



MARITIME REVIEW

A PUBLICATION OF THE MARITIME LEAGUE

Issue No. 18-3

May-June 2018

EXPANDED ROLES OF MARITIME FORCES

- ▶ **Trashing Paradise**
- ▶ **FVR: The Best is Yet to Come**
- ▶ **Enhanced Role of
Philippine Naval Aviation**
- ▶ **Ocean Dragon 1 Maiden Voyage**



**120th PN Anniversary
Special Edition**



Maritime Academy of Asia and the Pacific - Kamaya Point

Associated Marine Officers' and Seamen's Union of the Philippines-PTGWO-ITF

Kamaya Point, Brgy. Alas-asin, Mariveles, Bataan, Philippines

Tel. No. (02) 784-9100 Fax No.: (02) 741-1006

Mobile No.: (0917) 533-8253

URL: www.maap.edu.ph E-mail: info@maap.edu.ph

AMOSUP - PTGWO - ITF



Welcome Aboard!



Courses Offered:

- BSMT - Bachelor of Science in Marine Transportation
- BSMarE - Bachelor of Science in Marine Engineering
- BSMTE - Bachelor of Science in Marine Transportation and Engineering

Courses Offered:
Master of Science in Marine Transportation
(Marine Superintendent)

Master of Science in Marine Engineering
(Technical Superintendent)

MAAP Profile

Geographic destiny has given the Filipino the innate talent to be an excellent seafarer. To enhance this natural skill, the Maritime Academy of Asia and the Pacific (MAAP) was established on January 14, 1998. The Academy stands on a 103-hectare property in Kamaya Point, Mariveles, Bataan.

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 Norwegian Shipowners' Association, and the Japanese Shipowners' Association.

MAAP conducts shipboard training aboard T/S Kapitán Felix Oca, a 5020 DWT dedicated training ship capable of accommodating 180 midshipmen and 9 instructors in 30 air-conditioned cabins and six berths.

MAAP students are all scholars who are entitled to free tuition, board and lodging. They receive a comprehensive, up-to-date and well-rounded education that fully complies with the requirements of STCW 95 and the Commission on Higher Education (CHED). To ensure the highest standards of quality, MAAP adheres to a Quality Standards System that has been certified to comply with ISO 9001 version 2008, the Det Norske Veritas (DNV) Rules for Maritime Academies, and the Productivity and Standard Board (PSB) of Singapore.

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 Kapitán 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 Kapitán Felix Oca and/or a shipping company sponsorship.



AMOSUP Seamen's Training Center



Full Mission Bridge Simulator



Full Mission Engine Simulator



Full Mission Bridge Simulator on Motion Platform



Japanese Compact Ship Handling Simulator

Our Curricula



THE MARITIME LEAGUE

CHAIRMAN EMERITUS
Hon. Fidel V Ramos

HONORARY CHAIRMAN
Hon. Arthur P Tugade

TRUSTEE AND PRESIDENT
Commo Carlos L Agustin AFP (Ret)

TRUSTEE AND VICE PRESIDENT
VAdm Eduardo Ma R Santos (Ret)

TRUSTEE AND TREASURER
RAdm Margarito V Sanchez Jr AFP (Ret)

TRUSTEE AND AUDITOR
Commo Gilbert R Rueras PCG (Ret)

TRUSTEES
Edgar S Go

Delfin J Wenceslao Jr
Herminio S Esguerra
Alberto H Suansing

VAdm. Emilio C Marayag (Ret)
Engr. Sammuell T Lim
Philip L Ong

Capt Oscar D Orbeta (Ret)
Adm Wilfredo D Tamayo (Ret)
VAdm Edmund C Tan (Ret)

TRUSTEE AND BOARD SECRETARY
Commo Mariano S Sontillanos AFP (Ret)

ASSISTANT BOARD SECRETARY
John Paul D Agustin

HEAD, SECRETARIAT
Rosalie F Ricafort

MARITIME REVIEW

EDITORIAL BOARD

Managing Director
RAdm Quiricio V Evangelista AFP (Ret)

Chairman
VAdm Emilio C Marayag Jr AFP (Ret)

Members
Commo Mariano S Sontillanos AFP (Ret)
Capt. Tomas D Bains PN (Ret)
John Paul D Agustin

Executive Editor
Vicky Viray-Mendoza

The Maritime Review is published bimonthly on behalf of the Maritime League and is supplied to members as a part of their annual membership package. The opinions expressed by the writers do not necessarily reflect those of the Maritime League

PNSLAI Compound
Bonifacio Naval Station (BNS)
Fort Bonifacio, Taguig City

www.maritimeleague.com

marrev@maritimeleague.com

+63 (2) 844-6918

Contents

	Maritime Calendar	4
	Feature Story Expanded Roles of Maritime Forces	5
	Chairman's Page Trashing Paradise	6
	Words from FVR More on "The best is yet to come."	8
	Maritime Education Training and Growing Together	11
	Maritime Law Putting Things in Perspective	12
	Considerations on the Legal Approach to Dispute Settlement: The Philippine Experience with the South China Sea Arbitration	14
	Seafarer Shore Leave Gets Extra Protection	16
	Philippine Officials Trained in Forming Maritime Transport Policy	17
	Maritime Security "Great Powers, Grand Strategies: The New Game in the South China Sea" -- A Book Review	18
	Enhanced Role of Philippine Naval Aviation	22
	Haul Down the Pennant!	25
	Marine Technology Transas acquired by Wärtsilä to Accelerate its Smart Marine Ecosystem Vision	26
	Confined Space Inspections: The Revolution Has Begun... ..	27
	Ship Design & Shipbuilding DAMEN Shipyards Cape Town (DSCT) Receives Project Biro Order from ARMSCOR	28
	Construction of World's Largest Diamond Mining Vessel Underway	29
	Maiden Voyage of Ocean Dragon 1	30
	Ports & Harbors Reducing Emissions in Ports	31
	Marine Environment The Giant Clams in the Philippines	32
	Protection of Marine Wildlife	36
	Maritime Events SONAME & PRS Holds 2 nd Joint Golf Tourney	37



5



6



8



11



14



22



30



36

About the Cover:
Naval aviators pose with the newly-acquired helicopters for enhanced maritime roles.



Maritime Events Calendar

MAY '18

- 1-3 AUVSI Xponential 2018 (COLORADO CONVENTION CENTER, DENVER, CO, USA)
- 2-3 OPENING OCEANS (LOKOMOTIVVÆRKSTEDET, COPENHAGEN, DK)
- 7-10 MARITIME WEEK AMERICAS (HILTON PANAMA, AV BALBOA, PANAMA, PA)
- 14-16 CANADA GAS & LNG , EXHIBITION & CONFERENCE 2018 (VANCOUVER CONVENTION CENTER EAST, VANCOUVER, CA)
- 15-17 EUROPORT ROMANIA 2018 (IDU HALL, COSTANTA, RO)
- 16-17 NAVIGATE 2018 (TURKU FAIR CENTER, TURKU, FI)
- 16-17 UNMANNED MARITIME SYSTEMS (HILTON LONDON OLYMPIA, LONDON, UK)

18 **MARITIME BREAKFAST FORUM #133 (PHILIPPINE NAVY (PN), HEADQUARTERS, PHILIPPINE NAVY, ROXAS BLVD, MANILA)**

- 21-23 7TH BLACK SEA POSRTS AND SHIPPNG 2018 (INTERNATIONAL HOTEL CASINO & TOWER SUITES, VARNA, BG)
- 22-24 7TH EDITION OF NAVALIA, INTERNATIONAL SHIPBUILDING EXHIBITION 2018 (PONTEVEDRA, ES)

JUNE '18

- 4-8 POSIDONIA 2018 (METROPOLITAN EXPO, ATHENS, GR)
- 12 RECAAP ISC PIRACY AND SEA ROBBERY CONFERENCE 2018 (RENAISSANCE HONG KONG HARBOUR VIEW HOTREL, HK)
- 19-20 GLOBAL OFFSHORE WIND (MANCHESTER CENTRAL, MANCHESTER, UK)
- 20-22 INTERTANKO 2018 (HOTEL PARCO DEI PRINCIPI, ROME, IT)

29 **MARITIME BREAKFAST FORUM #134 (NATIONAL DEFENSE COLLEGE OF THE PHILIPPINES(NDCP, SMX CONVENTION CENTER, SM MALL OF ASIA COMPLEX, PASAY CITY)**

- 25 27TH WORLD GAS CONFERENCE, (WALTER E WASHINGTON CENTRE, WASHINGTON DC, USA)
- 25-29 TUG, SALVAGE & OSV CONVENTION AND EXHIBITION 2018 (PARC CHANOT CONVENTION CENTRE, MARSEILLE, FR)
- 27-29 PHILMARINE 2018 (SMX CONVENTION CENTER MANILA, MALL OF ASIA COMPLEX, PASAY CITY)

JULY '18

- 3-5 16TH ASEAN PORTS AND SHIPPING (RENAISSANCE JOHOR BAHRU HOTEL, JOHOR, MY)
- 3-5 SEAWORK 2018 (MAYFLOWER PARK, SOUTHAMPTON, UK)

20 **MARITIME BREAKFAST FORUM #135 (NATIONAL COAST WATCH COUNCIL (NCWC))**

- 25 INAMARINE 2018 (JIEXPO KEMAYORAN JAKARTA, JAKARTA, ID)

AUGUST '18

- 14-16 MARINETEC SOUTH AMERICA (SULAMERICA CONVENTION CENTER, RIO DE JANEIRO, BR)
- 22** **MARITIME BREAKFAST FORUM #136 (PHILIPPINE PORTS AUTHORITY (PPA), PORT AREA, MANILA)**

SEPTEMBER '18

- 4-7 SMM 2018 (HAMBURG MESSE, HAMBURG, DE)
- 17-20 GASTECH EXHIBITION & CONFERENCE 2018 (FIRA GRAN VIA, BARCELONA, ES)
- 25-27 2ND BALTIC PORTS AND SHIPPING 2018 EXHIBITION & CONFERENCE (RADISSON BLU HOTEL LATVIA, RIGA, LV)

21 **MARITIME BREAKFAST FORUM #137 (PHILIPPINE COAST GUARD (PCG))**

OCTOBER '18

- 2 SINGAPORE INTERNATIONAL BUNKERING CONFERENCE AND EXHIBITION (RESORTS WORLD SENTOSA, SG)
- 6-10 INTERFERRY 2018 (JW MARIOTT RESORT, CANCUN, MX)
- 9-11 TRANSTECH 2018 (LENEXPO EXHIBITION COMPLEX, ST PETERSBURGH, RU)
- 12-14 RESCUE 2018 (HARPA CONCERT BUILDING, REYKJAVIK, IS)
- 19** **MARITIME BREAKFAST FORUM #138 (DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (DENR))**
- 23-25 15TH TRANS MIDDLE EAST 2018 EXHIBITION & CONFERENCE (INTERCONTINENTAL AQABA RESORT, AQABA, JO)
- 29-31 SEATRADE MARITIME MIDDLE EAST (DUBAI WORLD TRADE CENTER, DUBAI, AE)

NOVEMBER '18

- 5-8 IRANIMEX 2018 (KISH INTERNATIONAL EXHIBITION CENTER, HORMOZGAN, KISH, IR)
- 23** **MARITIME BREAKFAST FORUM #139 (DEPARTMENT OF TRANSPORTATION (DOTR))**
- 27-29 20TH INTERMODAL AFRICA 2018 (MÖVENPICK AMBASSADOR HOTEL ACCRA, GH)
- 28-30 INTERNATIONAL WORKBOAT SHOW (MORIAL CONVENTION CENTER, NEW ORLEANS, LA, USA)

DECEMBER '18

- 5-7 INMEX CHINA 2018 (POLY WORLD TRADE CENTER, HAIZHU DISTRICT, GUANGZHOU, CN)

Expanded Roles of Maritime Forces

by VAdm Emilio C Marayag Jr AFP (Ret)

The principal role of maritime forces is war fighting. This includes searching for, surveillance of, and combat engagement with the adversary's battle fleet. The aim is to control the sea lines of communications including the chokepoints or deny their use by the enemy in order to achieve the enduring national interests: territorial integrity and political independence. Maritime forces initiate naval battles only when all conceivable conflict avoidance options fail, or when defending the integrity of their units is necessary. These battles though short in duration are intense and destructive, and could lead to full-scale conflict.

An isolated armed skirmish leads to a long period of lull that allows preparation for the next hostility: training, upkeep and updating. However, due to their inherent attributes and the existence of several threats, maritime forces, when directed by command authorities, can assume other roles: constabulary (law enforcement) and benign support (to national development, emergency medical support, search and rescue, etc.).

The escalation of global terrorism, coupled with increased migration and frequent natural disasters, redefined these "other roles" as Maritime Security and Defense Engagement. **Maritime Security** covers counter-terrorism, humanitarian assistance and disaster relief, hydrographic and oceanographic survey, law-enforcement like CIQ and transnational crimes, counter-piracy, counter-illegal drugs, counter-human trafficking, non-combatant evacuation, and other operations to preserve freedom of navigation. **Defense Engagement** refers to the use of defense resources and activities short of naval combat operations to prevent conflict, build-up confidence with partners, and influence the prevailing and anticipated situation in the maritime domain. This role entails enabling partners to participate in joint exercises, attend training opportunities, avail medical support, engage in maritime patrols and reconnaissance, and enhance interoperability and collaboration. Defense diplomacy –employing Defense Attachés, liaison and exchange officers, and visiting staff officers– is part of the defense engagement role.

For sometime now, the Philippine Navy adopted the capability-based planning approach to beef up its war fighting potential in compliance with the Armed Forces of the Philippines Modernization Law of 1995, as amended. This presupposes that naval forces should be able to fight and prevail over an unspecified threat utilizing existing manpower and modern equipment procured under the modernization program. Acquiring new capabilities, like submarine and anti-submarine, and upgrading existing ones to address unspecified threats is very expensive and requires a wide array of technical personnel and service support facilities; as well as a highly efficient sustainment system.

