4 battleships, 6 battlecruisers, 14 light cruisers, 27 destroyers, and a seaplane carrier. At 1428, light cruisers Galatea and Phaeton fired their 6-inch guns at the German torpedo boats, inaugurating the Battle of Jutland. Battlecruiser Indefatigable was under heavy fire for 15 minutes while bearing explosions at its center and rear. The 18,500-ton steel vessel was the first ship sunk in the battle. At 1432, German light cruiser Elbing fired back and hurried SW to help the destroyers. At 1437, Elbing sent a 5-9 inch shell that hit British light cruiser Galatea. At 1440, all British battlecruisers headed S-SE to be 70 miles nearer Jellicoe to close the gap and trap the enemy.

At 1435, German Vice Admiral Hipper's flagship, *Lützow,* broke radio silence to *Friedrich der Grosse*, reporting smoke clouds of

The British lost contact with the Germans at 1845. The British Grand Fleet had maneuvered in such a way that it ended up between the German High Seas Fleet and the German ports, and this was the situation Scheer most dreaded. So At 1855, Scheer ordered another reverse turn, perhaps hoping to pass around the rear of the British fleet. But the result was a worse position than that from which he had just escaped from. His battle line became compressed, and his leading ships found themselves again under intense bombardment from the broadside array of the British ships. Jellicoe had succeeded in crossing the German's "T" again. *Lützow* had now received irreparable damage, and many ships were also badly damaged.

At 1855, Scheer sent the German fleet steaming straight at full force to the British fleet. This move surprised the British, but the gamble did not pay off for the Germans. The British could see the German ships clearly, while the late-afternoon sun was blinding the German gunners, who could only make out the flashes of the British guns. Without a good target to shoot at, the Germans were sitting ducks. British dreadnought *Hercules* fired on German battlecruiser *Seydlitz*, while dreadnought Colossus and battleship *Revenge* fired on German battlecruiser *Derfflinger;* British battleship *Neptune* and dreadnought St. Vincent fired on *Derfflinger* and *Moltke.* Battleship Marlborough, ignoring her own torpedo damage, fired back 14 salvos in 6 minutes, and saw 4 of them hit home. *Monarch, Iron Duke, Centurion, Royal Oak, King George V, Temeraire, Superb, and Neptune* all scored hits.

The German ships were being slaughtered, finding difficulty to see the enemy ships due to the angle of the glaring sun. The British ravaged the German ships, the Germans only landed 2 shots, both on dreadnought Colossus. At 1915, Scheer ordered his warships to virtually sacrifice themselves in a mass charge against the British navy. 13 more German torpedo boats joined his cause to eliminate the enemy.

At 1917, more British ships opened fire. *Royal Oak, Lion, Tiger, Princess Royal, Benbow, Bellerophon, Temperaire, King George V* participated. A total of 19 British dreadnoughts at 1920 rose to 21; and at 1922 rose to 23. More joined later. The battle situation for the German navy had fallen apart. The British navy pulled out at 1930, suffering no major losses.

Vice Admiral Beatty mistakenly thought he had seen German ships and reported this to Admiral Jellicoe at 1940, 1945, and 1947. At 1954, dreadnought *King George V* received the message from dreadnought *Iron Duke*. Jellicoe received the message at 1959, and shifted SW-W to close the enemy at 2000. But Jellicoe's ships could not see Beatty's ships in the fog.

The British Fleet had spotted the silhouettes of 4 German battlecruisers steaming south trying to regain the lead off dreadnought *Westfalen*. Pre-dreadnought battleships of German Rear Admiral Franz Mauve's 2nd Squadron were also spotted. At 2018, battlecruiser Princess Royal opened fire; at 2019, Lion fired. They charged at Mauve's 2nd squadron. At 2021, Jellicoe continued sailing W-SW, and SW at 2028, when battleship *Posen* opened fire at Vice Admiral Beatty's ships.

At 2037, battlecruiser *Indomitable* received a violent jolt, shaking the ship as if it had been hit by a torpedo or a mine. A mysterious force then rocked *Inflexible, New Zealand, Tiger, Princess Royal,* and *Lion,* which felt the last of the shock wave. At 2044, destroyer Nestor sunk. Beatty's command then fired 65 salvos targeting Hartog's line, making Hipper board Moltke and veer off. German Battlecruisers *Derfflinger* and *Seydlitz* were hit. Battlecruiser *New Zealand* had scored its first 3 hits. Beatty pulled back SW, retreating as he had 4 hours earlier.

At 2045, German battleships resumed southward course. Scheer sent a message to Commodore Andreas Michelson on *Rostock* to set a torpedo boat attack against the British navy.

At 2106, Scheer instructed his naval air division with urgent Zeppelin reconnaissance. At 2110, Admiral Scheer ordered his squadrons to sail S-SE and 1 quarter; then at 2146 S-SE and 3 quarters. The course led straight to Horn's Reef.

At 2155, the admiralty radioed the *Rostock* plan to Jellicoe. At 2210, the bad weather and expiring twilight were tricky again, and Admiral Scheer did not sail W-SW per Beatty's report earlier at 2138 to Jellicoe. At 2215, 4 British light cruisers met 5 German light cruisers. In total darkness, it was hard to identify the ships. Commodore W.E. Goodenough's flagship light cruiser *Southampton* fired a shot. They returned a barrage of shells. *Southampton* suffered much damage but returned fire. Her torpedo sunk light cruiser *Frauenlob.*

The rest of the British ships were reluctant to engage so as not to disclose their night positions. Due to this fear, two of Scheer's dreadnoughts, *Moltke* and *Seydlitz,* were able to pass through the British lines unmolested. Both ships, heavily damaged and ripe for attack, were allowed to limp away.

At 2230, Jellicoe's ships sailed southward in the dark and collided with Scheer's ship. Over the next 4 hours up to 0230, there were 7 clashes of the British navy with the German navy, which was well-prepared and adept at night-fighting.

At 2400, the British 4th Flotilla of Destroyer Escorts, together with the 5th Battle Squadron, converged with the German High Seas Fleet 1,000 yards away. Destroyer *Tipperary* was leading 12 destroyers when she spotted unknown ships to the starboard. Searchlights and a barrage of 5.9-inch and 3.5-inch shells sent *Tipperary* ablaze. Destroyer Spitfire, which was behind *Tipperary,* had to maneuver to avoid hitting the burning ship. As she turned, she met the German dreadnought *Nassau* coming at her from the other direction. *Dreadnought Nassau* altered her course straight for destroyer *Spitfire* and their port bows collided and screeched by each other. *Nassau* fired her 11-inch guns at the smaller ship. Although the projectiles flew over the top of the destroyer, the blast still wrecked the bridge, the foremost funnel, and the mast. *Spitfire* limped away, useless for battle.

Commander Walter Allen's 4th destroyer flotilla signaled an unidentified ship and was met by a hailstorm of blinding lights and shells. In less than a minute, *Broke* was decimated and spun out of control, making *Contest* ram *Sparrowhawk*, slicing 30 feet off of her stern. Destroyers *Broke* and Contest pulled out of the mess, although limping. Destroyer *Sparrowhawk* floated until the next day, then was scuttled. A torpedo hit German light cruiser *Rostock*, taking on 930 tons of water, but was able to follow the German ships slowly.

Commander Reginald Hutchinson's 4th flotilla Destroyer *Achates*, was followed by other destroyers: Ambuscad*e, Ardent, Fortune, Porpoise, and Garland*. Hutchinson, aiming to merge with the British line, steered a course merging with the German fleet instead. Battleships *Westfalen* and Rhineland opened fire. It took less than a minute to sink *Fortune*. Destroyers *Achates* and *Ambuscade* thought they were being chased by a German cruiser. It was *Black Prince*, which had fallen behind because of engine damage. At 0100, battleships *Nassau* and *Thüringen* sighted the ship, which did not reply to their signals. *Thüringen* opened fire

down until 1654, at which point Evan-Thomas made his turn. The 6-minute period brought his ships 4,000 yards closer to the Germans. Barnham was hit again; while Warspite was hit 3 times; *but Valiant* was untouched; and *Malaya* avoided fire. All 4 ships were super-dreadnoughts.

Super-dreadnoughts Barham and *Valiant* steadied on their new course North at 1656-57. Super-dreadnoughts *Warspite* and *Malaya* took 5 more hits as they pivoted. *Barham* absorbed 4 more hits between 1658-1710. Battlecruiser *Lion* took 3 hits between 1659-1702. The Germans saw an explosion at 1701, perhaps from the British fleet making a hard veer to port (NW) which may have caused a flash fire. As the battle between Scheer and Hipper against Evans-Thomas intensified, the German ships suffered too. Between 1706-36, *Grasser* K*urfurst, Markgraf,* the leading ships, and *Derfflinger* and *Lützow* took hits on the belt armor, making ships crash, and causing ships and conning towers to vibrate. Battlecruisers *Moltke* and *Von der Tann* zigzagged to avoid further hail of shells and lessen the hits and damages.

At 1715, the British Fleet vanished from view in the fog. German Scheer and Hipper then concentrated on Evans-Thomas. In the *"Run to the North,"* they attacked dreadnoughts *Warspite* and *Malaya* with 13 more hits. At 1720, Admiral Scheer signaled Hipper to give chase. Beatty then altered his course N-NE to engage Hipper's ships again. This forced the German line to bend to the east to prevent Beatty's ships from gaining the advantage. Smoke from the guns mixed with a heavy mists to form a thick fog that hampered Hipper's vision. It was Hipper's job to keep the High Seas Fleet aware of changes, but because he was caught up in an intense battle with Beatty and was lost in one of the cloud banks, he did not spot the approaching British Fleet. German Rear Admiral Friedrich Boedicker, 3 miles ahead of him to the east, saw them first, reporting enemy dreadnoughts to the east. These could not be Beatty's nor Evan-Thomas' ships —someone else was entering the battle.

At 1733, light cruiser Falmouth, 5 miles ahead of Lion, sighted Rear Admiral Robert Arbuthnot's ships *(Defence, Warrior, Duke of Edinburgh, Black Prince)* sailing 7 miles SW of Jellicoe's Marlborough. It was not until 1750 that Lion saw Black Prince. Beatty veered right at 1756 to reengage with Hipper who saw the approaching battleships.