The acquisition of submarine capability needs further examination because of its complexity. Of the 41 countries with submarines, 9 could operate in South China Sea. Thailand does not possess any

submarines, after decommissioning its last submarine in 1951. When it reached the industrialized country status in 2012 Thailand eventually decided to buy 2 Chinese submarines in the future. None of the other 14 countries that removed submarines from their inventory reported any plan to reacquire such capability. Additionally, Malaysia's submarine purchase payments contributed to its military budget increase by over a third to an average of 2.1% of GDP from 2002 to 2009, compared with 1.5% of GDP after the acquisition. It presently encounters maintenance challenges.



Interestingly, the developing global and regional security landscape convinced some strategic planners to return to threat-based planning method that is somewhat less expensive in that it is highly focused and may not require significant changes in existing capabilities. At external front while the conversion of some features in the Spratlys into military bases continues to irritate the claimant countries, the freedom of navigation principle will encourage more multinational efforts to keep maritime traffic moving in that waterway. There could be a disruption of maritime activities there but it would be temporary. The Philippine Rise poses another challenge. Relatedly on global terrorism, some Israeli analysts observed the downward trend of terroristic activities in the past few years but could not say if there would be a recurrence. A very alarming observation is the threat and use of weapons of mass destruction, particularly chemicals, by the terrorists and even governments. Their recommendations: continuous monitoring of threat groups using intelligence, strengthening border protection, and enhancing cooperation with counterparts in foreign governments and their agencies.

Maritime forces may consider the threat-based planning scheme to address the internal threats. Necessarily, their capability priority list must change and so would their role as well. Maritime security will be at the center stage. The recent counter-terrorism operations in an urban setting in Marawi and in some rural areas, the continuing nationwide counter-drug campaign, and the ongoing marine environment preservation actions in Boracay Island and other coastal areas showcase the different security threats confronting maritime forces. In the Marawi operations, several Philippine Navy aviators flying newly-acquired armed helicopters had qualified as combat pilots for their exceptional feat. Naval and Coast Guard elements achieved absolute control of the waterways in and around Lanao Lake, thereby, containing the hostilities on land by the Army and Marine units.

Are the country's maritime forces –Navy, Coast Guard, select units of the Army and Air Force, and Maritime Police– "manned and ready" to assume an expanded role to protect our territory and sovereignty?

A snappy salute and Godspeed to the nation's premier maritime force, **Hukbong Dagat ng Pilipinas**, on its 120th founding anniversary! 🇵🇭



Trashing Paradise

by Commo Carlos L Agustin AFP (Ret)

In my column in the MR 18-1 (Jan-Feb 2018) issue of this magazine, I wrote about the need to look at coastal towns with tourism potential and figure out how to turn around development deficiencies (e.g., correcting zoning, construction and, environmental violations). I wrote in particular about **Coron** for four reasons: (1) I've been familiar with most coastal communities, including Northern Palawan, that have now evolved as tourist destinations; (2) Waterfront development and coastal tourism has been one of my passions the past 25 years and indeed included as one of the major interests of the Maritime Forum; (3) I revisited the **Coron-Busuanga** area after 5 years with my family during the Christmas holidays, and (4) Coron is one of the fastest growing tourist destinations in the country today.

The title of this column this issue is in quotes because I borrowed it from the title of the excellent forum on **Philippine Coastal Tourism, Marine Pollution and the Law** conducted by the **UP Institute for Maritime Affairs and Law of the Sea (IMLOS)** headed by its Director, Maritime Law expert Prof Jay L Batongbacal PhD at the Bocobo Hall, UP Law Center, Diliman, Quezon City that I was privileged to attend on 10-April-2018.

The forum was centered on the extremely controversial government *drift* towards a 6-month closure of the world-famous island destination, **Boracay**. I say "drift" because while it seems that while closure is certain, the final stamp of approval for that tragic event had not been made as yet. However, there is one indication that it would happen. After I listened to a news flash on 11-April-2018 that Sen. **Antonio Trillanes IV** is calling for a Senate investigation on the claim that **Boracay** is being closed in order to expedite the construction

of a giant casino, an immediate newsflash was incidentally made a minute later in the same channel that President **Rodrigo Duterte** had cancelled the casino's **Boracay** project. In the course of the Forum, that question was actually asked by one participant, and was answered clearly by DENR Undersecretary **Maria Paz Luna**: "while the **PAGCOR** has given its nod for the casino's establishment, the authority for its actual construction would be the **DENR**, and that would be unlikely."

After all is said and done on its closure, if that happens, I can point out my own thinking that a win-win solution would be to put the casino nearby on the Panay mainland, where Ayala Land, SMDC, San Miguel Properties, Robinsons Land and other developers are trying to outdo each other, thereby increasing property values to the delight of the Malay LGU. I just hope they don't screw up the master plans of these developers as they did in **Boracay**, as I stated during the **UP IMLOS Forum**, "The private sector does master planning and implementation much better than the government (particularly LGUs)."

USEC **Luna** was not the only excellent speaker. Prof **Batongbacal's** able assistant, Atty **Jackie Espenilla** had picked three other prominent experts for the topics in the forum. Aside from USEC Luna (a legal environmental law expert) who talked on "Understanding R.A. 9275 (the Clean Water Act)," the others were:

- ♦ Renown marine environmental expert Dr **Miguel D Fortes**, retired Professor at the **UP Marine Science Institute** and currently UNESCO Consultant (and a visiting NDCP Professor during my watch from 2001-2010), who spoke on "Philippine Coastal Tourism: Cutting the Hands that Feed."

- ♦ Engineer **Eligio Ildefonso**, Executive Director, **National Solid Waste Management Commission (NSWMC)**, who discussed "Tourism and Trash: R.A. 9003 (the Ecological Solid Waste Management Act of 2009) in Context;" and
- ♦ Attorney **Gloria Ramos**, Vice President of **Oceana Philippines**, who discussed "The Plastic Peril on our Oceans". Atty Ramos actually briefed the Maritime Forum last 23-March-2018 at the **Maritime Academy of Asia and the Pacific (MAAP)** on its activities with particular interest on the Philippine EEZ, including the WPS and the **Benham Rise**.

Dr **Fortes** gave a very good overview of environmental issues and our inability to cope with the demand for a good regulatory framework. His long experience in the academe and as practitioner looking in as a UNECO Consultant had given him deep appreciation of the situation on the ground and a keen knowledge of what ails the regulatory framework.

Engr **Ildefonso** showed deep knowledge and insight on solid waste management. He is an expert in the law, and knows the appropriate processes regarding solid waste management. He is right in the middle of it all as Executive Director of the National Solid Waste Management Commission that approves and oversees solid waste management systems and LGU performance related to the task. Unfortunately the overall impression with respect to this function is that no LGU unit can be regarded as compliant with the law, which we agree with.

Atty **Ramos** outlined the causes and effects of using plastic, which eventually end up in garbage and subsequently disposed off in the oceans. She showed locations of plastic floating in various areas in the world's oceans.

I mentioned an incident in 2013 when I was with a group visiting **Lubang Island** to discuss an alternative power project being developed locally. We used a **PPA** patrol boat that encountered a "garbage island" consisting mainly of plastic bags that fouled up our boat's waterjet engine. That slowed us down until the boat was stopped and the engine serviced by my son, who operates a boatyard in Bacoor, Cavite to remove all the debris. These plastic bags all came from **Manila Bay**, coming out from the **Cavite** coastal towns full of squatters that find the bay a convenient way to dispose of trash. I likewise mentioned this during the 127th Maritime Forum held at the Environmental Management Bureau at the **DENR** Compound on 27-Oct-2017.

During that time, I showed a very alarming clip on the "plastic menace" (See this and other videos: (<https://www.youtube.com/watch?v=kZq6vA5tQms&index=49&list=PLG8lrydigQfdN71-08mBcdLrHdpSEuubx&t=0s>))

Atty **Luna** showed her wide knowledge of the issue of water resources and how we score regarding implementing RA 9275, not only in **Boracay**, that actually has a better sewage system than Manila, which used to be the envy in East Asia at the turn of the 20th Century, when we were ahead of all other countries in development, with the exception of Japan. Since independence in 1946, we have not gotten our democratic act together. Does this show we are beyond independent governance?

I sensed a consensus among the speakers and the audience concerning **Boracay**, and that it is a gem of a tourist destination. This consensus does not seem to coincide with an announcement made by President **Rodrigo Duterte** that it should be declared for land reform, a reality that he personally reaffirmed in an arrival statement on 13-April-2018 after his China trip. This contradicts the **DOT** and **LGU Tourism Master Plans** and will set us back many years. I hope that we can somehow find a way to have this decision changed.

I particularly like Atty **Ramos's** parting reminder on our environmental predicament as well as many issue that she correctly attributes to "the root of the root of the evils in Philippine governance:

- ♦ Knowledge without character
- ♦ Science without humanity
- ♦ Worship without sacrifice
- ♦ Commerce without morality
- ♦ Wealth without work
- ♦ Pleasure without conscience
- ♦ Politics without principles

And "the root of the root of the root" – the seven deadly sins: Pride, Greed, Lust, Wrath, Gluttony, Envy, and Sloth. That, in essence is actually why we seem to be seen, as a nation, as among the top in impunity!

I also mentioned that, having seen a **Tokyo Bay reclamation** in 1994 that was primarily an island landfill, I requested the Japanese Embassy to invite a lecturer from Japan to make a presentation on that "garbage island" when we organized a Maritime Forum, "Waterfront Development 2000" at the Philippine International Convention Center in June, 2000. I mentioned that a Canadian colleague who is involved in developing projects for planting trees here in association with a friend in the Bamboo Coalition told me when he visited last year that he now lives on that "garbage island" and finds it "a great place to be at." The Japanese made a good presentation, which apparently did not get across to many, except our group.

Asked what he thinks of the idea, Engr **Ildefonso** stated that he is aware of it, and that many proposals have been advanced here but said in no uncertain terms: "*it will never pass me.*"

I added that perhaps such is the final solution to our predicament in **Metro Manila**, using many garbage barges from coastal towns and along the **Pasig River** to deliver them to a processing area that will have to be initially reclaimed and developed, then filled up in the landfills to be prepared and established, duly enclosed within retaining walls and lined with plastic in accordance with landfill procedures. **Ildefonso** replied that the Filipino reacts differently in comparison with the Japanese. His mind was closed.

Getting no support from any of the speakers, and lacking time, I left it at that. I cannot imagine why they compare the idea to that of simple dumping trash into the sea, which is actually what is happening now. As a former CPCG and PPA General Manager for a total of 9 years at the South Harbor, I agonized over the hundreds of tons of garbage carried by the southwest monsoon from the **Cavite** coast to the **South Inner Harbor** during the typhoon season that was the source of great embarrassment for us, and likewise the trash that blocks **Roxas Boulevard** during such heavy weather. Should these continue?

Perhaps it is worth mentioning that the idea is REALLY valid and maybe we can prove that the Filipino can do it. The Singaporeans did.

I conclude with this quote from a London article from CNN.COM, "The Island Paradise Built on a garbage dump:"

"Great effort went into making sure that the impact of the landfill on Pulau Semakau's biodiversity was minimized. In fact, biodiversity remains high and we have not lost a single species because of the landfill," says Wang Luan Keng, an education and research officer at the **Raffles Museum of Biodiversity Research (RMBR)** in Singapore. <http://edition.cnn.com/2007/TECH/07/26/ji.semakaulandfill/>

In fact many small areas in **New York** since the 1800s were reclaimed using partly trash, including **Ellis Island** and the parks of **Staten Island**: <https://gizmodo.com/5-parts-of-nyc-built-on-garbage-and-waste-1682267605>

As our venerable Chairman Emeritus former President **FIDEL V RAMOS** often says: "**Kaya natin 'to'**" 🇵🇭



More on "The best is yet to come."

by former Philippine President Fidel V. Ramos

"FVR is now being besieged by cascading, emerging dots to be connected, clamoring to be prioritized, and then to be brought to the attention of PRRD. KAYA NATIN ITO!"

- Mae Gaffud, Executive Director, RPDEV

BOAO FORUM FOR ASIA, HAINAN AND 10TH FVR GOLF CUP, TAIWAN. Another welcome development was the editorial announcement "Duterte In Boao" (Malaya, 02-April-2018), to wit: *"President Duterte is attending the Boao Forum for Asia (BFA) on the island province of Hainan, China ... with an open mind, eager to hear and learn from that meeting what the Philippines might profit from the experience and insights of great and results-driven minds, leaders in the fields of governance, economics, trade and industry, technology, and innovation.*

The Forum, slated from 09 to 10 April, is the first leg of Duterte's foreign travels after his Holy Week cum birthday break, and Malacañang is proud to announce this trip as potentially productive for the President. Duterte has astutely judged that the 2018 Boao Forum is worth attending, giving this Asian version of Davos the importance that it deserves. Davos, being in Europe, is understandably out of Duterte's circle of priorities.

"The Hainan conference and Duterte's attendance there come at a crucial and auspicious time, for 2018 is the year many big-ticket projects of the Administration's 'Build, Build, Build' economic tack become a reality, thanks to the Philippines-China cooperation ..."

Re the BFA, FVR was deeply saddened, however. Having been the Chairman/Co-founder of the BFA for eight years (2002-2010) and also the Chair of its Council of Advisors thereafter to-date, FVR had been physically overwhelmed by the sudden convergence of personal-family-spiritual-professional-social-civic obligations that he had to attend during the near-simultaneous observance of *Holy Week*, Veterans Memorial Week and AMR/FVR's joint birthday events. This resulted in FVR's inability to join President Duterte on this auspicious trip to Boao due to strict doctors' orders and the stern warnings of his "Dakilang Alalay" (XFL Ming). The word went out. SO, SORRY NA LANG!

All along and on top of all that, RPDEV was also busy coordinating with various entities re the requirements of this year's Philippine contingent – composed of sportspeople, businessmen and professionals from different parts of the Philippines – who wanted to join the 10th Taiwan-Philippines

Friendship Golf Tournament (FVR Cup) to be held next week in Taiwan. This is an annual event that provides a terrific opportunity for business networking, new products search, plus beneficial sports competition and people-to-people bonding with Taiwanese counterparts. Phone calls, trips to crowded streets and offices, and administrative matters daunted FVR because of the imminent BIR deadline for the submission of ITRs. Lastly, FVR received a letter last 11 April, which reads:

"To my dear Tita Ming and my 'Boss',

It was not necessary to give me a gift for helping to celebrate your birthdays. It was my pleasure for serving you two people who taught me how to love other people and our country. I want to thank you both for the beautiful examples you have shown me, and the beautiful days you have afforded me. May the two of you live to be the happiest, the greatest, and the loveliest people you have ever been to us!