Hipper changed course NW-NE at 1744 to N-NW at 1747 to N at 1750 to disrupt British ranging. Yet, 4 battleship projectiles smashed into *Derfflinger* and *Seydlitz*. When Hipper veered east at 1755, British Admiral Horace Hood emerged, and his *Indomitable, Inflexible, and Invincible* hit German cruisers *Pillau* and *Wiesbaden* lethally, firing from 8,000 yards away. Hipper commanded the torpedo boats to attack at 1758, at which time German Rear Admiral Friedrich Boedicker saw the British Grand Fleet on the horizon, 16,000 yards away. Beatty moved E-NE then E at 1800. Jellicoe sent a message at exactly 1800 asking "what direction is the enemy?" Beatty was irked by the tardy pace of Jellicoe to the meeting point. By 1800, the bulk of Arbuthnot's ships joined with Beatty's and Jellicoe's ships. Jellicoe then turned his 8 capital ships from SE-S at 1802, bringing the Fleet into action.

At 1806, Vice Admiral Beatty sighted the enemy to the south and passed the information on to Jellicoe. Still, Jellicoe did not know their speed, direction, or number. Despite this lack of information, Jellicoe would have no choice but to deploy. If he turned to starboard, he would engage the enemy quickly, being well within gunnery range. He could also come under heavy torpedo and destroyer attack from the Germans. If he turned to port, he would avoid the torpedo attacks, being 4,000 yards away from the enemy line. This move would cross the German "T" and put the British fleet against the dull-gray sky while the German ships would be backlighted by the sun on the western sky, making the British ships hard to see.

From 1800-1810, Rear Admiral Boedicker radioed Scheer and Hipper that his ship was being fired on by enemy ships.

Not until 1814, after Jellicoe's and Beatty's ships had been within sight of one another for nearly a quarter of an hour, was the German fleet precisely located —just in time for Jellicoe to deploy his ships to the best advantage. Jellicoe organized the Grand Fleet end-to-end in a line so that their combined broadsides could be brought to bear on the approaching German ships, who could in turn reply only with the forward guns of their leading ships. The British ships formed the horizontal stroke and the German ships formed the vertical stroke of the letter "T" with the British having deployed into line at a right angle to the German ships' forward progress. This maneuver is called *"Crossing the enemy's T"* and is the ideal situation dreamed of by naval tacticians, since by "crossing the T" one gains an overwhelming firepower superiority.

At 1819, two 13-5 inch shells from British battlecruiser Lion slammed into Hipper's flagship battlecruiser *Lützow*, one exploded at the base of the conning tower, the other penetrated the port roof and exploded against the rear wall of B-turret, both shells breaking up without penetrating armour. Battleship *Markgraf* hit battlecruiser *Princess Royal*. By 1820, 850-lb shells began to douse the German battlecruisers. Hood's flagship *Invincible* hit German battlecruiser *Lützow's* forward torpedo rooms and the A-turret. Although Beatty's ships took more hits, he had amassed critical tactical points by forcing German Vice Admiral Hipper to turn away SE. At 1820, cruiser *Defence* disappeared in a cloud of smoke, with all its crew dead. *Warrior* took 21 hits and crawled while its 800+ survivors off-loaded. Dreadnought Warspite suffered damages and 46 casualties. Battlecruisers *Indomitable* and *Inflexible* resumed rapid fire.

Admiral Scheer thought he was sitting in the catbird seat before Jellicoe showed up. Scheer's 21 dreadnoughts, with their corresponding complement of torpedo boats and destroyers. Scheer was about to grab his trophy when the whole British Grand Fleet suddenly appeared. Scheer quickly reacted. He saw only one way out —to order a carefully rehearsed fleet maneuver designed for exactly this situation, breaking away rapidly from a stronger fleet. At 1829, the British Fleet stopped firing. The misty veil split like a theatre curtain, and the German's automaton gun-laying mechanism shifted into gear without a moment of hesitation.

At 1830, Admiral Scheer signaled each ship to make a 180-degree turn for the opposite course steering westward. The slow annihilation of light cruiser *Wiesbaden* and crew perhaps became the tipping point. The British battlecruiser *Invincible* met her end at 1833. Bad visibility left Jellicoe in doubt about what happened. At 1837, Scheer avoided the stricken battlecruiser *Lützow* but Hipper could not get himself to abandon his flagship, until Captain Erich Raeder reminded Hipper that the squadron needs him. Hipper got a booster shot, and the old Hipper was back. Captain Viktor Harder asked Commodore Andreas Michelson, leader of light cruiser Rostock, to transport Hipper to torpedo boat *G39*. Hipper ordered Captain Harder to scuttle *Lützow* when the damage is too great.

to Admiral Scheer that several British battleship squadrons were steaming from the North. With no enemy ships in sight, the sobered Admiral Scheer headed home.

An all-out use of U-boats against British economic trade went into effect in February 1917 before the battle, which drew away resources from German surface fleet now anchored. Radical and rebellious German sailors established a committee to complain about the dismal food rations, and promoted the Independent Social Democratic Program. Hunger strikes and cancelation of recreation period made over 600 sailors bolt ship, and sailors from 4 more battleships and battlecruisers joined. By resuming unrestricted submarine warfare, Germany foolishly antagonized a powerful neutral nation, the United States, and brought it into the war and needlessly made a new enemy.

In April 1918, Admiral Scheer set out to annihilate Beatty's flotillas off Scandinavia. However, German naval intelligence decoded the departure date off by one day –an intelligence failure. Hipper and Scheer also misread their crew's mood, another intelligence failure resulting in mutinies in Kiel, Wilhelmshaven and Berlin. The lion-lamb behavior of Scheer, baffling aggressiveness, and attempt just 2 months later to "win" again were mainly influenced by his advisors, the cautious Adolf von Trotha and the impulsive Magnus von Levetzow.

At Jutland, several factors including poor signaling and communications in Beatty's fleet amidst thick foggy sea conditions meant the British fleet missed many chances to inflict heavier losses on the German fleet. The Royal Navy lost ships due to the ineffective British shells exploding on impact without penetrating armour plates versus the effective German gunnery. As such, the British navy sustained more losses than the German navy in ships and men. The British lost 14 ships: 3 battle cruisers, 3 cruisers, 8 destroyers, and 6,274 casualties. The Germans lost 11 ships: 1 battleship, 1 battle cruiser, 4 light cruisers, 5 destroyers, 1 pre-dreadnought, and 2,551 casualties.

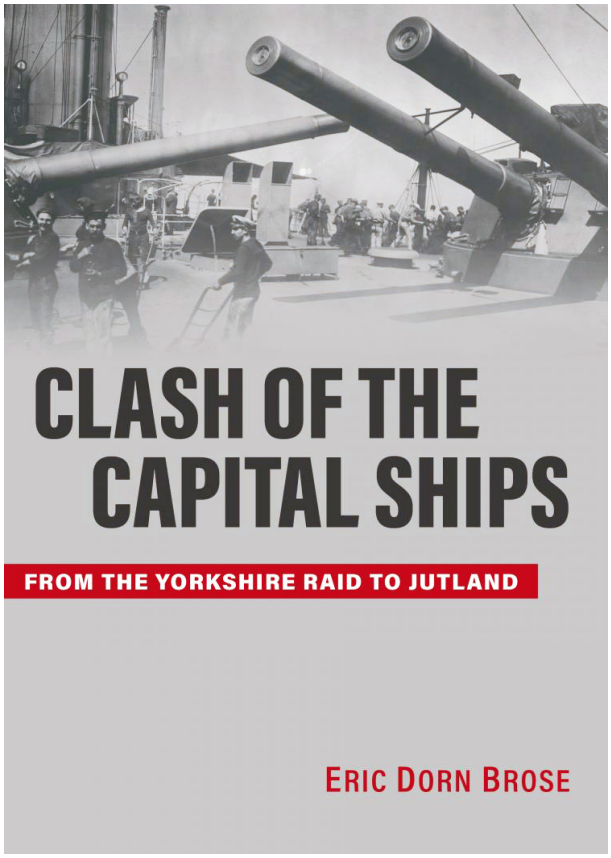
However, the losses inflicted on the British navy did not affect their numerical superiority in the North Sea, where their domination remained unchallengeable during the course of the war. The British used naval dominance to bar German access to the North Sea. Damaged German ships spent months under repair, while many reserve British ships were ready for action.

The 11 German ships sunk in the battle were torpedo boats *V27, V29, S35, V48 and V4; light cruisers Frauenlob, Wiesbaden, Elbing, and Rostock; battlecruiser Lützow;* and pre-dreadnought *Pommern*. Henceforth, the German High Seas Fleet chose not to venture out from the safety of its home ports.

The strategic value of the Battle of Jutland was that the British navy contained the German naval threat by deterring their warships from major actions in the North Sea, particularly from bombing the Yorkshire coast. "Although the German Fleet had assaulted its jailer, it was still in jail" was the sentiment in the press. The British navy continued to blockade German ports, resulting in grave shortages of food and materials. Submarine threats against the Atlantic supply lines was overcome.

On 9-November-1918, the Social Democratic Party made Germany a Republic. Two days later, the armistice went into effect. Germany surrendered, with her High Seas Fleet seized by the British and scuttled by the Germans. World War I ended. German Emperor Kaiser Wilhelm II fled to Denmark in exile, ashamed of being a German. He died in 1941 in the Netherlands.

THE ADMIRALS. Jellicoe died in November 1935 in Kensington before his 76th birthday. **Beatty**, ill with influenza, insisted to be a pall bearer at Jellicoe's funeral. He died in March 1936 in London at age 65. **Scheer** passed away in November 1928 in Kiel at age 65, still depressed for not having annihilated the British navy when the chance presented itself. **Hipper** lived incognito in different places in fear of the German naval crew whom he had starved. He passed away in May 1932 in Weimar at age 68.



RECOMMENDATION: The book Clash Of The Capital Ships authored by Eric Dorn Brose and published by USNI, highlights the Battle of Jutland between the navies of Great Britain and Imperial Germany. The German navy decided to use the U-boats to totally annihilate their enemy. The problem is that an aggressive hunter can become the hunted each time she needs to surface every 2 hours, compromising her location. The more cautious British navy made themselves difficult to locate by constantly shifting direction, using flags more than coded messages. The British continued intercepting and decrypting German coded messages, making full use of the German navy's movements. This became a significant element of British naval decision-making, despite some decoding errors. Great Britain came away the victor mainly because of its pre-eminence at sea. Nevertheless, both navies suffered horrendous casualties of officers, sailors, and ships in the battle. Ultimately, being held responsible in the vast sea to decide, whether to attack, retreat, or evade, it is still mastery of command –decisiveness and calculated risk taking– that is paramount. Closely following are the commander's tactical role, the capabilities of each ship, crewmen skills training, their motivation to fight, and a high sprit d' corps versus that of the enemy. This book excellently depicts how important these elements are for any naval force, big or small, to succeed in times of war, instability, or peace.

on Black Prince from a range of 1,000 yards. All shots were direct hits. German ships *Nassau, Ostfriesland,* and *Frederick der Grosse* fired more until *Black Prince* blew up and sank into the North Sea.