My love and prayers for you both and your lovely family,

Sgd. Ching Montinola"

But the last accolade from our former "25th Senator (Presidential Legislative Liaison Officer)" indeed takes the cake! He said, *"Pwede ba, isa pa?"* (May we please have one more piece?). Thank you everyone, for everything, and **Mabuhay** to all. Above all else, let us pray to the Good Lord as we perform, and perform as we pray! There is really no timeout from work for the weary. Wow!

How true is the above? Ask Mae Gaffud, General Rene de Villa, X-Executive Secretary Eddie Ermita, X-Mayor/Congressman Benjie Lim, Atty Nick Lagustan, P/General Gerry Kagaoan, General Mich *Templo*, General Charlie Tañega, Golfer Mel Bergado, Secretary Jun Yasay, Colonel Dennis Acop, Colonel/Atty Freddie Mison, Jelly/Patrick/Bryan Ramos-Jalasco, Archibartolome, Ranjit/Chanda/Lila Ramos-Shahani, Dra Regie Canlas, Congressman Leopoldo Bataoil, Ambassador Ed Malaya, Golf Manager Boens Floro, General Ernesto Carolina, Secretary Mina Gabor, Inday Valdez-Timtiman, Justice Raoul Victorino, and Ching Montinola. They're all still around! Thank God!



Please send any comments to fvr@rpdev.org.
Copies of articles are available at www.rpdev.org

AN INTERNATIONAL EXHIBITION OF MARITIME, SHIPBUILDING AND OFFSHORE TECHNOLOGIES, EQUIPMENT & SUPPORTING INDUSTRIES

The 5th
PHILMARINE[®]
 2018

Co-located With:



www.philmarine.com



BOOK NOW!

For more info, contact us: Tel: (+632) 9020-900 Ext. 115 / (+63) 92770 40888 or Email: phil@asiafireworks.com

27-29
JUNE 2018

**SMX Convention Center Manila,
 Mall of Asia Complex, Pasay City,
 Philippines**

Hosted by:



Supported by:



Supporting media:



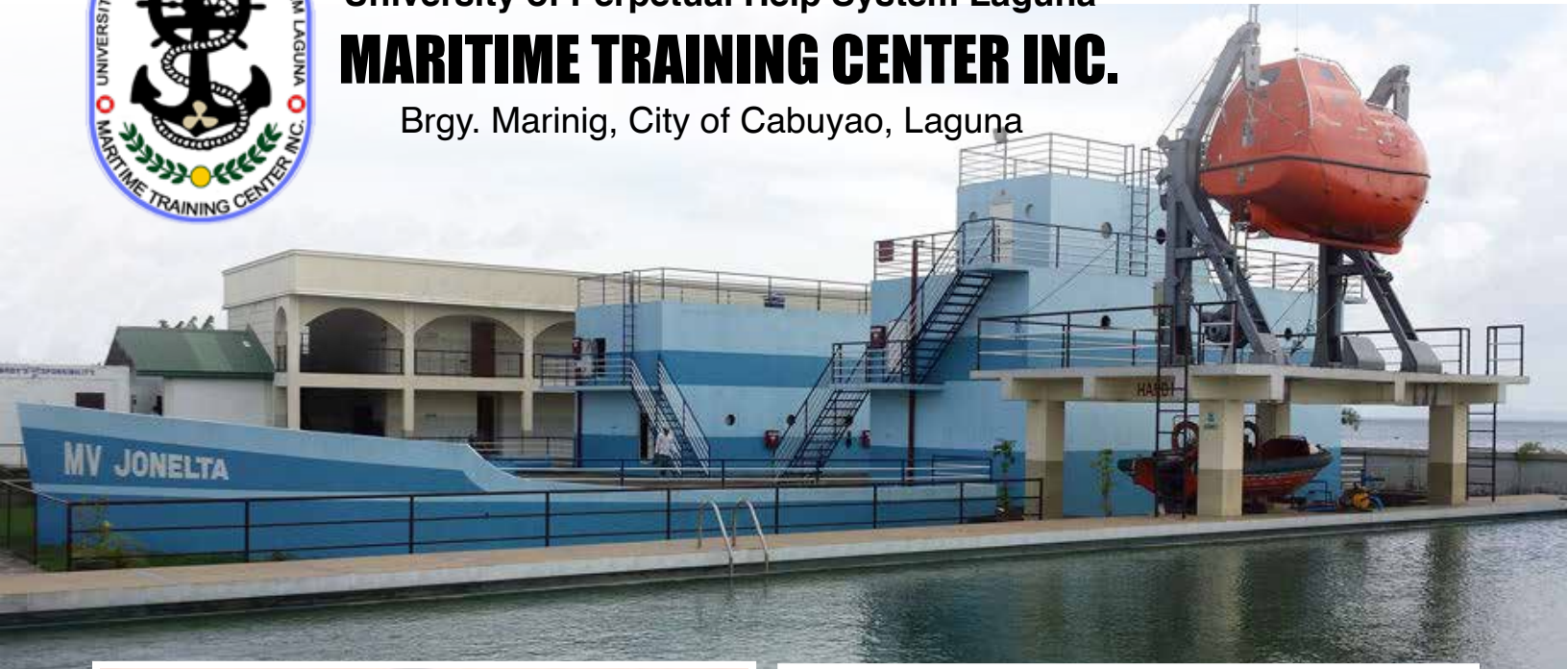
Organized by:





University of Perpetual Help System Laguna - **MARITIME TRAINING CENTER INC.**

Brgy. Marinig, City of Cabuyao, Laguna



A female trainee being assisted to board the lifeboat.



The trainees splash in circular formation as a survival technique.



Trainees engage in basic and advance fire fighting.



Trainees lowering, hoisting and securing the lifeboat.

Training and Growing Together

C/M James Nikko R. Hosana, MBA

For decades, Filipinos have been making a mark in the maritime industry as competent and skilled seafarers ready to set sail in any circumstances and opportunities that await them. Indeed, it takes more than bare knowledge to be able to stay focused and dedicated to this career path. That is why over the years, not just the number of Filipino seafarers has significantly grown but also the industry itself nationwide. The recognized maritime schools and accredited review and training centers all over the archipelago have certainly proven that the maritime field will continue to be very relevant to the country's economic growth.

Training centers have also promised excellence and growth in the maritime industry. With University of Perpetual Help System Laguna-Maritime Training Center, Inc. (UPHSL-MTCI), any aspiring seafarer is guaranteed to be provided with the knowledge, skills, character in order to remain steady on course in pursuing his career.

Founded by Chairman and CEO, Dr/BGen Antonio Laperal Tamayo, AFP (Res) and under the University of Perpetual Help System, the UPHSL-MTCI established in 2012 and currently located in Marinig, Cabuyao, Laguna, is accredited by MARINA to offer training programs namely: Basic Training, Advanced Firefighting, Proficiency in Survival Craft and Rescue Boat, Medical Emergency First Aid, Consolidated Marpol 73/78 Annexes I-IV (CONSO-MARPOL), Ship Security Awareness Training and Seafarers with Designated Security Duties (SSAT-SDSD), Anti-Piracy, ISM for Ratings and Officers, Hazardous Materials onboard with CPR, and Maritime English. Crowd and Crisis Management (International and Domestic) is now in the Training Center's drawing board. The UPHSL-MTCI is also ISO 9001:2015 Certified by Bureau Veritas.

Admiral Wilfredo D Tamayo PCG (Ret), Senior Executive Vice President for Maritime Affairs, has been providing the much-needed direction in bringing the University of Perpetual Help System's maritime education and training institutions to the forefront of maritime manpower development.

Normally, undergoing trainings can require a lot of time and effort for it could take days to complete. UPHSL-MTCI understands that this should be the least of any seafarer's difficulties. Thus, the UPHSL-MTCI provides quality in-house training to students, seafarers, and aspiring ones using up-to-date equipment in a safe and secure environment that would definitely help them save time and finances, and at the same time enjoy the ambiance of Laguna Lake. Expect as well that its instructors are as accomplished and respected in their respective fields of endeavor.

Another thing that sets UPHSL-MTCI apart from the rest is its consistent effort to offer trainings readily available for maritime students, seafarers, and would-be marine professionals. For the past six years, the UPHSL-MTCI continues to be upgraded as clearly shown by the state-of-the-art facilities, increasing number of successful trainees, and certifications earned which only proves that the UPHSL-MTCI is a training center of excellence.

However, to excel in any maritime endeavor, one must be fully prepared and determined to reach his or her goal. The UPHSL-MTCI trains both its trainors and trainees to have greater self-reliance, confidence, and discipline in themselves. After all, being a seafarer is

not just about being physically fit to work and knowledgeable to keep the course going, but also maintaining the faith and values one has instilled in himself.

UPHSL-MTCI, without a doubt, is a premier training center that meets any maritime student's or aspiring seafarer's training needs.

At the University of Perpetual Help, self-reliance goes beyond the integration process for maritime education and training programs. The integration and continuing development of its in-house capabilities is aimed at achieving its goal of continuously providing quality maritime education and training programs. After all, PERPETUAL training is a vital component of the trainees' journey towards their progressive and successful maritime career. ⚓

*"Perpetual
Training:
The Key to
Competence
and Confidence
Building..."*



Putting Things in Perspective

by Julius A. Yano, JD, LL.M.¹

Introduction

There appears to be much disagreement, if not chaos, arising from discussions on certain law of the sea concerns of the Philippines. Politics is clearly a factor here, but undeniably, there is likewise an issue concerning the appreciation of the law(s).

As a sovereign state, the Philippines has a government and exercises sovereignty over its subjects and its territory. Generally speaking, such authority of a sovereign state is to be exercised free from outside intervention. Included in this plenary authority is the power of a sovereign state to make (domestic) laws based upon a supreme fundamental law, the constitution. However, it has to be realised as well that the Philippines is a member of the international community. In its dealings with the international community, it is expected to comply with its international obligations arising from international conventions or treaties, *inter alia*.

In the field of international maritime law the 1982 United Nations Convention on the Law of the Sea (LOSC), regarded as the 'constitution of the oceans', is considered as the fundamental law. To state an essential point, there is friction between what Philippine domestic laws provide and what international law, particularly the LOSC, prescribes. It is submitted that this friction contributes largely to much confusion in regard to the understanding of certain law of the sea issues of the Philippines, two of which are presented here.

The concept of an archipelagic state

The concept of an archipelagic state is one of the novel and noble ideas of the Third United Nations Conference on the Law of the Sea which adopted the LOSC in 1982. As early as the mid-20th century, states composed of several islands – hence, an archipelago – put forth the idea that they should be permitted to draw their baselines such that these baselines would encompass all the islands of the state including all the waters in between such islands. States such as Indonesia and the Philippines proposed this idea as an alternative to drawing baselines individually around each land mass pertaining to the state. As a simplistic, if not crude, illustration, one may imagine the four plates of a diamond-shaped baseball field as the islands composing a state. Prior to the development of the concept of an archipelagic state, baselines were to be drawn individually around each plate. From these baselines, maritime zones would be generated. Thus, the legal status of the waters in between the islands could be quite varied – if the state had a 6nm territorial sea and there was a distance of 15nm in between two of its islands, the first 6nm counted from the baselines of the two islands would be territorial sea. However, the remaining 3nm area could no longer be territorial sea. Under the concept of an archipelagic state, an archipelagic state is permitted to draw its baselines, *i.e.* archipelagic baselines, around all of the four plates. Hence, the state's baselines shall effectively trace the entire diamond-shaped baseball field thereby making all the waters in between as the archipelagic waters of that

state, without prejudice to the possibility of having internal waters therein. Whilst deemed part of the territorial sea over which it exercises sovereignty, the prerogative of an archipelagic state in relation to the archipelagic waters is highly qualified in exchange for the international community's recognition of the concept of an archipelagic state as part of international law. This compromise appears sound in view of the fact that waters which were not territorial sea before can now be considered part of the territorial sea, more specifically as archipelagic waters, of that archipelagic state.

When the Philippine state ratified the LOSC, among its declarations was that '7. The concept of archipelagic waters is similar to the concept of internal waters under the Constitution of the Philippines [...]. At the time the Constitution referred to was the 1973 Constitution, the pertinent provision of which states:

SECTION 1. The national territory comprises the Philippine archipelago, with all the islands and waters embraced therein, and all the other territories belonging to the Philippines by historic right or legal title, including the territorial sea, the air space, the subsoil, the sea-bed, the insular shelves, and the other submarine areas over which the Philippines has sovereignty or jurisdiction. The waters around, between, and connecting the islands of the archipelago, irrespective of their breadth and dimensions, form part of the internal waters of the Philippines. (Emphasis and underscoring supplied)

Clearly, there is an incongruence in the understanding of archipelagic waters under the LOSC and the Philippine Constitution. It should be noted that in respect of internal waters, a state exercises unqualified sovereignty – e.g. without its consent, foreign ships cannot enter or pass through internal waters. Indeed, this idea is quite different from the highly qualified sovereignty that a state exercises over its archipelagic waters per the LOSC. Thus, when the Philippine legislature enacted Republic Act (RA) No. 9522 ('Archipelagic Baselines Law') in 2009, this legislation was met with a Supreme Court case contesting its constitutionality. It was argued that the Archipelagic Baselines Law would be tantamount to surrendering the unqualified sovereignty of the Philippine state over the waters around, between and connecting the islands of the Philippine archipelago. In any event, the constitutionality of the law was upheld by the Philippine Supreme Court.

Suffice it to state that the understanding of the legal nature of the archipelagic waters of the Philippines may vary depending on whether it is based upon domestic law or international law.

The extent of a state's 'maritime territory'

By the 19th century, the idea of a territorial sea was generally established under international law. However, it was only during the 1930 Hague Conference for the Codification of International Law when the nature of the rights possessed by a coastal state over its territorial sea was settled. At said conference, it was determined that a coastal state exercises territorial sovereignty over the territorial sea including the seabed and subsoil underneath and the airspace above. Stated otherwise, the idea that the territorial sea is part of a coastal state's territory was established.

Later developments in the law of the sea led to the doctrine of 'sovereign rights', which are distinct and different from 'sovereignty'. Prior to the LOSC, the breadth of the territorial sea was not yet established under international law – some states claimed a territorial sea of less than 12nm, others more. Precisely because of the hesitation over and objection to an extensive claim of a territorial sea that the doctrine of 'sovereign rights' was developed. The idea was that whilst the breadth of the territorial sea over which sovereignty was exercised was to be limited, the coastal state would nevertheless be entitled to exploit the resources beyond its territorial sea – under the doctrine of 'sovereign rights'. Simply put, the rights of the coastal state over said resources are sovereign. However, these sovereign rights in favour of a coastal state are not to prejudice the non-economic use by other states of said maritime areas which are already beyond the coastal state's territorial sea. This arrangement presents the balance struck in regard to the

issue of the breadth of the territorial sea. This doctrine of 'sovereign rights' would be the foundation of the continental shelf regime and the exclusive economic zone (EEZ) regime, which are fairly established in the LOSC.

It must be taken from the foregoing that there is a distinction between sovereignty and sovereign rights. It must be understood that the former applies to a state's territory – land or maritime, i.e. territorial sea – the latter, to the continental shelf and to the EEZ, if any. Clearly, two distinct doctrines apply to these different maritime zones. The LOSC does not grant unto a coastal state sovereignty beyond its territorial sea; the areas beyond the territorial sea cannot be deemed part of a coastal state's territory.

On the other part, the Philippine Constitution defines national territory thus:

ARTICLE I - National Territory

The national territory comprises the Philippine archipelago, with all the islands and waters embraced therein, and all other territories over which the Philippines has sovereignty or jurisdiction, consisting of its terrestrial, fluvial, and aerial domains, including its territorial sea, the seabed, the subsoil, the insular shelves, and other submarine areas. The waters around, between, and connecting the islands of the archipelago, regardless of their breadth and dimensions, form part of the internal waters of the Philippines.

The first clause of the first sentence may not pose problems considering that the waters within the archipelago may be deemed archipelagic waters and hence, part of the territorial sea. However, following the Constitution, claims are likewise made that even the continental shelf and the EEZ form part of the national territory since the Philippines exercises jurisdiction over said zones.

Clearly, there is a discrepancy as regards the extent of the national territory if viewed from the perspective of the LOSC, on the one part and from the perspective of the Philippine Constitution, on the other part. Whilst under the LOSC a claim of territorial sovereignty extends only up to the territorial sea, under the Constitution arguments are made so as to include the continental shelf and the EEZ as part of national territory.

Conclusion

Those engaged in debates over law of the sea issues of the Philippines put forth arguments anchored upon different legal bases – international law, specifically the LOSC on the one part, and domestic law, essentially the Philippine Constitution, on the other part. It is as though they are playing a sport under different sets of rules that which leaves spectators more confused. This discrepancy must be borne in mind whenever law of the sea issues concerning the Philippines are discussed.

It appears imperative that rules be harmonised so that there can be a more constructive discussion of issues. Truly, the Constitution is the fundamental law of the land; however, being a member of the international community, states have international obligations as well. Compliance with these obligations is heavily expected when they stem from conventional rules arising from a treaty or an international convention such as the LOSC. Certainly, adherence to the rule of international (maritime) law, which prevents internal and external conflicts that undermine national interest, cannot be fairly deemed inconsistent with patriotism.



¹ Atty. Yano is presently a lecturer at the IMO - International Maritime Law Institute in Malta. The views and opinions expressed in this article are those of the author and do not necessarily reflect the official policy or position of any organization or his affiliations.

² Otherwise known as An Act to Amend Certain Provisions of Republic Act No. 3046, as Amended by Republic Act No. 5446, to Define the Archipelagic Baselines of the Philippines, and for Other Purposes

³ Including the outer continental shelf; Benham Rise forms part of the outer continental shelf of the Philippines.



Considerations on the Legal Approach to Dispute Settlement: The Philippine Experience with the South China Sea Arbitration

by Edcel John A. Ibarra, Courtesy of the Foreign Service Institute of the Philippines

The filing of a case against China was a historic moment in Philippine foreign relations: it was the first time that the Philippines resorted to an international judiciary to settle a political dispute.¹ In retrospect, the effort was well worth it, at least from a legal standpoint. On 12-July-2016, three years since filing the case on 22-January-2013, the Philippines secured a favorable ruling, which clarified important aspects of the South China Sea disputes. However, the new Philippine administration decided to set aside the Award. Critics blamed President Duterte for not taking advantage of the ruling, but they failed to see the limitations inherent in the legal approach itself. The legal approach denotes the referral of disputes to an international court or tribunal for a binding decision in accordance with international law (Keohane, Moravcsik, & Slaughter 2000, 457). Should the Philippines consider using it again to settle a dispute, foreign policy makers must understand its viability and limitations.

The South China Sea arbitration case can offer some valuable insights on the complexities of the legal approach to dispute settlement. Five considerations on the legal approach can be gathered from the Philippine experience.

First, the legal approach is only feasible if the claim has a firm legal basis and if the case can be submitted to a forum having jurisdiction. The Philippines filed the case on the South China Sea believing that its claim would hold up well in a court of law, especially against China's position. The Philippines' submissions were strongly grounded in the UN Convention on the Law of the Sea (**UNCLOS**), unlike China's "nine-dash line" claim, which, at the outset, exceeded the 200-nautical-mile-limit set by the Convention, relied on "historic rights" existing outside the Convention, and infringed on the rights of coastal states given by the Convention. Indeed, the Philippines' claims were later upheld by the **Arbitral Tribunal**.

An international court or tribunal, however, can only settle legal disputes over which it has jurisdiction. This depends on whether both disputants have previously consented, expressly or implicitly, to the court or tribunal's authority to deliver a binding ruling on the issue. State parties to **UNCLOS**, including China and the Philippines, consented to **UNCLOS** dispute settlement mechanisms when they ratified the Convention, but this consent does not normally extend to sovereignty disputes. China additionally withheld its consent on compulsory dispute settlement relating to maritime boundary delimitation, historic bays and titles, military activities, and fisheries law enforcement, among others, in 2006. The Philippines thus had to avoid in its submissions questions of sovereignty (who owns the features?) as well as issues falling under the exceptions declared by China. Instead, it had to deal exclusively with questions of maritime entitlement (what rights over the surrounding waters do the features generate?). This careful framing of the dispute allowed the **Arbitral Tribunal** to exercise jurisdiction and decide the case.

States can refer disputes to two types of adjudicative forums: a permanent court or an arbitral tribunal. A permanent court is established indefinitely to resolve all cases that may be given to it, while an arbitral tribunal is formed only to settle the specific case lodged to it. The selection of judges, scope of applicable law, and procedure are usually already predetermined in a permanent court, but these may be flexibly specified by the disputants in forming an arbitral tribunal. Permanent courts, however, are less costly (being paid by the international community) and are generally deemed more prestigious (having judges presumed to have developed professionalism throughout their tenures), which makes their rulings potentially more authoritative (Bilder 2007, 198–205). Thus, the choice of forum can be strategic.

UNCLOS provided for a choice among two permanent courts (the International Court of Justice [ICJ] and the International Tribunal on the Law of the Sea [ITLOS]) and two arbitral tribunals (one constituted under Annex VII and a special arbitral tribunal constituted in accordance with Annex VIII). Unfortunately, neither China nor the Philippines had previously declared consent to the **ICJ** or **ITLOS**, but the Philippines had the option to negotiate a special agreement with China jointly granting jurisdiction to either permanent court. However, knowing that China at that time would not agree to such an arrangement, and knowing that arbitration under Annex VII of **UNCLOS** allows for proceedings to continue even if China would refuse to participate, the Philippines strategically chose an arbitral tribunal rather than insist on a permanent court.

Second, the legal approach is not exclusive from other approaches to the peaceful settlement of disputes and can, in fact, go together with them. In the **UN Charter**, the legal approach—which includes arbitration (adjudication through an arbitral tribunal) and judicial settlement (adjudication through a permanent court)—is only one method of resolving disputes. Other methods include negotiation, enquiry, mediation, conciliation, and resort to regional or international agencies. Indeed, the Philippines at that time pursued the legal approach (arbitration) simultaneously with two other approaches: a “political” approach (multilateral engagement of **ASEAN**) and a “diplomatic” approach (continued bilateral discussions with China on other issues).

Third, even though the legal approach is peaceful and depends on mutual consent by the parties, it can be viewed by the defendant state as unfriendly and adversarial, thus potentially damaging the bilateral relationship. Such was China’s reaction to the arbitration case. It returned the Philippines’ notification and statement of claims, refused to formally participate in the proceedings, and publicly denounced the ruling. Despite the Philippines’ efforts to engage its neighbor on other areas, China set restrictions on the import of agricultural products from the Philippines and issued an advisory against traveling to the country. It also repeatedly accused the Philippines of escalating tensions in the region. If states are thus to insist on the legal approach, they must also explore simultaneously pursuing conflict prevention and management strategies.



Source: D. Rosenberg/Middlebury College/Harvard Asia Quarterly/Philippine Government/Themalaymailonline.com

Fourth, the legal approach ultimately relies on the parties to enforce the settlement by themselves; it does not end with securing a favorable ruling. China’s rejection of the ruling is telling because there is no higher authority that can compel states to comply with international rulings. Absent the willingness of one party, the other party will have to induce compliance through other means. The Philippines initially attempted to rally international support to raise the reputational cost of noncompliance for China, but under President Duterte, it decided to set aside the ruling in favor of improving bilateral ties, hoping that it will eventually shape a regional environment more conducive for compliance. Other states may face the same problem with the legal approach because even if a party agrees to refer the disputes to an international court or tribunal, the agreement is not an assurance that that party will eventually comply with the ruling.

Finally, the legal approach cannot guarantee dispute resolution. Despite the Philippines’ efforts, the South China Sea disputes remain unresolved and incidents are still being reported. For one, the arbitration only settled questions of maritime entitlement and left open questions of sovereignty, which lie at the core of the disputes. For another, China rejects the ruling, which, if respected, can prevent incidents at sea, reduce tensions, and breed mutual trust and confidence among the claimant states. By itself, the **Arbitration Award** is an important step toward eventual dispute settlement in the South China Sea, but political realities must always be considered with the legal approach. However comprehensive the ruling may be in clarifying the issues, disputes will continue absent the political will and commitment of all parties to reach a settlement.

With these considerations, it is clear, drawing just from the Philippine experience that the legal approach is inherently limited and its viability depends on many other factors. The legal approach is, at the core, a means to an end. It is not enough to develop solid, shatterproof legal arguments, but states must also be careful about whether to throw them at all and, if one decides to go with the legal offensive, be skillful about how best to deploy them. The choice of forum, the deployment of simultaneous conflict prevention and management approaches, and the post-verdict strategy to ensure compliance are as important as, if not more important to, having well founded legal claims. Ultimately, the success of the legal approach depends not only on legal brilliance but also on political and diplomatic ingenuity. The Philippines succeeded in securing a legal victory that changed the geography of the South China Sea disputes to its advantage. China’s “nine-dash line” claim was shown to have no legal basis; the extent of the Philippines’ exclusive economic zone was clarified and its rights therein were affirmed; and the legal status of the disputed features were established. The challenge now is to induce China’s compliance and translate the legal victory into concrete gains.



Endnote: The Philippines had sued other countries to resolve international economic disputes under the World Trade Organization Dispute Settlement Mechanism. The Philippines had also submitted an application before to the International Court of Justice to intervene in a sovereignty case between Indonesia and Malaysia over the Ligitan and Sipadan Islands, but the Court eventually rejected it.

Visit the original article at <http://www.fsi.gov.ph/considerations-on-the-legal-approach-to-dispute-settlement-the-philippine-experience-with-the-south-china-sea-arbitration/>.

Edcel John A. Ibarra is a Foreign Affairs Research Specialist with the Center for International Relations and Strategic Studies of the Foreign Service Institute. Mr. Ibarra can be reached at eaibarra@fsi.gov.ph. The views expressed in this publication are of the authors alone and do not reflect the official position of the Foreign Service Institute, the Department of Foreign Affairs and the Government of the Philippines.

Ibarra, Edcel John A. 2018. "Considerations on the Legal Approach to Dispute Settlement: The Philippine Experience with the South China Sea Arbitration." *CIRSS Commentaries* 5, no. 5 (March), <http://www.fsi.gov.ph/wp-content/uploads/2018/03/Vol-V-No-5-0313-PH-Experience-in-SCS-Arbitration-Ibarra.pdf>.



Seafarer Shore Leave Gets Extra Protection

by IMO News

Seafarers' rights to **Shore Leave** have been strengthened through amendments, which entered into force globally on 1-January-2018, under the revised treaty, which aims to achieve the smooth transit in ports of ships, cargo and passengers. The amendments to the **Convention on Facilitation of International Maritime Traffic (FAL Convention)** also bring in a new requirement for national governments to introduce electronic information exchange including electronic data interchange (EDI) to transmit information related to maritime transport. This should be in place by 8-April-2019, with provision for a transitional period of at least 12 months during which paper and electronic documents would also be allowed.

The amendment to the international standard on Shore Leave adds a new provision, on top of the requirement to allow crew ashore while the ship on which they arrive is in port. This new provision says there should be no discrimination on grounds of nationality, race, color, sex, religion, political opinion, or social origin. Shore Leave should be granted, irrespective of the flag State of the ship. If any request is turned down, the relevant public authorities must provide an explanation to the crewmember and the master, which the seafarer or master can request to be provided in writing. ⚓

Philippine Officials Trained in Forming Maritime Transport Policy

by IMO News



Officials from various government entities in the Philippines have received training in how to develop a **National Maritime Transport Policy (NMPT)**. The concept is being promoted by IMO as a good governance practice to guide planning, decision making and legislation in the maritime sector, and as a key driver for a country's sustainable development. The event took place in Manila, Philippines (6-8 March), organized by IMO together with the Philippines **Maritime Industry Authority (MARINA)** and the **World Maritime University (WMU)**.