The thick foggy mists were a predicament in the Battle of Jutland. As the German battle cruisers and destroyers steamed forward, the German battleships astern became confused and disorganized in trying to execute their reverse turn. Had Jellicoe ordered the Grand Fleet forward through the screen of charging German battle cruisers at that moment, the fate of the German High Seas Fleet would likely have been sealed. Fearing and overestimating the danger of torpedoes from the approaching destroyers, he ordered his fleet to turn away, and the two lines of battleships steamed apart at a speed of more than 20 knots. They did not meet again, and when darkness fell, Jellicoe could not be sure of the route of the German retreat. By 0300 on 1-June-1916, the Germans had safely eluded their pursuers.

Destroyer *Ardent* was the final ship of the 4th Flotilla to meet the German line, illuminated by searchlights, and destroyed by a hailstorm of small-caliber shells. None of the British destroyers radioed Jellicoe about the action with the German dreadnoughts. The clash of destroyers versus dreadnoughts was a mismatch that quickly turned into a massacre. Admiral Jellicoe had no idea that Admiral Scheer was successfully cutting across his rear guard and escaping. With minor injury, the German ships easily broke free.

At 0415, Admiral Jellicoe learned that the High Seas Fleet had gotten away. It was only now that Vice Admiral Beatty got around to tell Admiral Jellicoe of the loss of battle cruisers *Queen Mary and Indefatigable*. Jellicoe was shocked to hear the news, especially when he learned that they had been lost early in the battle and why battleship commander Beatty failed to keep him informed of such a catastrophe.

STEEL TRAPS. On 31-May to 1-June-1916, Admiral Scheer intended to blast his way to the reefs through whatever enemy forces would try to bar his way, or be destroyed trying. He succeeded entering the swept channel, leaving to historians to explain how the British navy allowed this to happen. One fault lies with incorrect intelligence on the German fleet's location.

The Battle of Jutland began with a naval encounter off the Danish coast between the battlecruiser forces of German Vice Admiral Hipper and British Vice Admiral Beatty, during which the Germans quickly gained momentary advantage. This was Admiral Scheer's plan –to trap British Vice Admiral Beatty before reinforcements could come to his rescue. German Captain Karl von Kameke of dreadnought Helgoland bluntly said, *"Our bait, the light cruisers, will draw the stupid fools out to sea with their wireless messages.*" Scheer was 50 miles behind and was in time to trap Beatty's ships. He hoped for a big catch entrapped by 110 German ships. Beatty's flagship, battlecruiser *Lion*, was hit hard, lost two of eight 13.5-inch guns, and 99 sailors. Her wireless transmitter got badly damaged, which hindered Beatty's communications with his fleet and Jellicoe.

Vice Admiral Beatty quickly headed northwards to trap Vice Admiral Hipper, in turn, under Admiral Jellicoe's large fleet. A collision between Scheer's gray leftwing destroyer and Jellicoe's black rightwing rear guard destroyer led to 4 hours of sea fighting in the dark of night. Intense bombardment continued from British ships, and the Germans moved forward, well into the steel trap of the British.

Sensing danger, Admiral Scheer ordered a 180 degree turn of all German ships, and steamed out of the impending trap. Still, the German navy believed they had outgunned the enemy, their cruisers were technically superior, their vessels were better equipped and more adept at night fighting, and that they had the element of surprise versus the British navy's defective shells and light steel armor. But ultimately, sheer number alone, would make it impossible to lose in a war at sea, a British navy expertise honed against the French navy over a century ago.

The question is not whether Jellicoe would have gone back to engage because he was known not to favor night action. Instead, he could have veered S-SE towards Horn's Reef to block Scheer from escaping at dawn, assuming it would be his escape route. But neither did Jellicoe turn back to engage in battle with the German navy nor did Scheer search for the battleships of Jellicoe. This "missed opportunity" would haunt them for the rest of their life. Jellicoe was accused of forsaking the Royal Navy's chance for a new Trafalgar, while Scheer accused divine Providence for dealing him a cruel hand. Magnus von Levetzow's recollection was "the 65-year-old Scheer thought of how Providence had given opportunities for a complete annihilation of the British fleet still robbed him of sleep."

AFTERMATH. On 1-June-1916, every British naval officer and sailor knew they had hit the German High Seas Fleet hard, forced it to retreat back to Jade River, and prevented it from breaking Great Britain's blockade of Germany. But this came at a high price. 14 British Battlecruisers and destroyers sunk in the battle: *Indefatigable, Queen Mary, Nomad, Nestor, Defence, Invincible, Shark, Ardent, Fortune, Black Prince, Turbulent, Tipperary, Sparrowhawk, and Warrior.* The majority of British casualties were from flotillas attached to Beatty, which lost *Queen Mary, Indefatigable, and Invincible* at the outset, with 3,309 lives lost, over half of the British casualties in the battle.

The first deceptive newspapers from London reported Germany's victory at sea. Later, the papers got it right. German officers had laughed at the defective British shells even if they knew their enemy had larger caliber ordnance. Admiral Scheer knew that the British navy suffered heavier losses than the German navy did. But British torpedoes had heavily-damaged the German ships: *Benhcke, Ostfriesland, Helgoland, Von der Tann, Derfflinger, Moltke, Seydlitz, Konig, Grosser Kurfurst, Markgraf, Frauenlob.* The state of the German ships in the aftermath was horrendous, with thousands of casualties. In reality, the German navy was depressed for not having annihilated their enemy. That night, when the hunter became the hunted, the badly damaged battlecruiser *Lützow* resulted in 115 Germans killed.

However, German Captain Erich Raeder's memory is that Admiral Scheer knew Great Britain had suffered greatly on May 31st while Germany stood up to a hegemon that did not fight back on June 1st. Germany's *"Navalis Modus Operandi"* was to annihilate those of the Royal Navy that responded to the bombardment at Sunderland in April 1916.

Germany's Admiral Hipper, and Great Britain's Admirals Beatty and Jellicoe's ships were just an hour away from each other, and a German L-13 Zeppelin reported this sighting twice to Admiral Scheer, albeit from a very cloudy visibility at sea. Admiral Jellicoe turned his ship southward but could not see Admiral Sheer's flotilla through the thick cloud of smoke emitted by Admiral Scheer's smokescreen while he escaped upon seeing the incoming massive British fleet. Jellicoe thus turned back. Later, a U-boat reported

windward surface of each wavelet results in further depression of the water on that side of the wavelet. Lower pressure on the leeward side causes further elevation on that side. As the wind continues to supply energy to the water, the wave continues to grow in height and length until any excess energy is dissipated by internal friction in the water. The rate at which the wave grows depends on the difference between the wind velocity and the wave velocity. A sudden increase in wind velocity can cause a rapid build-up in wave height at a rate of as much as one to two feet per minute.

BREAKING WAVES. Waves will become unstable and break when the ratio of wave height to wavelength exceeds 1:7 (0.14). Reduced local gravity at the crest combined with high wind drag, causes the top third of the wave to detach and come thundering down with a turbulent and random motion. Never get caught abeam on a large breaking wave.

DEFINITION OF SEA STATE CONDITION

Table 1.

(Source: www.clubcruceros.net/CruisingBaja/Beaufort.html)

Force	Description	Specification for use at sea*	Equivalent speed at 10 meters above sea level				Description in forecast	State of sea	Probable height of waves*/meters
			Mean		Limits				
			/knots	/ms $^{-1}$	/knots	/ms $^{-1}$			
0	Calm	Sea like a mirror	0	0.0	<1	0.0 to 0.2	Calm	Calm	0.0
1	Light air	Ripples with the appearance of scales are formed, but without foam crests	2	0.8	1 to 3	0.3 to 1.5	Light	Calm	0.1 (0.1)
2	Light breeze	Small wavelets, still short but more pronounced. Crests have a glassy appearance and do not break	5	2.4	4 to 6	1.6 to 3.3	Light	Smooth	0.2 (0.3)
3	Gentle Breeze	Large wavelets. Crests begin to break. Foam of glassy appearance. Perhaps scattered white horses	9	4.3	7 to 10	3.4 to 5.4	Light	Smooth	0.6 (1.0)
4	Moderate breeze	Small waves, becoming longer, fairly frequent white horses	13	6.7	11 to 16	5.5 to 7.9	Moderate	Slight	1.0 (1.5)
5	Fresh breeze	Moderate waves, taking a more pronounced long form; many white horses are formed. Chance of some spray	19	9.3	17 to 21	8.0 to 10.7	Fresh	Moderate	2.0 (2.5)
6	Strong breeze	Large waves begin to form; the white foam crests are more extensive everywhere. Probably some spray	24	12.3	22 to 27	10.8 to 13.8	Strong	Rough	3.0 (4.0)
7	Near gale	Sea heats up and white foam from breaking waves begins to be blown in streaks along the direction of the wind	30	15.5	28 to 33	13.9 to 17.1	Strong	Very rough	4.0 (5.5)
8	Gale	Moderate high waves of greater length; edges of crests begin to break into spindrift. The foam is blown in well-marked streaks along the direction of the wind.	37	18.9	34 to 40	17.2 to 20.7	Gale	High	5.5 (7.5)
9	Strong gale	High waves. Dense streaks of foam along the direction of the wind. Crests of waves begin to topple, tumble and roll over. Spray may affect visibility.	44	22.6	41 to 47	20.8 to 24.4	Severe gale	Very high	7.0 (10.0)
10	Storm	Very high waves with long over-hanging crests. The resulting foam, in great patches, is blown in dense white streaks along the direction of the wind. On the whole surface of the sea takes on a white appearance. The 'tumbling' of the sea becomes heavy and shock-like. Visibility affected.	52	26.4	48 to 55	24.5 to 28.4	Storm	Very high	9.0 (12.5)
11	Violent storm	Exceptionally high waves (small and medium-sized ships might be for a time lost behind the waves). The sea is completely covered with long white patches of foam lying along the direction of the wind. Everywhere the edges of the wave crests are blown into froth. Visibility affected.	60	30.5	56 to 63	28.5 to 32.6	Violent storm	Phenomenal	11.5 (16.0)
12	Hurricane	The air is filled with foam and spray. Sea completely white with driving spray; visibility seriously affected.	-	-	64 and over	32.7 and over	Hurricane force	Phenomenal	14.0 (-)

SEA STATE CONDITIONS AND ITS EFFECT ON SHIP OPERATION

by Capt Tomas Baino PN (Ret)

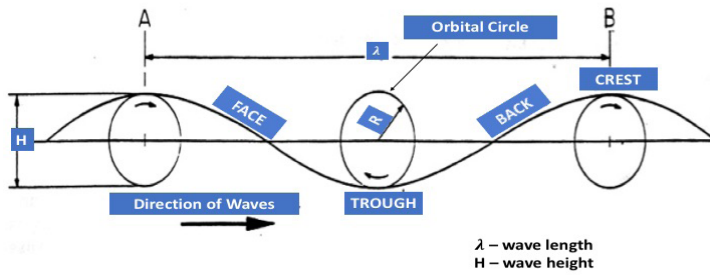
INTRODUCTION

This article is a research on sea state conditions and the Beaufort scale –how sea state conditions can affect ship operation at sea and how the Beaufort scale can be a tool of information to define the characteristics of waves and its effects on ship navigation.

WAVE GEOMETRY

The forces generated by ocean waves are among the most powerful naturally occurring forces on earth. In order to better understand the effects of ocean waves on ship stability, we need to study the wave phenomenon itself. Oceanography is a vast and complex science. A comprehensive study of Oceanography is well beyond the scope of this research work. Therefore, in this article we will confine our discussion to just a basic introduction on the ocean wave phenomenon.

Fig. 1 Theoretical Wave Form



Wave forms resemble certain mathematical curves but do not correspond exactly to these curves.

In theory, deep water surface waves are formed by water particles moving in circular orbits about their centers of rotation. This is depicted in Figure 1. While a water particle makes one complete orbit, the crest of the wave shifts from position A to position B. The distance from point A to point B is known as the **wave length** (λ). The time it takes for the crest to shift from point A to point B is called the **wave period** (T). The **wave height** (H) is equal to the diameter (2R) of an orbit.

WAVE HEIGHT is the vertical distance between the trough and the crest. Wave heights vary in magnitude from about 0.02 ft. in ripples to over 100 ft. in ocean storms. However, about 95% of all waves have heights below 16.5 ft. (5m) and the most frequently observed waves at sea are about 5 ft. (1.5m) high.

WAVELENGTH is defined as the distance between adjacent wave crests. Wavelengths vary from 0.55 ft. (1.7 cm) in ripples to about a mile (1.6 km), and even greater distances where seismic disturbances are involved.

The **WAVE PERIOD** is the time that passes between the arrival of the centers of two consecutive wave crests at a fixed point. Most wave periods range between 5 seconds and 50 seconds. Very much longer periods, (1,000 seconds - 10,000 seconds) are associated with earthquakes and tidal waves. Most storm waves have periods ranging between 12 and 15 seconds while a commonly occurring "*Atlantic*" wave has a period of 6 to 9 seconds.

Waves with periods of up to 2 seconds are known as ripples; from 2 to 5 seconds are called a chop; from 5 to 15 seconds a sea; and from 15 to 30 seconds, a *swell*.

STEEPNESS is defined as the ratio of wave height to wavelength (H/). This is an indication of the surface slope of the wave. For ratios much less than 1:7 (0.14) wave surfaces tend to have smooth curves (**sinusoidal wave form**). For values that approach 1:7, crests become sharper while troughs remain smooth (**trochoidal wave form**). At the critical value of 1:7, waves become unstable and break. Large breaking waves are very dangerous.

WAVE SPEED. This is the velocity at which the wave crest moves. It is dependent on the wave length and depth above the sea bottom and can vary between 0.5 knots for ripples to over 400 knots for waves in mid ocean earthquakes.

ORIGIN OF WAVES. Ocean waves are caused primarily by the transfer of kinetic energy to water from the wind. The wind energy, passing over the ocean surface sets small particles of water in motion. These particles accumulate along closely spaced surface ridges, producing small wavelets (ripples). High pressure on the

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PHILIPPINE SEA AREAS OF RESPOSIBILITY

Figure 1

Philippine Areas of Responsibility

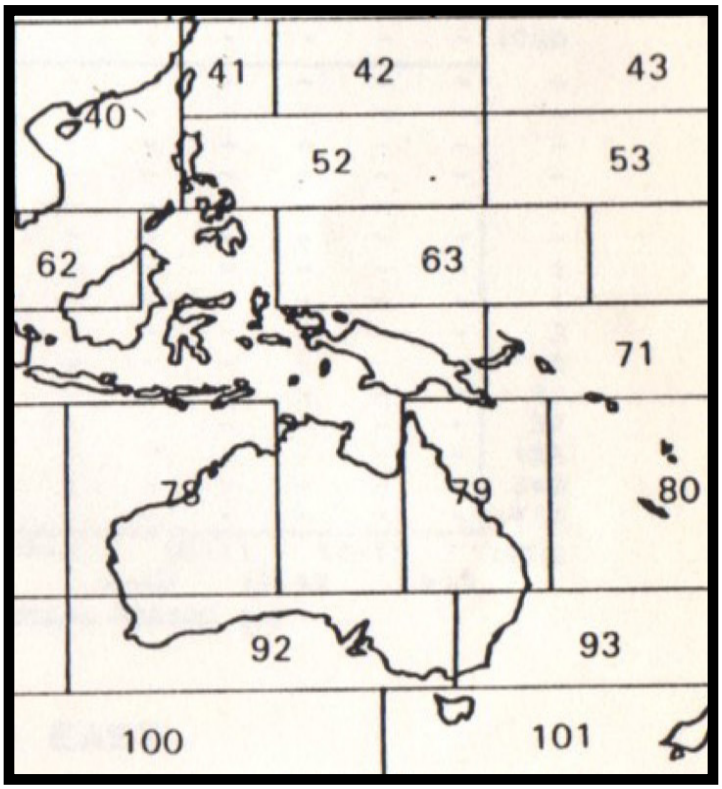

Photo Credit: World Meteorological Organization.

THE WAVE ENVIRONMENT. The Philippines lies on the boundary between "Global Wave Statistics" Area 40 (105-120o E, 10-30oN) and Area 52 (120-150oE, 10-20oN). In these two areas significant wave heights exceed 4 meters less than 11% of the time, therefore the operability of the surface ship will hardly be affected by the weather. (World Meteorological Organization – WMO)

PROBABILITY OF SEA STATE 6 CONDITION OCCURRENCE OF FULLY ARISEN SEAS

Table 2.

Philippine Sea Condition, Sea Area 40, Sea Area 41 and Sea Area 52

Sea Areas	Proportion of time when Wave heights exceed 4 meters	Per 1000 Wave Observations
40	10.6%	106 times to happen
41	11.1%	111 times to happen
52	6.7%	67 times to happen
62	3.2%	32 times to happen
63	2.0%	20 times to happen

Sea State – is the description of a wave characteristic and how it appears in the open ocean.

Beaufort Scale – is the measure of wind velocity that triggers the ocean waves, as the wind velocity collides with the surface of the ocean.

WAVE LENGTH/SHIP LENGTH

A ship whose length waterline is equal to the wave length, and wave height is less than the freeboard, will only experience less severe functionality degradation in rough seas (pounding, slamming, wetness of the deck, excessive rolling and pitching, emergence of propeller at the surface, etc.), whereas a ship whose length waterline is smaller than wave length, and wave height exceeds the freeboard will encounter severe functionality degradation of the ship's system in rough sea conditions. Both conditions are presumed to be at head-on seas. The ship faces a risky heading if she exposes the ship broadside against the waves.

RECOMMENDATION

As a basic rule, the skipper's real time observations on the prevailing sea condition must employ all his due diligence to avoid being caught by rough sea condition, or in case of being caught and encountering such rough sea condition in the middle of the ocean, always bring the ship to face head-on seas rather than exposing the ship broadside, a dangerous ship position in relation to the kinetic energy of the waves being absorbed by the hull of the ship at beam seas.

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ABOUT THE RESEARCHER

CAPT TOMAS D BAINO PN (Ret), a retired naval officer in 2004 and was former Commander of the Naval Research and Development Center, Naval Sea System Command of the Philippine Navy. He has undergone orientation seminars in Hydrodynamics laboratory in the UK Defense Evaluation Research Agency (DERA), under the sponsorship of UK Ministry of Defense, England in 1998. He served as Naval Architect Ship Acquisition Consultant with PCG/DOTr for 3 years, from 2017 to 2020.

Still shot of MV Iris Paoay. Photo Credit: RoyalCrown.com

calling on Philippine ports unless for onwards shipment from a foreign destination. Other than that, domestic cargo is exclusively reserved for domestic shipping lines.

The specter of violating cabotage laws is the reason why MARINA disallows local shipping lines from plying international routes while concurrently engaging in domestic shipping. This regulation has been the great stumbling block that prevents local shipping lines from going international.

The container crisis we are presently going through has prompted MARINA to be more flexible. In a draft memorandum dated 9-June-2021 (no memorandum number yet), MARINA has softened its stance and is now open to grant permission to certain local shipping lines to ply international routes.

Fortunately, we are not short of shipping conglomerates who are willing to invest in vessels for international routes. **Iris Logistics** and **Chelsea Logistics** are among them. The permit granted to Iris Logistics to sail to the U.S. is good only for six months. It is a step in the right direction.

If there is anything this incident has taught us, it is that we must not be dependent on foreign shipping lines. Doing so makes us vulnerable in terms of stability of trade, food security, and national security. The Philippines must have its own shipping lines connecting our archipelago inter-island and to the rest of the world.

That said, we ask Congress to pass the **Philippine Registry of Ships Law** so as to provide the legal framework for Philippine shipping lines to concurrently serve both domestic and international routes.

We further ask the Chairman of the Committee of Transportation of the House, Congressman Edgar Mary Sarmiento, to consider the following provisions in the legal framework: That we do away with the split between *"coastwise license"* and *"international license"* to allow vessels flying the Philippine flag to operate domestically and internationally in one registration; that we establish a one-stop shop for all maritime related permits and licenses with fees made reasonable; that we relax restrictions on bareboat chartering by deleting time restrictions and enabling concurrent domestic and international operation; that foreign-owned ships that are bareboat chartered by a Philippine national be allowed entry into the Philippine Register of Ships; that we apply international crewing standards to domestic shipping as well; and, that Philippine Port Authority guidelines relating to port charges must be respected and not arbitrarily raised by port operators.