The training comes at an opportune moment – with the Philippines in the process of adopting its **Maritime Industry Development Plan (MIDP) 2018-2028** – designed to enhance the country's maritime industry. Forty-five officials took part in the Manila event, which was run by IMO's Josephine Uranza, WMU's Professor Neil Bellefontaine, and Associate Professor Henning Jessen. ⚓

"Great Powers, Grand Strategies: The New Game in the South China Sea" -- A Book Review

by Vicky Viray Mendoza

"Great Powers, Grand Strategies: The New Game in the South China Sea", edited by Anders Corr (U.S. Naval Institute Press, 2018), is a good read because it puts the South China Sea conflict into a global strategic context. In so doing, it looks at the movements of China well within the EEZ of Philippine coasts, a topic dear to my heart, through the optics of all major global powers. This issue has caught the interest and ire of Filipinos all over the world, and this book makes clear why it is an issue well beyond Philippine shores.

The discussion is framed by a definition of **Grand Strategy** as "a set of plans to achieve a set of important state goals through the utilization of all its resources, including economic, diplomatic, and military means and interactions." The definition shall be the format and basis of this book review, but not necessarily in the same order.

Military. Since 1997, China's defense budget grew over 600%, making itself the 2nd largest defense spender in 2016 after the United States. This drives the arms race in the East Asia Region. China's posture and activities have been unquestionably offensive in the South China Sea (SCS). China disregards and disrespects international law, and "demands" joint development and exploration of the resource-rich islands in the SCS. However, China's lack of transparency may also be hiding the true technological quality and quantity of their total arsenal.

The top 5 in military expenditure globally (US, China, Russia, India, Japan), the European Union (EU), and ASEAN, together, could have influence in the conflicts in the SCS. At present, the US is still the top defense spender, albeit over-stretched in its resources with a citizenry weary of war. Dr. Corr predicts that unless the US increases defense spending, by 2025, the US and China will be on military parity in the South China Sea, and the US will then not be able to effectively protect friends like the Philippines or Vietnam from China's predation. China at that point might even take the top spot and could make a preemptive but limited war against the US.

China's increased defense expenditures are to meet the following goals: (1) solidify standing as a global power; (2) maintain pressure on Taiwan to rejoin the Mainland; (3) develop expeditionary military capabilities; (4) expand control of hydrocarbon resources, fish, sea lines of

communication (SLOCs) in the SCS; (5) increase naval power projection, littoral security, and territorial claims; and (6) pressure US military forces in the region to withdraw.

Diplomatic. The strong words of US Secretary of Defense **Ashton Carter** against China's massive reclamations in the SCS, serves as a warning that the US would uphold international law to protect freedom of navigation for naval and civilian vessels in the SCS.

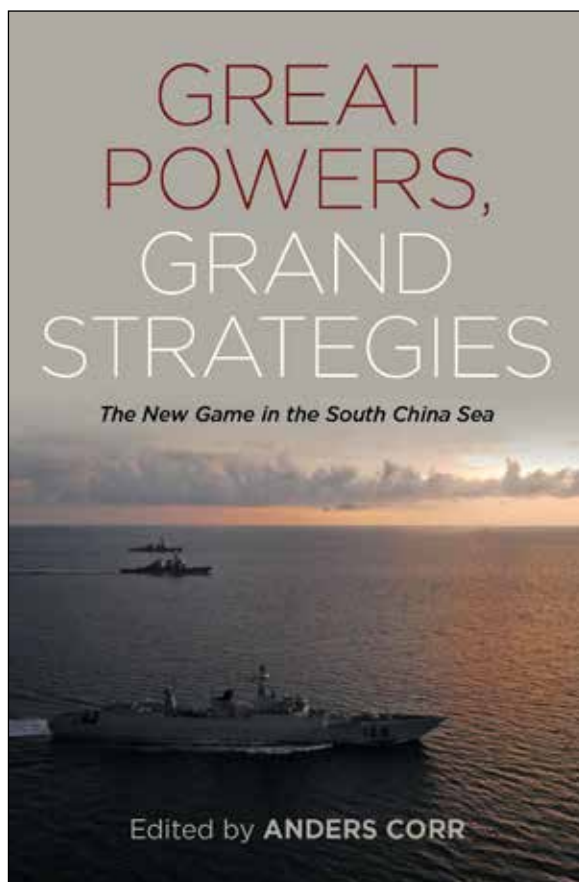
The US has a 1951 Mutual Defense Treaty to defend the **Philippines**. But **China** has occupied and built massive military infrastructure covering over 200 acres in a span of 18 months on Philippine territories (e.g., on Mischief Reef; Subi Reef, and Fiery Cross Reef, where in April or May they placed surface-to-air missiles and anti-ship cruise missiles) in the SCS, simultaneously accusing the US of being the source of instability in the area. This, while they occupy Scarborough Shoal within the Philippine EEZ as well. Neither the US nor the Philippines have posted permanent vessels to monitor the area, something quite puzzling from the sole perspective of naval defense. However, this scenario makes the US' resolve to defend the Philippines seem questionable to both the Philippines and China.

The SCS conflict cannot be seen outside the context of Japan and Taiwan. The US has a 1960 Treaty of Mutual Cooperation with **Japan** where the US is obligated to protect the Senkaku Islands as part of Japan's territory, but which are also being claimed by Taiwan. The Taiwan Navy regards freedom of navigation of utmost importance.

The 1979 **Taiwan** Relations Act authorizes the US to sell arms to Taiwan. However, to navigate into the Taiwan Strait, depends upon freedom of navigation in the SCS. And there's the rub – the US refuses to recognize the sovereignty

claims of **China** in the SCS.

Resources. China calls its top 3 overseas interests – energy, fishing, and SLOCs. In 2009, China had circulated a map with 9 dashes indicating its sovereign territories in the SCS. Regardless of distance from its coastline, China claimed sovereignty over the Paracels to the west; Scarborough Shoal to the east; Spratlys to the south; and Natunas to the southwest.



The most important resource interests of China in the SCS are the 58 trillion cubic meters of gas and 29 billion tons of oil deposits, totaling 70.78 billion tons in reserves, more than enough to supply China's needs for 60 years, and making the SCS the 3rd largest reserve in the world, next to Venezuela and Saudi Arabia. Beyond energy resources are the fish catch, which accounts for 12% of the world's catch, and the corral reefs that account for 30% of the world's corals, and habitats for thousands of marine animals. At the bottom of the sea are rare earths, minerals such as metallic ores, and on land are phosphoric and lime mines, all of which are attractive to China and its over-fished seas. By 2013, over-populated China became the world's highest net oil importer.

By reclaiming the reefs into islands, China had built outposts in the SCS that she may later use to block ships from passing through. China has rammed and capsized big ships as well as fishing vessels of its neighbors, and evicted local fishermen from their traditional fishing coasts.

Tactics. China has been using brinkmanship, an effective form of intimidation, against its less powerful neighbors. It has made repeated verbal assurances that it would work in harmony with its neighbors, which is rather a big mistake for naïve countries to believe in China's words, rather than in its actions. In the "win-win" arrangement promoted by President Xi to jointly develop the resources to increase GDP of all participants, China demands at least a 50% stake, and the rest of the Claimant countries get a slice of the remainder. More recently it has become a 60% take, but even this is unclear. China could demand more later depending on whether it also tries to charge for any machinery, labor, or expertise it provides. And this is from a country farthest from the disputed islands in the SCS.

When faced with a problem, China prefers bilateral talks and arrangements, but this is rather due to mastered bribery tactics to dominate the weaker country; it is a delaying tactic until China solidifies control of a territory, and in so doing, discourages other countries from following the UNCLOS arbitral path that the Philippines took. The win-win rhetoric is just a ploy, a zero-sum game solely in favor of China.

The US has had more frequent joint exercises with the Philippine troops. The US also passed through the Spratlys to prove that these are legally navigable international waters in opposition to China's claim of sovereign territory over the Spratly Island Group and the waters surrounding the islands. The US had also flown reconnaissance jets over the SCS, and was able to record the massive military construction being done by China early on. Similar reconnaissance jets in Djibouti, Africa, were subject to Chinese military laser attacks in May, causing damage to U.S. pilots' eyesight. With the lack of a stronger military response from the US, the Philippines has had to balance between the US and China.

The Root of China's Aggressive Behavior. China's incursions into the SCS are predicated on a sense of entitlement, a "false memory syndrome." It is historically baseless to see themselves not as expansionists but rather "defending their territories" because these islands and reefs were never part of China. Most islands were merely renamed from their original British names to Chinese. Spratly became Nanwei, James Shoal became Zengmu Ansha, etc. In 1974, China attacked and killed 64 Vietnamese marines to capture the Paracels. In 1988, China grabbed Johnson Reef from Vietnam by shelling the Vietnamese ship and machine-gunning 84 Vietnamese marines to their death. After 1988, China employed incrementalism in building new islands in the SCS until the present—all supposedly to eradicate their Century of National Humiliation.

This is one place in the book that is lacking—an analysis of the effects that this supposed Century of Humiliation has had on the conflict. China supposedly recalls its deep shame, but in reality it is another propaganda ploy. I find it quite convoluted for China to use it as their rallying cry when in truth their actions are to completely negate their words, a

staged double-talk that China utilizes with absolutely no shame.

Although China vehemently refuses to accept the Arbitral Tribunal findings under UNCLOS because China claims its ancient sovereign rights supercedes the UNCLOS claim, the UN Tribunal judges dismissed China's argument. The Tribunal found that China "violated the Philippines' EEZ," and "inflicted irreparable harm to the marine environment" during its reclamations in the SCS. China then aimed to discredit UNCLOS from then on.

China's reclamations in the SCS are analogous to the Israeli settlement-building in the West Bank. Other smaller countries submit to do joint exploration with China, even if legal judgment is in their favor, and regardless of China's flawed sense of righteousness. "*The disputes can only be truly resolved "by challenging China's view of history, and thereby undermining China's sense of righteousness,"* writes famous South China Sea historian Bill Hayton in the volume. Hayton also pushes for States interested in long lasting peace, "**to go beyond their stances of neutrality on the territorial questions.**" He adds that, "**Instead, they need to assert that territorial claims without a foundation in verifiable evidence are not a viable basis for dialogue and conflict resolution.**" These are wise words of strength. My Philippines, and the United States, should not cave in to China.

China has had only one country that it skirts around, watching its reactions and non-reactions—the US. And we should remember that the Philippines has in the past, along with Thailand and Singapore, been the US' strongest ally in Southeast Asia. China is therefore in a tight spot. While China has succeeded in avoiding war with the US through its "salami-slicing" aggression, it has gained deep animosity from neighboring Asian countries, thereby galvanizing nationalistic anti-China sentiments. China obviously did not take its little neighbors (but serious Claimant States) into consideration. The US now finds a gaping hole in China's **Grand Strategy, the patriotic citizens of Southeast Asia**, from which it can expand the US' role as protector of national sovereignties in these Asian countries surrounding the SCS.

China's neighboring countries are now investing more on defense and joint activities with the US, as a result of China's continued illegal dredging and militarization of islands in the SCS, despite the UNCLOS arbitral ruling. The inordinately fast pace of China's military build-up to increase "defense" and control over the SCS is all falsely based on an invented myth that the SCS was once their "lost territory." But truly, for all of China's trumpeting about its centuries-old culture, no historian has ever known or heard of China's lost "Atlantis." China does have a fake news problem, but also a much bigger fake history problem.

The limelight of this decade is on maritime power. China aims to be in the top 8 navies by 2020; the top 5 by 2030; and the top 3 by 2049. China's territorial expansion in the SCS is **unilateral**, in utter disregard of international rulings on the laws of the sea and based instead on a mistaken historical claim of China's sovereignty over the 3 million square miles of maritime territory in the SCS. China also has absolutely no respect for **EEZ** rights and continental shelves. Scarborough Shoal is 470nm to China, while only 125nm to Philippines, well within the Philippines' 200nm **EEZ**. The same applies to Reed Bank. Yet China sent away a Philippine survey vessel from Reed Bank in 2011; and continued to survey Scarborough Shoal underwater in 2016. China's diplomatic, economic and military powers have similarly gotten Laos, Cambodia, and Thailand to surrender aspects of their sovereignty; to a lesser degree, Malaysia as well.

China's new naval stations in seized islands like Cuarteron, Fieri Cross, Gaven, Hughes, Johnson, Mischief and Subi Reefs—China's 7 occupations in the Spratlys—not only have dramatically increased Chinese warships but also provided China the confidence to challenge anyone who dares to sail or fly over their so-called territory. They often

justify these as weather stations, rescue stations or even for environmental study. But in the book, former P-8 flight officer Sean Liedman (Capt., USN, Ret.) makes the important point that these islands experienced the fastest rate of permanent coral loss in human history. Clearly, China's rhetoric versus actions has a pattern of two-faced dualism that only leads to more distrust. China had stated that only involved Asian countries can interfere during conflicts, alluding to the interference of US and Japan. Yet China sent its submarine all the way to the Indian Ocean and claims to have interests there.

China's **Grand Strategy** is to be the Leader of Asia and the world, and to lay the blame for all the instability and conflicts left in its wake mainly to the US presence –from Southeast Asia to South Asia– where smaller country economies are highly dependent on seaborne trade, and therefore, freedom of navigation in international waters. Even India now needs to defend itself with greater vigor against an expansive China, not only in the Indian Ocean, but also in the Himalayas. China's most important tactical accomplishment is not island-building nor imposing its 9-dash line sovereignty, but rather in bribing officials, splitting factions off formerly strong alliances, buying off countries, and rendering the ASEAN weightless and powerless to impose international rulings, let alone discuss the conflicts in the SCS. Calling it a **Grand Strategy** is just more wholesome than what it really is: bribery and illegal island grabbing, inclusive of air, sea and sky.

Economic. The worries do not end in Asia, as China's claws have now been seen rising up in the Arctic. It has established the Asian Infrastructure Investment Bank (AIIB) to challenge the World Bank and the Asian Development Bank. In the near future, if China gets its way, there will stand a United Nations of Asia centered in Beijing, with its own security council to decide the fate of the Asian countries. China will institute its own international law with Chinese characteristics,

starting with its obstruction of a **Code of Conduct** in ASEAN. The very country that virtually does not respect peace treaties, even where she is a signatory member, is now taking the helm.

China's attempts to eliminate US-Japan security alliances and military assistance to Vietnam and Philippines have increased mostly through blatant threats and harassment tactics. And if that didn't work, through extravagant promises of infrastructure loans in the ballpark of \$20 billion which have been offered to Laos, Cambodia, and recently, the Philippines. As a result, the US and Japan have only become more occupied in showing its presence in the SCS more than ever as ASEAN became fragmented. US and Japan contribute to increase maritime capacity building of China's neighboring countries in the SCS, while Russia helps build military capacity of Vietnam to help deter China's aggression in the SCS, although Russia failed to hold sway as ASEAN's balancer in Asia.

Conclusion. The intricacies of China's (un)diplomatic and military tactics are set out throughout the book, which would be too much for me to itemize just for the sake of comprehensiveness. Let me instead invite you to read, "**Great Powers, Grand Strategies**". From the in-depth Introduction to the incisive chapters, the tactical and strategic events and analyses provided by the authors will make it difficult to put this book down. It shows the minutia of how China's brand of defiance has brought instability in the Asia region. The US will need to respond strongly to compel China to adhere to international law, at least by signing and ratifying UNCLOS, to empower the Claimant States to keep up the fight. And given the lack of collective power projection by the EU, the responsibility for keeping the expansionism of China in check eventually lies with not only the US, but with patriotic citizens in all claimant countries. Unless this takes place, then China's "Might makes Right" will prevail. 🇺🇸



PHILIPPINE REGISTER OF SHIPPING

Services that we offer:

- Classification Services
- Statutory Inspection
- Training Services

Safe Seas Always



TECHNICAL SERVICES INC.

Services that we offer:

- H&M and FSI Condition Surveys
- On Hire / Off Hire Surveys
- Pre-purchase Surveys
- Towage Approval Surveys
- Grounding and Collision Surveys
- Cargo Damage Surveys and Investigations
- Pollution Surveys
- Fire Investigations
- Expert Witness
- Risk Evaluation and Analysis
- Superintendency and Repair Supervision
- Naval Architecture and Ship Design
- Project Cargo Surveys
- Nickel Ore Loading Surveys
- Management System Development, Consultancy
- JH143 Shipyard risk assessment surveys



QUALITY ASSURANCE INC.

Services that we offer:

- ISO certification of various management systems, validation and verification of these management systems in compliance with national and international standards
- Public or in-company training events (like ISO and safety trainings) including customized training solutions or multi-disciplinary training which can better equip companies in implementing their management system




Your Partner in Technical Excellence

2nd Floor T.M. Kalaw Center
967 T.M. Kalaw Avenue
Ermita Manila
1000 Philippines

Tel: +632 3101588
Fax: +632 3101589

E-mail: info@prsglass.org

Website: www.prsglass.org

Happy 120th Independence Day!





June 12, 2018

FULL SPECTRUM AIR DEFENCE

AIR DEFENCE ASIA: A REGIONAL OVERVIEW

Escalating tensions in the region have prompted nations to enhance their air defence capabilities. In the West, non-state actors such as Daesh and affiliated groups are being slowly driven out of the Middle East by coalition troops and are taking advantage of Nepal's open border with India. The operating model, involving the use of drones for malicious purposes is urging Nepal and neighbouring nations to improve their counter-drone solutions. In the East, requirements are focused on ballistic missile defence, in light of North Korea's ongoing efforts to develop a ballistic missile capability. The challenges of meeting the air defence requirements on a technical level are equalled by remaining questions over the strategic air defence command in the region, with many nations now consolidating under joint force air defence command.

Ahead of the Full Spectrum Air Defence Asia conference, Defence IQ have created a map of existing requirements, active programmes and direct threats, to better understand how the different nations respond to the current security context in the region.



WHY ATTEND FULL SPECTRUM AIR DEFENCE ASIA?



Dramatically improve your capability by designing a fully integrated and layered air defence system covering the full spectrum of ranges



Reduce operating costs by adopting new and successful command and control processes, tried and tested by peers and solution providers in the Asia-Pacific region



Manage the future threat by including cutting edge research-delivered by the regions leading technical specialists into your plans & policy



Contribute to regional security and establish future partnerships beneficial to your organisation via dialogue and cooperation with senior leaders and Air Defence Commanders in Asia

16th - 17th May 2018 | Novotel Singapore Clarke Quay

FULL SPECTRUM AIR DEFENCE

Defining and shaping Air Defence across Asia

This is the only conference in Asia which considers the full spectrum of air defence, in one of the most diverse and active regions in the world, crippled with political tensions. The need for air defence has never been greater and nations can no longer afford gaps in their capabilities. The Full Spectrum Air Defence Asia summit will bring the region's air defence commands together to shape, design and meet the future requirements.

Enhanced Role of Philippine Naval Aviation

by Snake Eyes 98

As part of modernization, the Philippine Navy procured five new helicopters manufactured by Italy's **Agusta Westland** to replace the ageing helicopters in its inventory. Three of these aircrafts that are in multi-role configuration were delivered in 2013 while the other two in armed-configuration came in 2015. These helicopters gave the **Philippine Navy** a great leap in terms of capabilities and are considered a progressive upgrade for modernization.

The Background. On 23-May-2017, **Abu Sayyaf** terrorists, led by **Isnilon Hapilon** and the **Maute Group**, under the leadership of the brothers **Abdullah Maute** and **Omar**

sign Proclamation Nr 216, declaring Martial Law in all of Mindanao and the suspension of the privilege of Writ of Habeas Corpus.

A week later, the Navy celebrated of its 119th founding anniversary in Davao City where 2 naval helicopters participated in capability demonstrations to highlight the capability of the Helicopters for **Naval Operations**, particularly hostage rescue mission with no other than the President witnessing the same aboard ship.

The Call. Except for training flights and ground troop transport sorties in Jolo and Basilan, Naval helicopters had not

Maute, seized and inflicted damage to some of the vital infrastructure of Marawi City. The combined forces of these terrorist groups that declared their affiliation with the **Islamic State of Iraq and Levant (ISIL)** intended to establish an independent ISIL state in Mindanao by means of **jihad**. With this primary objective, they captured government facilities such as the Marawi City Jail and Police stations, hospitals, schools, and desecrated and burned churches and other vital infrastructures to make their presence known and to show the world that they mean business. Along the way, they held hostages and went on a killing spree on government forces and innocent civilians, and continued to strengthen their ranks by threatening people to join their group or be killed. Such acts of terrorism led the Commander-in-Chief, President Rodrigo Duterte to

been utilized at the forefront of any battle. Hence, the Navy pilots and crew had very limited experience in close air support. When the news broke out that Marawi was under siege, the pilots who were deployed for the Navy Anniversary air demo thought that the crisis would be quelled immediately and that government troops would easily overcome the terrorist group conducting "petty skirmishes" to disrupt the peace and order in that city.

But then, they were wrong. Soon thereafter, on 03-June-2017, the pilots were alerted to swing to actual combat operations when the Philippine Navy leadership decided that Naval Helos would be needed to augment the government troops in the frontline. With a high sense of morale and pride,



the Naval pilots immediately responded to the call of duty and upon the issuance of formal directive, flew their aircraft on 06 June initially to Zamboanga City to get instructions from Commander, Naval Forces Western Mindanao Radm **Rene V Medina** AFP, then to Lumbia airport, Cagayan de Oro City where other aircraft of the AFP supporting front line troops are stationed.

This deployment was quite a challenge for the Naval Pilots considering that Naval Helos are supposed to be an extension of the capability of her mother ship. In the absence of a mothership, the Naval Helos are then isolated of their support facilities (i.e., billeting and messing of the pilots, refueling and maintenance of the aircraft, etc.). In short, the pilots were tasked to operate in an environment totally different from where they were doctrinally taught. With the great number of Air Force pilots and crew, along with their respective aircraft stationed in Cagayan de Oro, the Navy pilots had to look for their support requirements elsewhere. Fortunately, the **Philippine Army's 4th Infantry Division** at Patag, Cagayan de Oro City warmly hosted them. Upon settling down and orienting themselves with the new environment, they immediately planned to proceed to where action is: **Marawi City**.

search, locate and monitor enemy movements from the sky. But On 09 June, the first target given was **Padian Wharf** in **Lanao Lake** where enemy snipers targeted military personnel from the other side of the lake. After refueling and loading ammunitions at Lumbia, the Naval Helo took off and proceeded to its first combat mission (daytime). Unlike the Air Force, a single Naval helo can conduct an assault on its own. As a famous air strategist said:

"Would not the sight of a single enemy airplane be enough to induce a formidable panic? Normal life would be unable to continue under the constant threat of death and imminent destruction."

– General Giulio Douhet, *The Command of the Air*, 1921

That single Naval Helo made attack dive passes until all her 500 rounds of munitions were depleted. Later that day, it was learned that **Abdullah Maute** was wounded in the attack at **Padian Wharf**. It then returned to Lumbia Airport to refuel and rearm, and immediately took off for another sortie. This time the target was a pick-up truck with mounted 50 cal guns that was spotted retaliating fire during the first sortie of the chopper. Exercising caution but still full of courage, the Naval Helo engaged another target where the terrorist group was reportedly situated.



One Naval Helo was under direct control of Naval Task Group (NTG) "Tiger" under Marine BGen **Custodio Parcon** AFP Commander (later transferred to Marine BGen **Melquiades Ordiales**) whose Tactical Command Post was located at the Mindanao State University (MSU) in Marawi. In order for the pilots to be oriented with the battle space, they had to fly and land at MSU to get the much needed reports and briefing prior to the conduct of combat sorties, and to setup necessary equipment that would allow the ground commander to see in real time a view of the battlefield. Later, reports indicated that the Navy pilots were considered brave enough to land at MSU since ISIL sympathizers reported the Naval helo's frequent landings as a valuable target.

The Baptism. After orienting themselves on the campaign situation, the pilots geared for action to conduct their very first potential combat mission. Their initial sorties were more of a surveillance to

The Glory. With 2 combat sorties in a row and a reconnaissance mission the night before, it was indeed a tiresome day for the pilots. By around 4 o'clock in the afternoon while elements of **Marine Battalion Landing Team 10 (MBLT 10)** were engaged in a firefight against members of the **Maute Group** at the vicinity of Rakila Compound, Makalilay Street, Marawi City, **Joint Task Force Marawi** requested the **Philippine Air Force** to conduct another sortie of Close Air Support (CAS) to ease enemy pressure on government troops that were surrounded and pinned down by heavy enemy gun fire, including Rocket Propelled Grenades (RPG), thereby leaving no maneuvering space to counter the enemy. The Air Force could provide only 1 helo. And, due to the numerous missions earlier that day, 1 Air Force helo had already exceeded its flying hours thus leaving its buddy alone and would therefore not be allowed to fly for close air support sortie as it would be a violation of Air Force doctrines.

Although highly exhausted from delivering 2 strike missions earlier,

upon learning of the urgency of the CAS mission, the Naval Helo Pilot in Command (PIC) together with his co-pilot volunteered to undertake said mission to be in tandem with the PAF helo.

Immediately, the 2 PICs with their respective crew planned and sought clearance to fly in tandem despite differences in established doctrines. Upon receipt of clearance to proceed, the pilots and crew of both aircrafts rushed to respond to the desperate call for help from the Marines engaged in a firefight with the enemy. Shortly upon take-off however, the situation of the responding pilots became more difficult with the rapidly deteriorating weather, and evening twilight was setting in. Despite these challenges, the pilots skillfully flew their aircraft towards the combat zone with the objective of relieving enemy pressure on the pinned down troops, to enable them to safely maneuver and gain advantage in the ensuing battle.



Once the location of the enemy and government troops were pinpointed, the helos maneuvered and conducted air assault to suppress the enemy's attack on government troops. To the government troops, the sight of the helos providing air support was a morale booster but to the enemy it was a nuisance, hence they directed retaliatory fire to the helos. In spite of this, the pilots of the 2 aircrafts pressed on. They boldly flew, an added risk on their lives, lower than usual to avoid dark clouds while evading enemy fire. After accurately expending all their cal 50 ammunition, the helos inflicted heavy casualty on the enemy, including the withdrawal of their snipers situated on rooftops, enabling the government troops to tactically maneuver to a vantage position. Aware that their aircraft was running low on fuel, and would be met by heavy rains in zero visibility and total darkness on their return to base, the pilots demonstrated exceptional courage and deep sense of duty.

This combat mission by an Air Force-Navy team hurriedly assembled, being the first of its kind, defined the essence of joint operations and demonstrated the synergy of the different armed services of the AFP.

The Lesson. Absent existing doctrine on counter-terrorism in an urban setting the Marawi incident provided considerable inputs in fighting terrorists. For one, technology significantly helps in locating, monitoring and suppressing the enemy. For another, morale and leadership boost the troop's will to fight. Also, command and control system is vital in harnessing synergy of the various components of the armed forces.

About 2 weeks before the end of the battle however, the Naval Helos were pulled out from the scene to respond to other missions at Basilan, Jolo, and Tawi tawi. Given the concentration of AFP assets at Marawi, the other sectors of threat needed to be safeguarded as well. Despite the fact that we never saw the end of the battle in Marawi, we could certainly say, "We were there too!" We were there for love of country and the Filipino people. ⚓



MARITIME FORUM

The League organized the Maritime Breakfast Forum (MBF) series in 1995 as a venue for developing plans and programs to discuss and resolve issues in the maritime industry. The MBF is attended by stakeholders in the maritime sector and resource persons in the government and private agencies involved in maritime concerns. The MBF is regularly held, without fail, every month except December, hosted by different agencies and organizations in the maritime industry. Policies and projects presented during the forum are published in the Maritime Review for information and dissemination to the general public.





Haul Down the Pennant!

by VAdm Emilio C Marayag Jr AFP(Ret)

On 15-March-2018, Navy Commander **Alex Gianan**, the last skipper of BRP Rajah Humabon, ordered his chief quartermaster to haul down the ship's Commission Pennant to formally conclude her 38-year service in the **Philippine Navy (PN)**. Philippine Fleet Commander RAdm Danilo Rodelas presided the Decommissioning Ceremony with Offshore Combat Force Commander Captain **Caesar Bernard Valencia**, Fleet senior officers, and 10 former ship captains in attendance.