The decision of MARINA to allow a Philippine registered vessel to sail to Los Angeles without compromising its cabotage privileges is the first step towards breaking our dependence on international shipping lines. MARINA is showing more flexibility than it ever did before. Well done, MARINA!

This development is a breakthrough for Filipino traders and the Philippine economy.

About the Author:
Andrew J. Masigan is an economist. You may reach him at andrew_rs6@yahoo.com, Facebook @Andrew J. Masigan, and Twitter @aj_masigan

Source:
https://www.bworldonline.com/after-45-years-a-philippine-shipping-line-goes-international/

Photo Credit: RoyalCargo.com

AFTER 45 YEARS, A PHILIPPINE SHIPPING LINE GOES INTERNATIONAL!

by Andrew J. Masigan

We can all use a bit of good news at this time.

First, some context. Since the pandemic started, there has been a scarcity of cargo container vans and international shipping lines calling on Philippine ports. This has caused our exporters to default on their delivery schedules. The default, in turn, caused their customers to withhold payments triggering cashflow problems across the industry. Meanwhile, exporters of perishable goods like fresh mangoes and bananas are suffering from rotting inventories due to their inability to leave the ports on time.

The scarcity of cargo vessels calling on Philippine ports has disrupted production schedules of companies that depend on imported components for their production lines (e.g., the electronics industry). It has also caused delays in the importation of the country's essential goods such as rice, foodstuff, and construction materials.

And here is the good news — the Department of Trade and Industry (DTI) and the Maritime Industry Authority (MARINA) have worked decisively to relieve the logistics woes of our importers and exporters. For the first time in 45 years, a container ship under the Philippine flag will make an international voyage to the United States. Not only will this ease the plight of our exporters, it is a precursor for an honest to goodness Filipino international cargo line going international.

Iris Logistics, Inc., a subsidiary of Philippine logistic giant, Royal Cargo, has invested in a fleet of three carrier vessels with a 1,100 TEU capacity, the largest in the country. On 23-September-2021, the *MV Iris Paoay* made its inaugural voyage to Los Angeles.

This is a milestone in Philippine maritime history. Why? Because the prospect of having a Filipino international cargo line will free us from dependence on foreign shipping lines. Shipping costs will significantly drop for Filipino traders thereby improving their margins. More significantly, our exporters will no longer be subjected to oppressive destination charges (exorbitant add-on fees) which are unilaterally levied upon local importers by foreign shipping lines.

What precipitated the shortage of container vans and international shipping lines calling on Philippine ports?

It all stems back to the pandemic. See, lockdowns here and around the world have caused acute disruptions to supply chains worldwide. Now that economies are slowly opening up, there is a mad rush for component and raw material suppliers to ship their goods to manufacturers. Similarly, there is a scramble for importers to replenish their inventories and a need to transport essential products like medical equipment, construction materials, and food across nations.

International shipping lines have taken advantage of the spike in sea cargo demand. With profit as a motivator, shipping lines have decreased their frequencies to low-volume ports and short-haul regional voyages. Instead, they channeled the lion's share of their vessel capacity to long-haul routes between high-volume trading hubs (e.g., Shanghai to Rotterdam). The high demand allows them to charge premium rates on vessels which are full to capacity.

So serious is the problem that the U.S. Federal Maritime Commission has cracked-down on the unfair trading practices of international shipping lines.

To ensure the stability of frequency and freight cost for Filipino traders, the DTI endorsed the establishment of a Filipino international shipping line which MARINA now seems willing to support. For those unaware, MARINA is the country's regulator of maritime industries. It's set of regulations are so antiquated that MARINA only registers local shipping lines as either engaged in domestic trade or international trade, never both.

Shipping lines registered for international trade must conform to Philippine cabotage laws. As such, they are prohibited from

VADM LAROYA's leadership as Commandant was tested from years of maritime service. In rising up the ranks, he has steered the Philippine Coast Guard with sound decisions as the Agency faced complex endeavors. In 2012, he led Manila's demilitarization at the Scarborough Shoal (Bajo de Masinloc) following the infamous stand-off between the Philippine Navy vessel BRP GREGORIO DEL PILAR and two (2) China Marine Surveillance (CMS) vessels. In 2013, he successfully administered the Coast Guard District Southwestern Mindanao to counter the attack of the Moro National Liberation Front (MNLF) rebels during the Zamboanga

siege.

Today, he has been the binding force of every Coast Guard Command, District, Stations, and Sub-Stations. By upholding courage and humility in service, VADM LAROYA weathers various battle fronts at sea and on land, with a more united and dedicated Coast Guard force.

Aside from being an officer and a gentleman, a leader, a manager, an environmentalist, a maritime rescuer, a maritime law enforcer, a maritime safety expert, a security and intelligence specialist, a mariner, an educator, a crisis manager, a strategist, and a visionary, VADM LAROYA is a family man – a loving husband and father, and a God-fearing individual. As the saying goes, "Behind a successful man is a supportive woman and vice versa," VADM LAROYA's success is fully supported by his lovely and caring wife, Mrs. Rowena Salomon Laroya.

They are blessed with one child, Lionel Zachary Laroya, a graduate of Bachelor of Science – major in Healthcare Administration and minor in Human Resource Management at the University of California in Long Beach, CA, and is currently employed at the benefits division of California State University-Long Beach (CSULB) while pursuing his Masters in Public Administration.

COMMANDANTS OF THE PHILIPPINE COAST GUARD

COMMANDANTS	DATE OF SERVICE
COMMO DIOSCORO E PAPA AFP	10 OCT 1967–30 NOV 1968
COMMO LEOVIGILDO GANTIOQUI AFP	30 NOV 1968–31 MAR 1970
CAPT GIL S FERNANDEZ PN	31 MAR 1970–14 JUL 1971
COMMO ERNESTO R OGBINAR AFP	14 JUL 1971–20 SEP 1972
COMMO SIMEON M ALEJANDRO AFP	20 SEP 1972–27 MAR 1976
COMMO BRILLANTE C OCHOCO AFP	27 MAR 1976–01 AUG 1980
COMMO BRILLANTE C OCHOCO AFP	01 AUG 1980–09 DEC 1985
COMMO LIBERTAD L LAZO AFP	09 DEC 1985–26 FEB 1986
COMMO CARLITO Y CUNANAN AFP	26 FEB 1986–29 MAR 1988
COMMO PIO H GARRIDO AFP	29 MAR 1988–10 APR 1990
CAPT RODOLFO J SIMON PN	10 APR 1990–17 APR 1990 (OIC)
COMMO CARLOS L AGUSTIN AFP	17 APR 1990–02 DEC 1993
COMMO DARIO T FAJARDO AFP	02 DEC 1993–17 OCT 1994
COMMO ARTURO Y CAPADA AFP	17 OCT 1994–08 SEP 1997
CAPT JULITO M CASILLAN II PN	08 SEP 1997–10 OCT 1997 (OIC)
RADM MANUEL I DE LEON AFP	10 OCT 1997–01 JUN 1998
VADM EUCEO E FAJARDO PCG	01 JUN 1998–09 FEB 2001
VADM REUBEN S LISTA PCG	09 FEB 2001–04 NOV 2003
VADM ARTHUR N GOSINGAN PCG	04 NOV 2003–09 NOV 2006
ADM DAMIAN L CARLOS PCG	09 NOV 2006–27 SEP 2007
ADM DANILO A ABINOJA PCG	27 SEP 2007–31 MAY 2008
ADM WILFREDO D TAMAYO PCG	31 MAY 2008–19 APR 2011
VADM RAMON C LIWAG PCG	19 APR 2011–24 JAN 2012
VADM EDMUND C TAN PCG	24 JAN 2012–14 DEC 2012
RADM LUIS M TUASON JR PCG	16 JUL 2012–14 DEC 2012 (OIC)
ADM RODOLFO D ISORENA PCG	14 DEC 2012–26 OCT 2015
RADM WILLIAM M MELAD PCG	18 JAN 2015–20 DEC 2016
COMMO JOEL S GARCIA PCG	21 DEC 2016–15 JAN 2018 (OIC)
ADM ELSON E HERMOGINO PCG	15 JAN 2018–23 OCT 2019
ADM JOEL S GARCIA PCG	24 OCT 2019–01 JUN 2020
ADM GEORGE V URSABIA JR PCG	01 JUN 2020–08 SEP 2021
VADM LEOPOLDO V LAROYA PCG	08 SEP 2021–PRESENT

COMMANDANT-PHILIPPINE COAST GUARD VADM LEOPOLDO V LAROYA

Born in Quezon City, Commandant Vice Admiral Leopoldo V. Laroya PCG began his military career in 1983 when he entered the Philippine Military Academy. Through hard work and discipline, he earned his degree in Bachelor of Science and graduated in the upper percentile of *"Maringal"* class (number 12 out of 135) in 1988.

His competencies enabled him to expand his educational background when he later pursued his post-graduate degree at World Maritime University (WMU) in Malmo, Sweden — one of the graduate schools of the International Maritime Organization (IMO), a United Nation's organization that specializes in Maritime Affairs. In 2000, he eventually earned his Master of Science Degree in Maritime Safety and Environmental Protection (MSc, MSEP).

Prior to his appointment as the Commandant of the Philippine Coast Guard on 08-September-2021, VADM LAROYA was entrusted with various major positions such as Commander, Maritime Safety Services Command; Commander, Coast Guard Education and Training Command; Commander, Maritime Security and Law Enforcement Command; Commander, Coast Guard District Western Visayas; Commander, Coast Guard District South Western Mindanao; Commander, Coast Guard District Northern Luzon; and Commander, Coast Guard District Bicol.

As a seasoned mariner with five years of sea experience, his sea duty tour includes junior billets served onboard the PCG ship "Barko ng Republika ng Pilipinas" (BRP) Badjao (AE-59), a lighthouse tender and RPS Catanduanes PG-62, a Motor Gun Boat. He did his Executive Officer tour on board BRP BESANG PASS (AU-100), a search and rescue (SAR) vessel. After such, He successfully earned the most coveted Command-at-Sea badge having commanded two flagships of coast guard search and rescue vessels, namely: BRP Batangas (SARV-004) and BRP Nueva Vizcaya (SARV-3502).

His dedication to service has been reflected through his remarkable achievements and numerous awards received throughout his career. Among the awards conferred to VADM LAROYA are the following: Coast Guard Legion of Honor, Bronze Cross medals, Outstanding Achievement medals, Superior Achievement medals, Coast Guard Search and Rescue medals, Military Merit medals and other numerous medals, ribbons and commendations.

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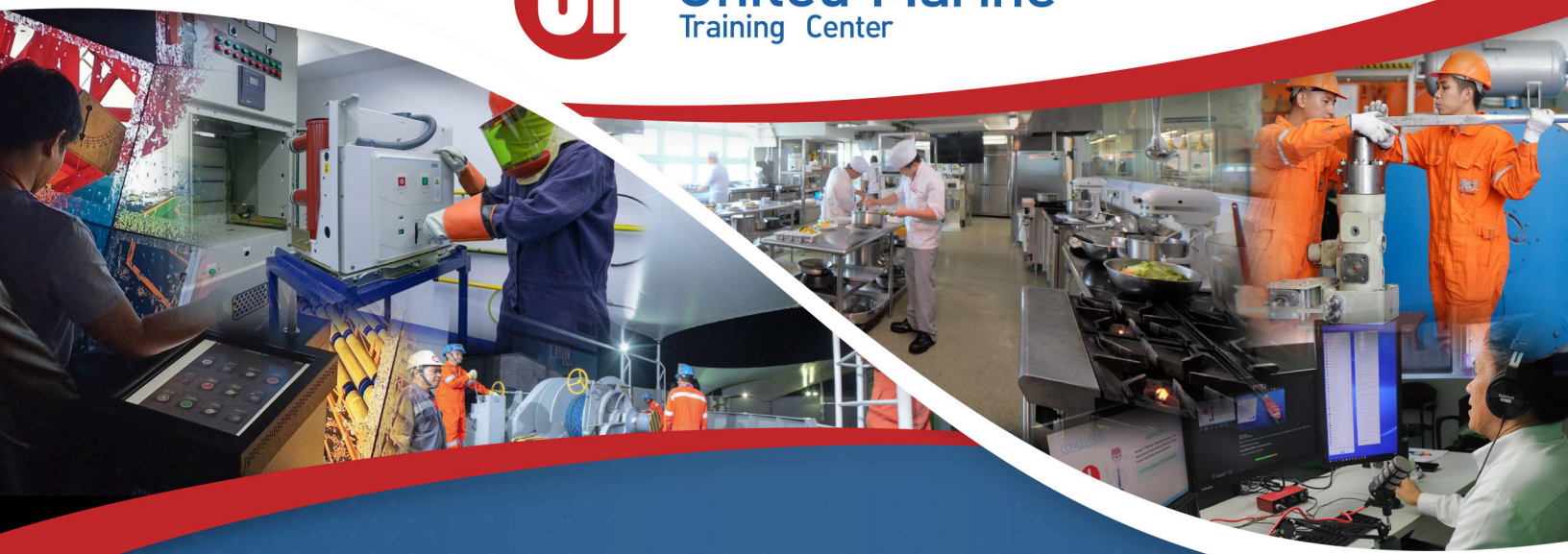

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NEW PIER, POB TO BOOST TRAFFIC, ADDRESS CONGESTION AT LUCENA PORT

by PPA

The Port Management Office of Marinduque/Quezon (PMO MarQuez) is anticipating bigger Ro-Ro traffic as the PMO unveils an additional pier and a POB facility at its Lucena port.

With high concentration of passengers and rolling cargoes bound for Marinduque and Romblon, the new pier facility will address the congestion at the port as it offers additional berthing space for vessels.

The new pier, along with the PMOs Port Operations Building (POB), are set to be inaugurated this Saturday, 25 September 2021 with Department of Transportation (DOTr) Secretary Art Tugade as Guest of Honor and Speaker.

Philippine Ports Authority (PPA) General Manager Jay Daniel R. Santiago said these twin developments will make the port and the PMO more capable of handling bigger vessel calls and larger rolling cargoes, as the country transitions to the new normal.

"Lucena port is very vital to the economies of Quezon, Marinduque and Romblon. However, it is bugged by some congestion not only during peak seasons but almost through the whole year thus, choking the growth of the three provinces. This, we wanted to address swiftly," PPA GM Santiago said.

"Now, with the new pier already in place, vessel congestion is expected to ease up and likewise ensure the faster commercial turnaround of vessels. Eventually, this will translate to more vessel frequencies which will result in higher volume of cargoes and passengers for the port, as well as provide opportunity for growth on areas where the port is interconnected," Santiago added.

The construction of the POB and the new pier were carried out under the Build-Build-Build program of the current administration by the PPA and the DOTr for Filipinos and the global traveling community primarily aimed at providing the much-needed buffer for the terminal in the next decade or so.

The annual passenger volume average for the terminal is pegged at around 925,000 or about half of the average consolidated passenger volume of the PMO which is at 1.815 million annually.

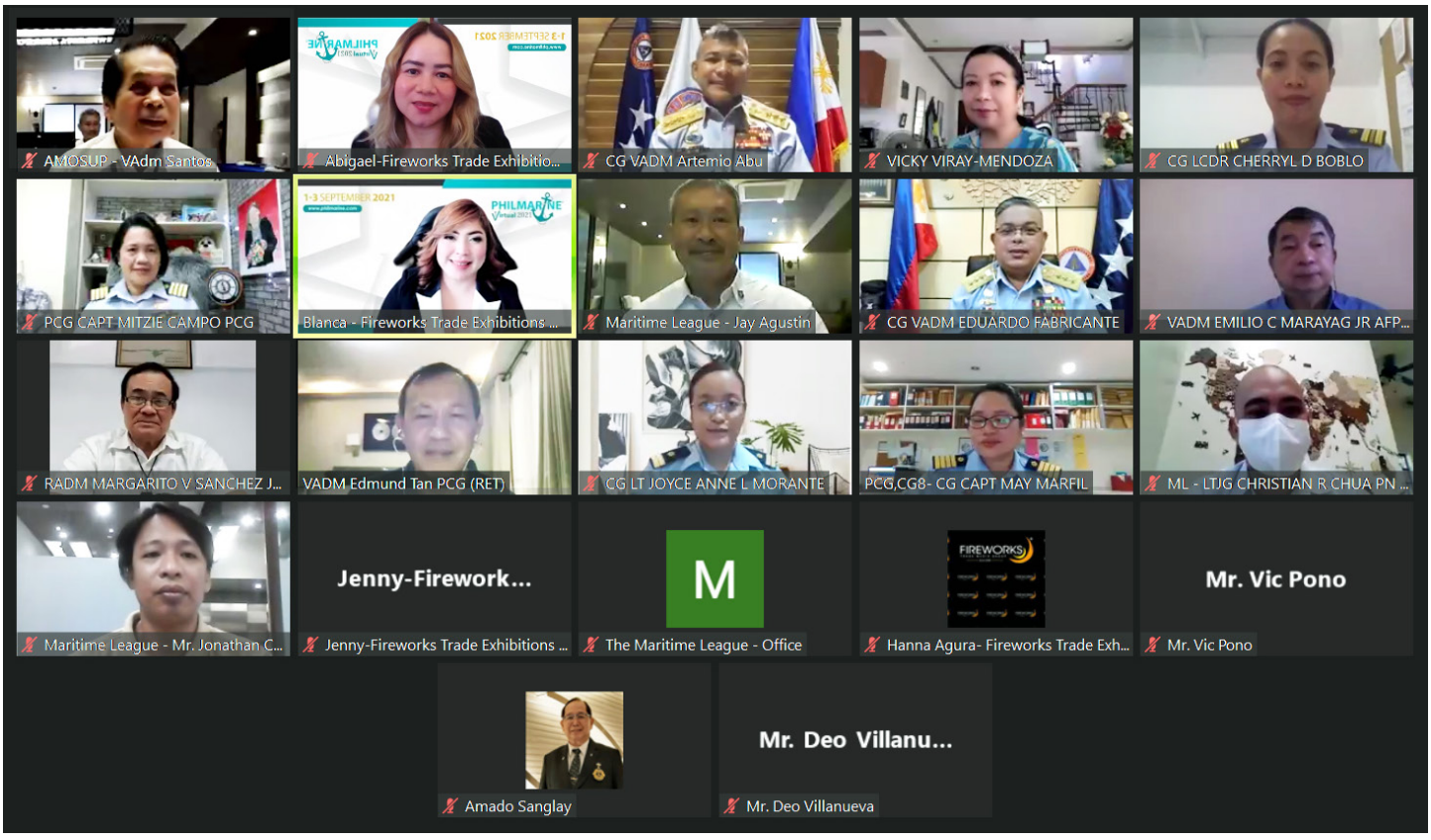
In terms of Ro-Ro traffic, the annual average is about 131,000 rolling cargoes representing 50% of the overall annual Ro-Ro traffic for the entire PMO.

Lucena also handles about 6,000 shipcalls annually or a little under 50% of the consolidated shipcalls handled by the PMO at 12,500 shipcalls.

"The projects which are being inaugurated one after the other are the culmination of our efforts to provide seamless connectivity and mobility since the Duterte administration came in July 2016. With the strong-willed leadership of Transportation Secretary Art Tugade, this administration provided the facelifts of these ports that were deprived of such for at least a decade," Santiago said.

Source: https://web.facebook.com/portsauthorityph

GAWAD PASASALAMAT AWARD to the MARTIME REVIEW by BFAR National Director Commo. Eduardo B. Gongona.



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NAVAL FORCES CENTRAL PHILIPPINE NAVY

PHILIPPINE NAVY CONDUCTS EXERCISE PAGSASAMA 2021

The Philippine Navy's Naval Forces Central (NAVFORCEN) and the Philippine Naval Reserve Centers of Eastern Visayas (NRCEV) as well as Western Visayas (NRCWV) conducted the unilateral exercise with reservists on August 16-20, 2021.

The activity is dubbed as E**xercise Pagsasama 2021,** carrying the theme "Strengthening Integration, Cooperation and Interoperability of the Philippine Navy Reserve Force to the Regular Force." The exercise is part of the command's thrust to strategically and operationally utilize the naval reservists and the Philippine Navy Affiliated Reserve Unit (PNARU) in maritime security and interagency operations. Its objective is to continuously evaluate and assess reservists and PNARU's readiness when the call of duty arises.

The scope includes organizational, operational and strategic concepts; rapid response planning process; shipboard evolution and naval maneuvering tactics; maritime security operations; search and rescue; conduct of amphibious raid and withdrawal; and civil military operations.

The preparation phase began on 12-April-2021. Prior to the exercise at sea, the command spearheaded 4-day lectures on maritime operations at the University of Cebu-Maritime Education and Training Center, with participants from Ormoc City Philippine National Police and the 802nd Infantry Division, Philippine Army, attending remotely via Zoom. Over 100 reservists participated in the week-long drill which was aimed at boosting interoperability and integration among regular and reserve forces. Capt. Raul Regis PN (GSC), Deputy Commander and Exercise Director, led the event.