This Cannon Class destroyer escort was named after Cebu Island's ancestral Chieftain **Rajah Humabon** when **Ferdinand Magellan** sailed to the Philippines in 1521. Formerly designated USS Atherton (DE-169), in honor of US Navy LTJG **John Mc Dougal Atherton** who died during the Guadalcanal Campaign in 1942, she entered US naval service in August 1943 escorting troop and logistics convoys from American shores to Mediterranean ports. She distinguished herself as the first combatant to sink a German submarine, U-853, in the Atlantic using the Hedge Hog anti-submarine weapon in 1945.

After her decommissioning in 1946, the US transferred her to the Japanese Navy (renamed Hatsushi) where she served until 1975. The US later transferred her to the **Philippine Navy** in 1978. After undergoing massive refitting, she was commissioned in February 1980 with Captain **Vicente Escala** in command. **PN** classified her as a patrol frigate and became the Fleet's flagship until 2015. The other ships belonging to the same class that **PN** acquired in 1967 and 1978, respectively, were BRP Datu Kalantiaw (PS76) and BRP Datu Sikatuna (PF5).

The **PN** deployed BRP Rajah Humabon (PF11) in various operational

areas where sea state conditions suited her sea-keeping capability. Before **PN** replaced her main engines in 1996 she became a training ship for two years. She participated in several overseas missions (East Timor, Thailand, Vietnam, South Korea, etc.) and multilateral/bilateral naval exercises. She conducted numerous sovereignty patrols in the West Philippine Sea, Luzon Sea, and Sulu Sea. In early 2001, she provided naval gunfire support to army forces pursuing terrorists in Sulu Island.

While the ship would no longer be put to sea for operations, the **PN** may as well transform the vessel into a floating museum to form part of the country's maritime history.

Among the skippers who became flag officers were:

- ♦ Vice Admirals **Eduardo Ma. Santos**, **Emilio Marayag Jr.**, and **Ruben Domingo**;
- ♦ Rear Admirals **Eriberto Varona**, **Manuel de Leon**, **Gilmer Batestil**, **Edgardo Tamayo**, **Isabelo Gador**, **Jaime Bernardino**, **Joseph Rustom Peña**, **Jose Renan Suarez**, **Leopoldo Alano**, and **Giovanni Carlo Bacordo**;
- ♦ Commodores **Nicanor Hernandez**, **Leon Oribello**, **Edsel Lumawag**, **Salvador Esguerra**, **Paterno Labiano**, **Teddy Pan**, **Antonio Mendoza**, **Virgilio Garcia**, **Edwin Mackay**, **Nichols Driz**, and **Adeluis Bordado**.

A ship decommissioning ceremony is an important part of naval tradition that highlights and supports the nation's Armed Forces core values: honor, loyalty, valor, duty, and solidarity. ⚓



Transas acquired by Wärtsilä to Accelerate its Smart Marine Ecosystem Vision

by Transas Marine News

Wärtsilä, a global technology group headquartered in Finland, announced on March 19 that it had acquired **Transas**, an innovative digital solutions provider headquartered in the UK. This acquisition is a recognition of **Transas'** strong position in the maritime technologies market and its technological leadership. The transaction will allow **Transas** to work within a global maritime company in delivering its solutions, bringing scale and value to the industry in need of innovation leadership. The move will speed **Wärtsilä** along its path towards its **Smart Marine Ecosystem** vision.

This acquisition takes **Wärtsilä** a significant step closer to achieving its mission of enabling sustainable societies with smart technologies. It will also speed delivery on the company's promise to disrupt the industry by establishing an ecosystem that is digitally connected across the entire supply chain, through applications that are secure, smart and cloud-based.

The transaction is valued at MEUR 210 (enterprise value) and is expected to be closed in Q2 of 2018.

Established in 1990, Transas is a global market leader in marine navigation solutions that include complete bridge systems, digital solutions and electronic charts. The company is also a leader in professional training and simulation services, ship traffic control, as well as

monitoring, and decision-support tools. **Transas** leverages the latest advances in machine learning and AI to create a unified cloud-based platform for managing operations across the entire marine ecosystem.

Transas' current annual net sales is EUR 140 million. **Transas** has 22 regional offices worldwide and a distribution network that spans 120 countries. It has a workforce of approximately 1000 employees who will be integrated within **Wärtsilä's Marine Solutions** business. Transas' large and competent base of software engineers will play a key role in propelling **Wärtsilä** to accelerate the development of smart digital platform products.

*"It's incredibly exciting to have this opportunity to join the **Wärtsilä** brand in delivering the future of maritime transport. The **Transas** team has significant competences in technology, along with a globally recognized leadership position in navigation, simulation and traffic control systems. Adding these to the extensive world leading **Wärtsilä** services and products provides an unparalleled opportunity for a new ecosystem for maritime operations,"* says **Frank Coles**, CEO, **Transas**.

Wärtsilä's Smart Marine Ecosystem is a vision whereby smart vessels connect with smart ports and beyond to deliver three fundamental industry benefits: (i) maximizing the use of resources and operational efficiency, (ii) minimizing environmental impact and risk, and (iii) achieving the highest levels of safety and security.

Confined Space Inspections: The Revolution Has Begun...

by Martek Marine



Unmanned aerial systems (UAS) are the future. They're where the maritime industry is heading and more and more companies are already beginning to embrace the opportunities they bring to improve safety, reduce costs, speed up processes and collect more accurate data. UAS have particularly huge potential when it comes to inspections, surveys and maintenance. As well as eliminating the need for staff to be sent into hazardous conditions, they cut down on time that would normally be spent assembling safety rigs and access equipment.

Martek is renowned for its forward-thinking approach so we were naturally one of the first companies to recognize this potential. We recently began supplying the world's first collision-tolerant UAS, which is able to access even the tightest of confined spaces beyond the line of sight. It has a protective frame which enables it to be bumped and scraped without damage and it remotely captures high-resolution photos, thermal images and live video feed in real-time so that inspectors can work with data immediately.

Our first customer was **Queensland Ship Surveyors Pty Ltd**. Their CEO Director and Principle Surveyor immediately recognized the benefits: *"I had been searching for a confined space inspection drone/robot for many, many years. As soon as Martek demonstrated the collision-tolerant UAS to me in Sydney, I placed my order. It's simple to set up and after about 6 hours of flying time/practice, I was ready to conduct the first confined space inspection. Our survey/inspection company now utilizes the world's first purpose-designed collision tolerant drone to inspect confined spaces at every opportunity."*

It's already had a big impact on how his business operates: *"It's made our confined space inspections safe with zero risk of injury or casualty to any person. Post-flight/mission we can go back in the confined space without going back in because the high-quality data collected allows us to review the results of the inspection over and over. After demonstrating the Collision-tolerant UAS to our clients, they showed great interest and enthusiasm and they can't wait to have us carry out their next confined space survey/inspection."* ⚓

Through data integration, greater connectivity and cloud-based technology, **Wärtsilä** aims to resolve inefficiencies in the shipping sector resulting from over-capacity, sub-optimal fuel consumption, waiting times at ports and other high-traffic areas.

*"Combining **Transas** with **Wärtsilä** will bring the **Smart Marine Ecosystem** many steps forward. We can now connect **Wärtsilä's** product portfolio, the biggest in the Marine industry, with Ship Traffic Control, Simulators, Navigation solutions and fleet operation solutions from **Transas**. The combined package will further improve the way a vessel can sail in the most cost efficient and environmental friendly way for our customers,"* says **Roger Holm**, President, **Wärtsilä** Marine Solutions.

Transas' vision is to lead the way in creating an ecosystem of harmonized integrated solutions in safety, navigation and ship operations. In creating these solutions **Transas** unites global maritime stakeholders in the future of e-Navigation and operations. www.transas.com

Wärtsilä is a global leader in smart technologies and complete lifecycle solutions for the marine and energy markets. By emphasizing sustainable innovation, total efficiency, and data analytics, **Wärtsilä** maximizes the environmental and economic performance of the vessels and power plants of its customers. In 2017, **Wärtsilä's** net sales totaled EUR 4.9 billion with approximately 18,000 employees. The company has operations in over 200 locations in over 200 countries around the world. **Wärtsilä** is listed on **Nasdaq Helsinki**. www.wartsila.com



Sources: *Transas News* and *Wärtsilä Media*

Serving the Philippine shipping and shipbuilding industry

The Society of Naval Architects and Marine Engineers, Inc. (SONAME) is a duly-PRC accredited professional association of Filipino naval architects and marine engineers, shipping and shipbuilding professionals. Our main objective is to advance the art, science and practice of the design, construction, operation, repairs and maintenance of marine vessels, structures, machinery and related fields, encouraging the exchange and recording of information, offering career guidance and supporting education and enhancing the professional status and integrity of its membership.




68 years

OF NAVAL ARCHITECTURE AND MARINE ENGINEERING IN THE PHILIPPINES

"FOR FILIPINOS, BY FILIPINOS"



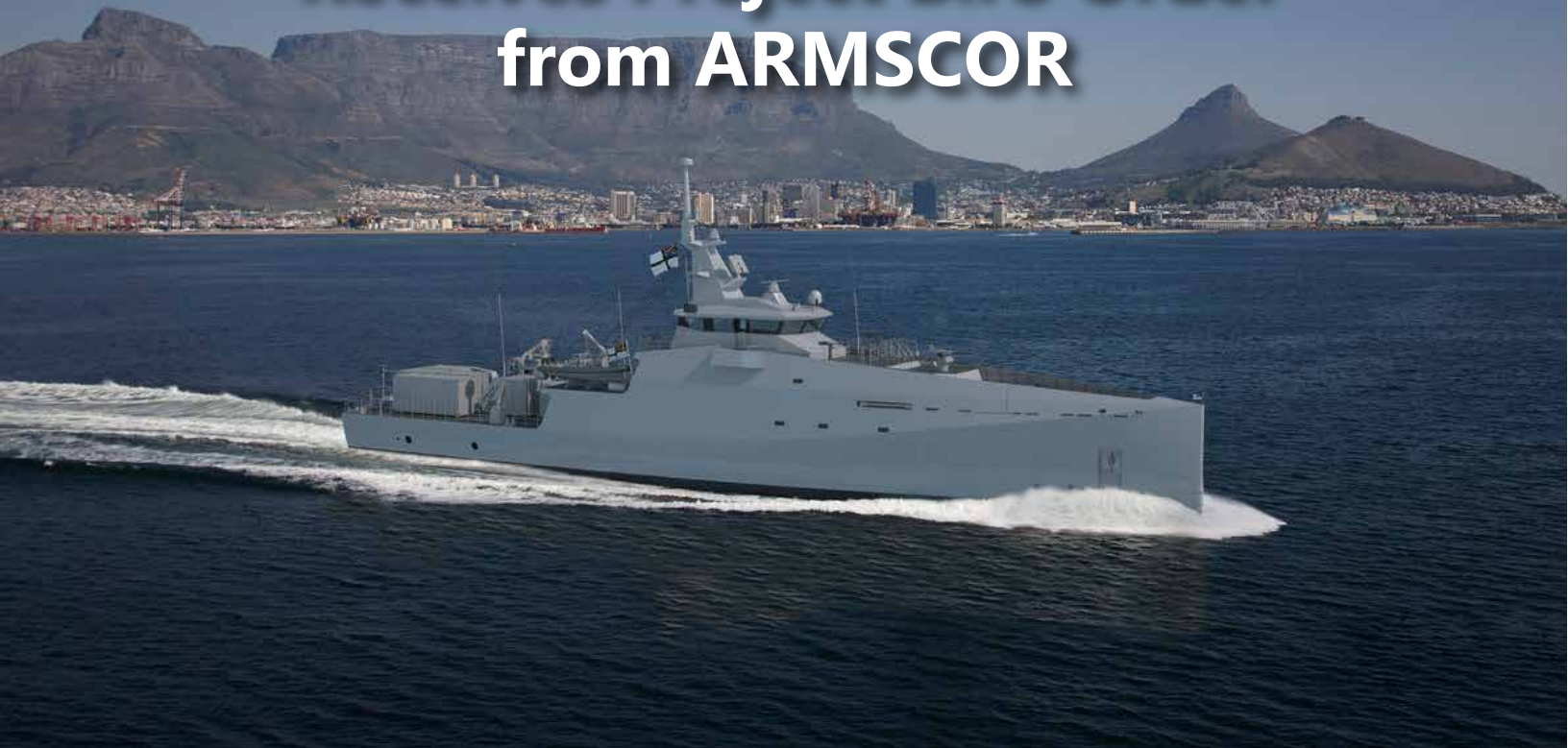


SONAME

SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS

2nd Floor TM Kalaw Center, TM Kalaw Avenue, Ermita Manila
 +632-536-1108 | secretariat@soname.org | www.soname.org

DAMEN Shipyards Cape Town (DSCT) Receives Project Biro Order from ARMSCOR



Damen Shipyards Cape Town (DSCT) has received an order from **Armcor** – the acquisition agency for the South African Department of Defence – for three **Inshore Patrol Vessels (IPV)**, with dimensions of 62 x 11 meters. The vessels form part of the South African Navy's **Project Biro**. The project aims to develop South Africa's maritime security, ensuring that the country has the capability to respond effectively, rapidly and cost-efficiently to maritime threats such as illegal trafficking and fishing.

DSCT received the order exactly four years to the day that it received the order to deliver vessels for a previous project for the South African Navy – Project Canter. The yard is delighted to be able to continue to provide support to the navy, says Chairman Mr. **Sam Montsi**.

"We are very happy to receive this order and are looking forward to this continuation of our long-standing relationship with the South African Navy."

Participating in **Project Biro** underlines **Damen's** commitment to the South African Government's **Operation Phakisa initiative**, which aims to unlock the potential of the country's maritime industry.

Mr. **Montsi** continues: "At **DSCT** we are not only about shipbuilding and repair, but also about providing people with the opportunities

needed to reach their potential – whether they work for us or for one of our many local suppliers – and supporting the country's economy. **DSCT** is about the development of an entire shipbuilding and related industries.