In the early morning of August 17, the reservists boarded BRP Batak, BRP Abraham Campo, BRP Alfredo Peckson, BRP Enrique Jurado, BRP Filipino Flojo, and the 5th Patrol Boat Division. Ship maneuvers and shipboard drills were completed off the waters of Camotes Islands, Cebu Province. The Gun Exercise (GUNNEX) included testing and firing of naval surface assets, along with a sortie out, maritime surveillance, division tactics, and search and seizure. The simulation exercise of an amphibious raid held on Aug. 19 at the Ormoc City Park was among the highlights of the exercise.

The Armed Forces of the Philippines Reservist Act called the Republic Act 7077 states the need of the State to maintain a standing force or regular military force in times of peace in consonance with its adequate and actual needs, for the security of the State but which can be rapidly expanded by the well-disciplined Citizen Armed Force, in the event of war, invasion or rebellion. Reserve forces of the Army, Coast Guard, Police, and the Navy Reserve Component under the Naval Warfare branch, duly participated in the **Exercise Pagsasama 2021.**

Source: https://ph.news.yahoo.com/philippine-navy-conducts-exercise-panagsama-030200941.html

PHILIPPINES TO IGNORE NEW CHINA MARITIME LAW WITHIN WEST PHILIPPINE SEA

by Jairo Bolledo, RAPPLER

MANILA, PHILIPPINES. *The new Chinese law requires vessels passing through the South China Sea to provide information, including positions of their vessels, to Chinese authorities.*

Defense Secretary Delfin Lorenzana said the Philippines did not recognize the new Chinese maritime law, which mandated foreign vessels in the South China Sea to "report their detailed information" to China.

"Our stand on that is we do not honor those laws by the Chinese within the West Philippine Sea because we consider that we have the sovereign right within this waters. So we will not recognize this law of the Chinese," SND Lorenzana said during the 70th anniversary event of the Mutual Defense Treaty on Wednesday, September 8.

Effective September 1, the Chinese government had amended its 1983 Maritime Traffic Safety Law that now required vessels passing through the South China Sea to provide information, including positions of their vessels, to Chinese authorities, the Chinese-run Global Times reported on September 6.

There are at least five types of vessels that need to notify China. This includes submersibles, nuclear vessels, ships carrying radioactive materials, ships carrying bulk oil, chemicals, and harmful substances, and ships tagged by China as "harmful" to their maritime traffic.

However, the new law does not encompass the West Philippine Sea because the 2016 Hague ruling already invalidated the non-existent nine-dash claim of China in the region. The ruling upheld the 1982 United Nations Convention on the Law of the Sea principle, which states that all maritime features located within a country's exclusive economic zone, rightfully belong to that country.

Philippine Foreign Secretary Teodoro Locsin Jr. said on Tuesday, September 6, that the Philippines will not acknowledge China's efforts to impose reporting requirements.

"What reporting requirements? We've not heard of any requirements nor would we care if there are any; the West Philippine Sea comprising our EEZ (exclusive economic zone) is ours. Period!" DFA Sec. Locsin said.

The United States, one of the Philippines long-time allies, also said that the new Chinese law won't affect their operation in the Indo-Pacific. The US has also been proactive in dealing with Chinese intimidation in the past months under the administration of President Joe Biden.

The US says it military vessels passing through the South China Sea is part of its exercise to assert freedom of navigation in the contested waterway.

US Defense Secretary Lloyd Austin said during his visit in Singapore in July that China's claims have no basis in the international law: *"Beijing's claim to the vast majority of the South China Sea has no basis in international law...we remain committed to the treaty obligations that we have to Japan...and to the Philippines in the South China Sea."*

After his 7-day visit in Southeast Asia, **US Vice President Kamala Harris** also said that China continues to intimidate other countries to back its claims in the region. Harris' visit in the region is part of the US' continuous protest against China. – **with a report from Sofia Tomacruz/ Rappler.com**

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Source: https://www.rappler.com/nation/lorenzana-says-philippines-does-not-honor-new-china-maritime-law

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PH AND ROK HOLD FIRST JOINT FISHERIES COMMITTEE MEETING

by BFAR-4A

Photo Credit: Agriculture Attache Aleli Maghirang

The Philippines and the Republic of Korea conducted the first joint fisheries committee meeting online on 1-October-2021 to pursue an active partnership between the Philippines' Department of Agriculture (DA) and the Korea's Ministry of Oceans and Fisheries (MOF) in the field of fisheries and seafood trade.

Chaired and co-chaired by MOF-International Cooperation Bureau Director General Dong-sik Woo and DA Undersecretary for Agro-Industrialization and for Fisheries Cheryl Marie Natividad-Caballero, the committee discussed new official development assistance and technical cooperation projects that will strengthen the international cooperation of Filipino and Korean experts for the development of a platform and framework to engage in technical consultation and discussion.

The joint fisheries committee meeting is a result of the memorandum of understanding on fisheries cooperation signed by the two countries during the ASEAN-Republic of Korea Commemorative Summit in 2019.

Some of the cooperation projects tackled during the meeting include technology transfer and innovation, strengthening the development of capture fisheries and aquaculture, post-harvest, product value adding, trade and coastal and marine fishery management, and facilitation of exchanges of experiences, information, technologies and expertise between the two countries.

Personnel from the DA, Bureau of Fisheries and Aquatic Resources (BFAR), and National Fisheries Research and Development Institute will be trained and equipped with Korean technology and expertise through exchange visits, workshops and training, and collaborative research as part of the bilateral cooperation.

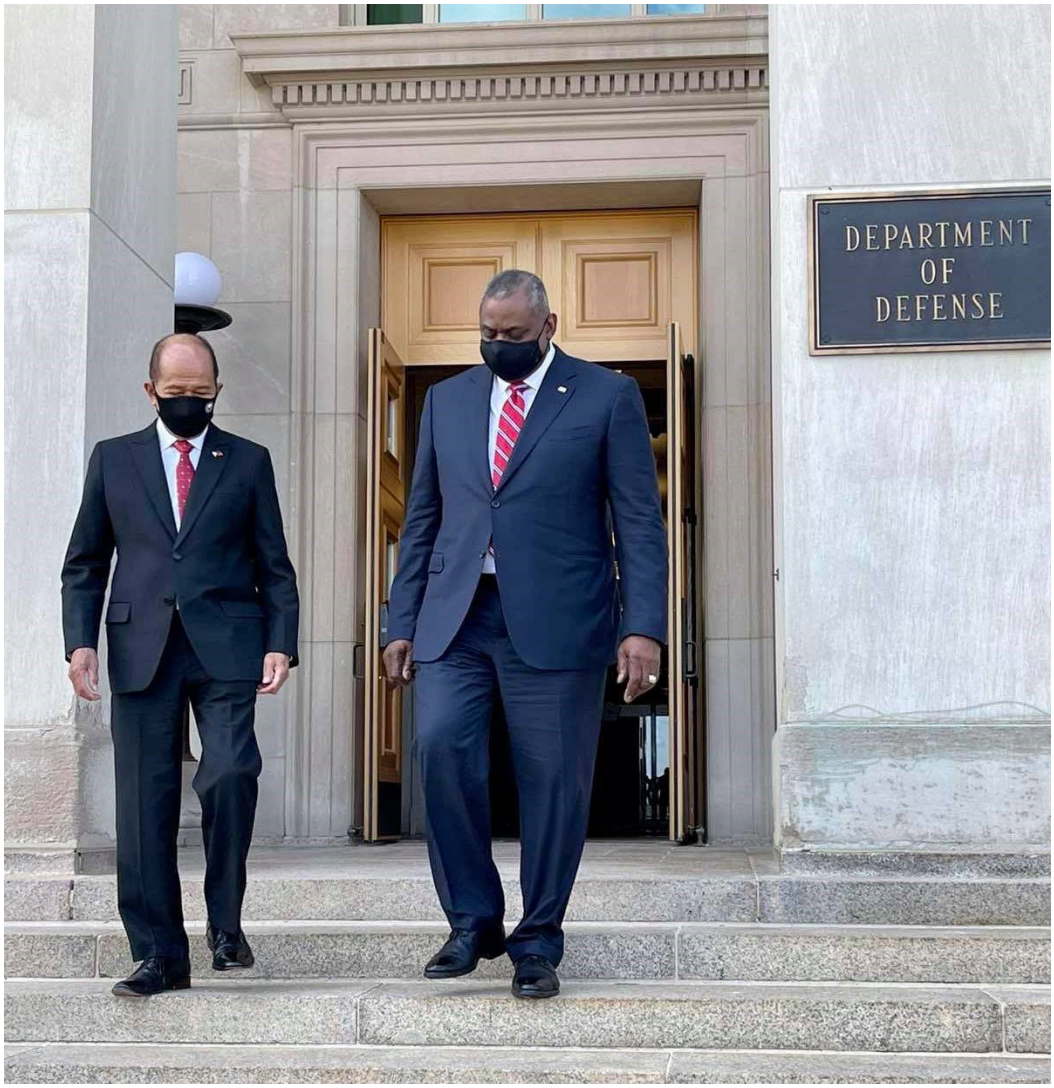
The two countries also discussed each country's best practices and fisheries and aquaculture policies. Korean delegates presented South Korea's 2nd Master Plan of Fisheries and Fishing Community Development for 2021-2025 while the Philippines' BFAR talked about new developments, policies, and challenges encountered by the country's fisheries sector.

To further strengthen the partnership for the promotion of fisheries trade and business investments, the two countries are looking forward to the next fisheries committee meeting with the Philippines expressing intent to host by mid-2022 in Manila.

Source: https://www.facebook.com/BFAR4A

BILATERAL MEETING BETWEEN SND AND US SECRETARY OF DEFENSE LLOYD J AUSTIN

by Dept. of National Defense



Philippine Secretary of Defense Delfin N. Lorenzana visited the United States of America to meet with US senior officials, in commemoration of the 70th anniversary of the Philippines-US Mutual Defense Treaty (MDT).

Following their bilateral meeting in Manila last 30-July-2021, Secretary Lorenzana met with his counterpart, US Secretary of Defense Lloyd J. Austin III on 10-September-2021 in Washington DC where both sides reaffirmed their commitment to further enhance the defense relations between the two countries.

Secretary Lorenzana mentioned that both sides now have a better appreciation of each countries' defense and security priorities, and have come to an understanding of shared goals for the alliance and the region. The two Secretaries also exchanged views on regional issues and concerns, and agreed on common positions and approaches.

Secretary Austin expressed his appreciation for the Philippine decision to restore the Agreement Regarding the Treatment of US Armed Forces Visiting the Philippines (VFA), which signals a commitment by both sides to strengthen the longstanding alliance.

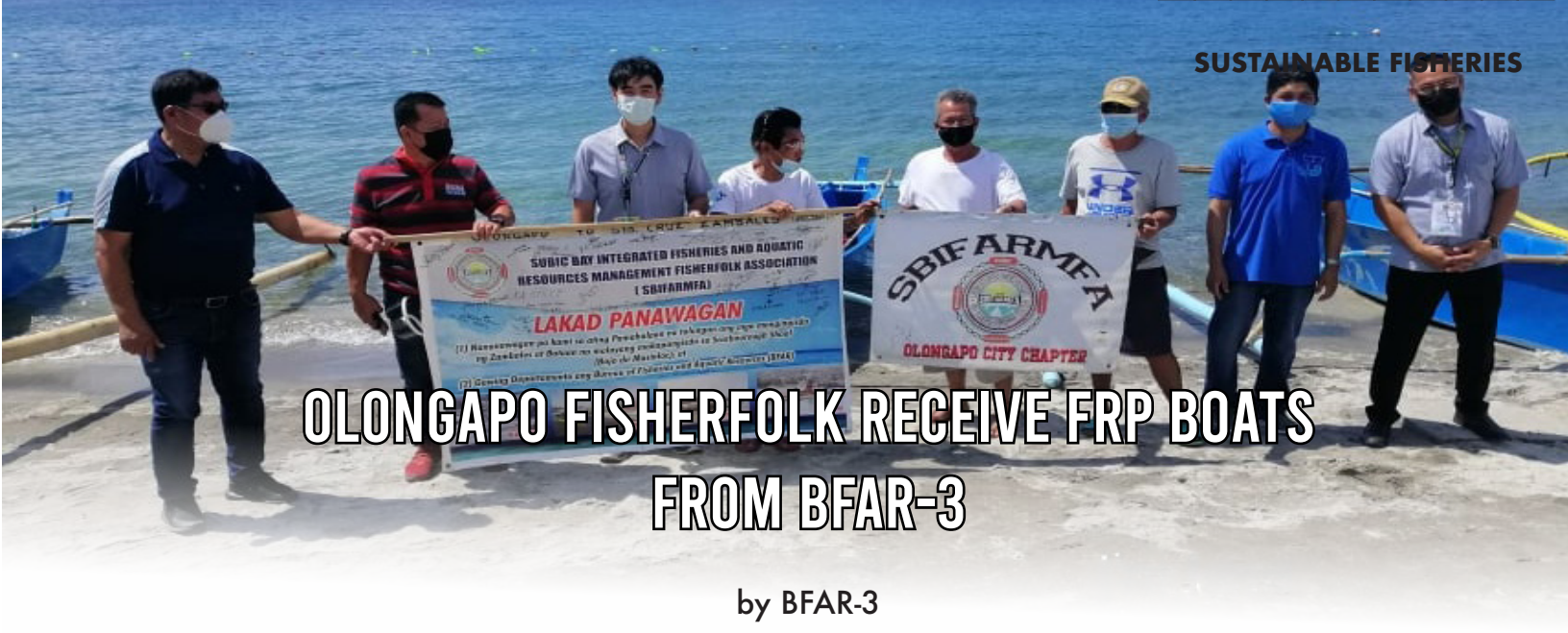
Aside from boosting security ties and defense cooperation between the two countries, the defense secretaries discussed developments in the South China Sea (SCS), with Secretary Austin reaffirming the US' commitments to the Philippines under the Mutual Defense Treaty.

The two Secretaries also agreed to convene the Bilateral Strategic Dialogue (BSD) to further discuss shared priorities for the alliance, and encouraged their respective armed forces to sustain cooperation under the Mutual Defense Board-Security Engagement Board (MDB-SEB).

Relatedly, both sides agreed to work on a bilateral maritime framework that advances cooperation in the maritime domain, and to resume projects in approved Enhanced Defense Cooperation Agreement (EDCA) locations in the Philippines.

The meeting ended with the two Secretaries reaffirming the friendship, partnership, and alliance between the Philippines and the US. Both sides reaffirmed that the engagement is not just a fulfillment of obligations under the MDT, but a willing commitment to keep the alliance ironclad.

Source: https://www.dnd.gov.ph/Postings/Post/Bilateral%20Meeting%20between%20SND%20and%20US%20Secretary%20of%20Defense%20Lloyd%20J%20Austin



OLONGAPO FISHERFOLK RECEIVE FRP BOATS FROM BFAR-3

by BFAR-3

BARRETTO, Olongapo City - Twenty fisherfolk families and one fisherfolk organization received their Fiberglass Reinforced Plastic (FRP) boats in an awarding program led by Regional Director Wilfredo Cruz on February 24, 2021.

The FRP boats, worth P45,000 each, came with a 10 HP diesel engine and a complete set of underwater fittings and accessories. RD Cruz in his speech said, "It is DA-BFAR's aim to improve the livelihood and increase the income of the beneficiaries by providing them with durable and hard-wearing boats as well as promoting sustainable and responsible fishing not just for the present but more so for the future generation."

The awarding was made possible through the support of Mayor Rolen Paulino, Councilor Rodel Cerezo, the City Fisheries Department, and PFO Neil Encinares.

(Story by RCC/ photos by PFO Zambales/details provided by Joseph Bitara).

BFAR-7 SUPPORTS TILAPIA BACKYARD FARMING, RESTORES FISH STOCKS IN INLAND WATERS

by BFAR-7

The Bureau of Fisheries and Aquatic Resources in Central Visayas (BFAR Region 7) distributed 33,500 tilapia fingerlings and 16,000 bangus fingerlings in Cebu province, particularly in Cebu City and the towns of Asturias and San Remegio. Several tilapia backyard farmers, fishpond and fish pen operators received fishery inputs from BFAR-7, through its Fisheries Production and Support Services Division (FPSSD) and its Cebu Provincial Fishery Office (PFO). Tilapia fingerlings were also released on inland waters, which are managed currently under the Balik Sigla sa Ilog at Lawa (BASIL) program, aiming to increase the fish stocks in these areas. BFAR- 7 has distributed fishery inputs to fish farmers and stocked fingerlings in some inland waters in Cebu province.

BFAR-7, through its Fisheries Production and Support Services Division (FPSSD) and its Cebu Provincial Fishery Office (PFO), dispersed 12,000 tilapia fingerlings to small-scale tilapia growers and released 18,000 tilapia fingerlings to inland waters in Cebu City and Asturias town on 15-September-2021.

At least five tilapia backyard farmers received fishery inputs: 1,000 each to two fish farmers from Barangay Malubog, Cebu City; 2,500 from Barangay Taptap, Cebu City; 5,000 from Barangay Bonbon, Cebu City; and 2,500 from Barangay Bago, Asturias town.

BFAR-7 also allotted tilapia fingerlings for the two inland waters in Cebu City and Asturias town that are up for restoration under the Balik Sigla sa Ilog at Lawa (BASIL) program, which aims to increase the fish stocks in these inland waters.

At least 8,000 tilapia fingerlings were released at the small water impounding project in Barangay Malubog, Cebu City while 10,000 fingerlings were provided for Buswang Lake in Barangay Bago, Asturias that is now under the care and management of the Buswang Lake United Farmers Association.

All the 30,000 tilapia fingerlings were sourced out from one of BFAR-7's facilities – the Lake Danao Freshwater Fish Farm in San Francisco, Cebu in Camotes Islands.

In another development, a separate team was deployed to an upland village in Asturias town on September 16, transporting the about 6,000 bangus fingerlings and 3,500 tilapia fingerlings to a small-scale fishpond operator from Barangay Calunasan.

The fingerlings were initially supplied from the BFAR 7 – Carmen Brackishwater Fish Farm (CBFF) in Carmen town and were later on acclimatized from brackish to freshwater at BFAR 7 – Multi-Species Hatchery in Medellin.

The next day, the team proceeded to San Remegio town in northern Cebu to facilitate the delivery of the 10,000 bangus fingerlings from CBFF-Carmen to a fish pen operator in Barangay Jagnaya.

The distribution of the fingerlings, which is closely coordinated with the local government unit's City and Municipal Agriculture Office, is part of the weeklong activities lined up for the 58th Fish Conservation Week observance.

Details & Photos | BFAR 7 – FPSSD: Joel Clapano; Cirila Libay; Mark Joseph Piloton; Marljun Evangelista
BFAR 7 – Cebu PFO: Joseph Eric Aparici
BFAR 7 – CBFF: Raymund Francis Nicanor
Source: https://www.facebook.com/BFARCentralVisayas/posts/3064484073832783

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The Associated Marine Officers' and Seamen's Union of the Philippines (AMOSUP) founded by the late Capt. Gregorio S Oca, capitalized and developed the Academy. The new AMOSUP President,Dr. Conrado F. Oca, heads the Academy's board of governors. The board is comprised of representatives from the private sector, the International Transport Workers Federation, the Filipino Association of Maritime Employers, the International Transport Workers Federation, the All Japan Seamen's Union, the International Mariners Management Association of Japan, the Norwegian Seafarers' Union, the International Maritime Employers' Committee, the Danish Shipowners' Association, the Norweigan Shipowners' Association, and the Japanese Shipowners' Association.

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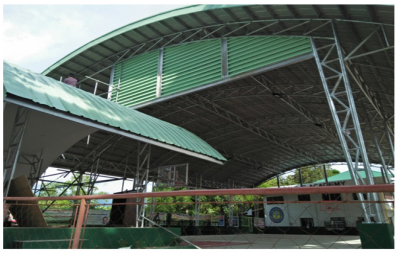
The Academy offers three main programs: the Bachelor of Science in Marine Transportation (BSMT), Bachelor of Science in Marine Engineering (BSMarE) and the Bachelor of Science in Marine Transportation and Engineering (BSMTE). The curricula for the three courses were designed with the help of the United States Merchant Marine Academy at Kings Point, New York. Courses are four-year courses with sea phases scheduled in the third year. The BSMT curriculum requires a total of 192 units: 152 at MAAP, 40 practicum/shipboard units on board T/S Kapitan Felix Oca and/or a shipping company sponsorship. The BSMarE curriculum requires a total of 193 units: 153 at MAAP, 40 practicum/shipboard units on board T/S Kapitan Felix Oca and/or a shipping company sponsorship.







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