Naturally, with this philosophy in mind, **DSCT** will be sourcing as many components and services as possible for the project from South Africa-based suppliers. In this regard, **DSCT** plans to provide active support for the Government's Enterprise Supplier Development program, supporting small and micro-businesses in the country.



DAMEN Shipyards Cape Town (DSCT)

The project will also actively contribute to the Department of Trade & Industry's National Industrial Participation (NIP) program and the complimentary, defence-focused Defence Industrial Participation (DIP). In turn this contributes to the Government's Broad-Based Black Economic Empowerment (BBBEE) initiative. **DSCT** is a Level-3 BBBEE rated company.

The **IPVs** will be the first vessels of a **Damen Sea Axe** design to operate in South Africa. The Sea Axe is a revolutionary **Damen** patented hull design, which offers exceptional seakeeping behavior. The straight-edged, axe-shaped bow cuts through the water, minimizing slamming for improved safety and comfort on board and significantly reduced fuel consumption and emissions. ⚓



Construction of World's Largest Diamond Mining Vessel Underway

by The Maritime Executive News

The **De Beers Group** has confirmed that construction of the world's largest diamond mining vessel has commenced.

Local media outlet, **New Era**, highlighting the announcement, said the vessel would be used exclusively for operations off Namibia's coast when it commences operation in 2021. **Debmarine Namibia**, a joint venture between the government of Namibia and De Beers, first announced a feasibility study for the offshore vessel last year.

Construction of the vessel is expected to cost in the region of N\$2 billion (\$173 million) excluding around N\$5 billion (\$432 million) of mission equipment, including crawler-mounted dredge technology that will be retrofitted afterwards.

Making the announcement last year, **Debmarine** said various built options were considered, and Norway's **Kleven Verft** was chosen after the yard's successful construction of the deepwater diamond exploration and sampling vessel, **Nujoma** that was launched into **Debmarine** service in July 2017.

Debmarine Namibia became operation in 2002 and mines in the offshore mining license area off the southern coast of Namibia. The company operates five diamond mining vessels, namely Debmar Atlantic, Debmar Pacific, !Gariiep, Grand Banks, and Mafuta. Two mining technologies are deployed, the airlift-drill and the crawler mining technology. The mining vessels mine diamonds off the ocean floor using advanced drill technology and supported with sophisticated tracking, positioning and surveying equipment.

The new vessel will be the longest vessel to-date to be built in the Kleven Shipyard. At 176 meters (577 feet), she will be slightly larger than the current largest vessel, Mafuta (174 meters, 571 feet). Similar to the Nujoma, the new vessel will be a Marin Teknikk design – MT 6027 vessel. She will also have dynamic positioning.



Namibia has been strengthening its offshore diamond mining capacity, as land-based diamonds are expected to run out within a decade. Namibia has more than 3,700 square miles of diamond concession at sea on the southwest coast, which is expected to yield millions of carats of marine gemstones for the next five decades.

In January this year, De Beers announced it is progressing development of the first blockchain technology initiative to span the diamond value chain and provide a single, tamper-proof and permanent digital record for every diamond registered on the platform. The initiative will underpin confidence in diamonds and the diamond industry by ensuring that all registered diamonds are conflict-free and natural, while also enhancing efficiency across the sector.

Following the success of an initial proof of concept trial that resulted in a working prototype, a pilot is now underway involving a small number of participants. A full system launch is expected later this year.



Reprinted with permission from The Maritime Executive News. Visit the original article at: <https://www.maritime-executive.com/article/construction-of-world-s-largest-diamond-mining-vessel-underway#gs.DLQLrEk>



Maiden Voyage of Ocean Dragon 1

by Jaydon Li, MAN Engines

A new 36m long passenger ferry, Ocean Dragon 1, has begun its maiden voyage, transiting from Bantam (Indonesia) to Johor Bahru (Malaysia), and vice versa. This is a friendly collaboration between the Malaysian and Indonesian governments in creating this new route to shorten the travelling time to 1 hour and 15

minutes between the two countries. Normally, passengers would have to transit through Singapore.

This passenger vessel is powered by a MAN Engine: 3X MAN D2848 LE 423 (V8-900). In the recent sea trial, Ocean Dragon 1 achieved a staggering speed of 34 knots at 23245 rpm. The vessel is able to ferry up to 254 passengers per trip.

PT PALINDO MARINE, a renowned Indonesian shipyard, built this ferry. It has built hundreds of SARs and patrol boats for the Indonesian government. On record, PT PALINDO MARINE, one of our key customers for more than 30 years, has over 700 units of MAN Engines. ⚓



MAN Engines
Powered by MAN

		<table border="1"> <tr><td>Name of the vessel</td><td>MV Agustin T. B. B</td></tr> <tr><td>Shipyard</td><td>PT Palindo Samudra</td></tr> <tr><td>Application</td><td>Catamaran Ferry</td></tr> </table>		Name of the vessel	MV Agustin T. B. B	Shipyard	PT Palindo Samudra	Application	Catamaran Ferry																		
Name of the vessel	MV Agustin T. B. B																										
Shipyard	PT Palindo Samudra																										
Application	Catamaran Ferry																										
<table border="1"> <tr><td colspan="2">Vessel specification</td></tr> <tr><td>Length</td><td>35m</td></tr> <tr><td>Beam</td><td>8.5m</td></tr> <tr><td>Displacement</td><td>—</td></tr> <tr><td>Speed</td><td>31kts</td></tr> <tr><td>Classification</td><td>BV</td></tr> </table>		Vessel specification		Length	35m	Beam	8.5m	Displacement	—	Speed	31kts	Classification	BV	<table border="1"> <tr><td colspan="2">Technical Data</td></tr> <tr><td>Engine</td><td>2 x D2848 LE423</td></tr> <tr><td>Power</td><td>102kW @ 2100rpm</td></tr> <tr><td>Gearbox</td><td>AVR200</td></tr> <tr><td>Propulsion</td><td>MAN Z771</td></tr> <tr><td>Population</td><td>100</td></tr> </table>		Technical Data		Engine	2 x D2848 LE423	Power	102kW @ 2100rpm	Gearbox	AVR200	Propulsion	MAN Z771	Population	100
Vessel specification																											
Length	35m																										
Beam	8.5m																										
Displacement	—																										
Speed	31kts																										
Classification	BV																										
Technical Data																											
Engine	2 x D2848 LE423																										
Power	102kW @ 2100rpm																										
Gearbox	AVR200																										
Propulsion	MAN Z771																										
Population	100																										
<p>Authorized Distributor of MAN High Speed Engines and Spare Parts</p> <p>Hexagon Distributing Corporation</p> <p>G/F SGS Foundation Bldg, #1335 G. Araneta Ave, Quezon City Tel #: 740 7816, 740 7845, 740 7848, 781 0057 Loc 181 & 183 Mobile #: +63 917 843 5411 Service #: (02) 263 7244 +63 917 851 9128 +63 926 831 7542 +63 923 723 1819</p>																											

Reducing Emissions in Ports

by IMO News



How can ports cut emissions to ensure cleaner air and contribute to the battle against climate change? First, ports need to quantify emissions in ports, and they need to identify measures to cost-effectively reduce port-related emissions. A strategic partnership between the IMO-executed **GloMEEP** energy efficiency project and the International Association of Ports and Harbors (IAPH) is helping selected countries to develop port emission inventories and subsequently draw up a port emission reduction strategy.

A new three-day workshop package on the **“Prevention and control of shipping and port air emissions”** is being developed as part of the **GloMEEP-IAPH** strategic partnership. Training will begin in **May 2018**, and will be rolled out to the ten lead pilot countries participating in the **GloMEEP** project. The workshops will train port personnel on how to develop an inventory of emissions in a port, and subsequently how to develop a strategy to address emissions from ports, based on two technical guides which are also being developed (*Guide for assessment of emissions in ports; and Guide for the development of port emissions reductions strategies*).


The workshop package is designed for port personnel and aims

to increase their awareness about maritime energy efficiency from a port perspective and show how port management, port infrastructure development and port logistical systems contribute to overall maritime energy efficiency and air quality.

The **GloMEEP** team, Astrid Dispert and Minglee Hoe, met (19 March) with experts representing IAPH, from the Port of Los Angeles, the Port of Long Beach and Starcrest Consultancy Group, to further develop the draft workshop package and guides.

GloMEEP technical adviser Astrid Dispert outlined the prospective new training course and the ongoing collaboration between **GloMEEP** and **IAPH** at the **5th Pacific Ports Clean Air Collaborative (PPCAC) Conference**, hosted by the Port of Los Angeles, United States (20-22 March).

GloMEEP is a GEF-UNDP-IMO project aimed at supporting the uptake and implementation of energy efficiency measures for shipping, thereby reducing greenhouse gas emissions from shipping.

The Lead Pilot Countries of the **GloMEEP** project are: Argentina, China, Georgia, India, Jamaica, Malaysia, Morocco, Panama, Philippines, and South Africa. 



Tridacna gigas (True Giant Clam). Photo Credit: Insight Philippines

The Giant Clams in the Philippines

by Vicky Viray Mendoza

Scientific Family. The **Giant Clams** belong to the genus *Tridacna* (Bruguière 1797), of which *Tridacna gigas* is the largest living immobile bivalve mollusk in the world. The **Giant Clam** is known as “**Taklobo**” in the Philippines. They live in the shallow coral reefs of the South China Sea, West Philippine Sea, Sulo Sea, Red Sea, but mainly in the Indian and South Pacific oceans. The word *Tridacna* came from the Latin word ‘Tri’ meaning three, and ‘dacr’ from the Greek meaning bite, or “*Three Bites*,” perhaps after the wavy shape of the clamshells. They have been around for over 38 million years. Antonio Pigafetta, the Italian navigator who joined Ferdinand Magellan in his sea travels around the world, documented these **Giant Clams** as early as 1521 in his journal. Eight (8) of the twelve (12) known existing **Giant Clam** species in the world are found in the coral reefs of the Philippines. They have a lifespan between 100-200 years. **Giant Clams** have hundreds of eyes along the edges of its mantle. The eyes are used to detect shadows to warn them of potential predators. The eyes are sensitive to green, blue, and ultraviolet light. This helps the clam position itself toward the sun to expose as much algae for photosynthesis. The eyes also detect excessive amounts of potentially harmful UV rays.

Feeding. The **Giant Clams** can either filter-feed themselves or rely on photosynthesis. They use the cilia in their gills to filter phytoplankton and absorb oxygen from the water. The **Giant Clam’s** mantle tissues act as a

habitat for the single-celled algae, zooxanthellae, from which the adult clams get most of their nutrition. The clam opens its shells and exposes its mantle tissue so that the algae can receive ample sunlight needed for photosynthesis. Through photosynthesis, the algae deliver carbohydrates in the form of glucose and amino acids like Alanine to the clam, while the clam transfers its metabolic-products such as carbon dioxide, phosphates, nitrates, and ammonium to the algae for further utilization. Thus, the **Giant Clam** can grow over 39 inches (100 cm) in length even in nutrient-poor coral-reef waters. The laboratory-reared **Giant Clams** have been observed to grow 5 inches (12 cm) per year (Beckvar 1981). The **Giant Clams** cultivate symbiotic algae in a special circulatory system. It is a symbiotic relationship. If the algae die, the **Giant Clam** will eventually die as well.

Habitat. The **Giant Clams** live in flat coral sand or broken corals, and can be found in shallow warm waters and depths up to 66 ft (20 m). Its populations are diminishing quickly, and the **Giant Clams** have become extinct in areas where they were once abundant. When a larval **Giant Clam** settles, it remains there for the rest of its life. In the Philippines, various species of **Giant Clams** live in Palawan, Eastern Samar, Maricaban Island, Silaqui Island (Bolinao, Pangasinan), Anilao Batangas, Samal Island (Davao), Negros, and Tawi-Tawi. With the help of NGOs, **Giant Clams** have been restocked at the sites of Anda, Pangasinan; Masinloc, Zambales; Calape,

Bohol; Camotes Island, Cebu; Ilocos Norte: Tawi-Tawi; and Hundred Islands National Park.

Largest specimens. The largest known **Giant Clam** is a ***T. gigas*** specimen that measured 4 ft 6 inches (137 cm) in length. It was discovered in 1817 on the northwestern coast of Sumatra. The weight of the two shells was 510 lbs (230 kg). The weight of the live clam would've been 550 lbs (250 kg). An unusually heavy ***T. gigas*** was found in 1956 off Ishigaki Island, Japan. It measured 3 ft 9 in (115 cm) in length, and weighed 734 lbs (333 kg). The weight of the live clam would've been 750 lbs (340 kg).

Types of Giant Clams. The 8 types found in the Philippines are: ***T. gigas*** (Linnaeus 1758); ***T. deresa*** (Roding 1798); ***T. squamosa*** (Lamarck 1819); ***T. crocea*** (Lamarck 1819); ***T. maxima*** (Roding 1798); ***T. hippopus hippopus*** (Linnaeus 1758); ***T. hippopus porcellanus*** (Rosewater 1982); and ***T. noae ningaloo*** (Roding 1798). The 4 types not found in the Philippines are: ***T. costata squamosina*** (Sturany 1899) of the Red Sea; ***T. rosewateri*** (Sirenko 1991) of Mauritius; and ***T. tevoroa mbalavuana*** (Ledua 1990) of Fiji; and ***T. lorenzi*** (Monsecour 2016) of Mauritius.



Tridacna gigas. Samal Island, Davao del Norte. Photo Credit: Geng Geminski.

Tridacna gigas (True Giant Clam): is the **largest Giant Clam** with a length of 47 inches (120 cm); thickness of shell up to 4 inches (10 cm); weighs 440 lbs (200 kg), with soft parts of 22 lbs (10 kg); shell has 4-5 vertical folded ribs with triangular inward projections at the upper margins of the shell; mantle is mostly golden brown, blue, green, or yellow; anchors on overgrown sponges, corals and algae; unable to close their shells in full.



Tridacna deresa. UPMSI Bolinao Marine Lab. Photo: Willie Lomibao / Inquirer.

Tridacna derasa (Smooth Giant Clam): **second largest clam**; grows up to 24 inches (60 cm) in length, and weighs 220 lbs (100 kg); smooth shell; has 6-7 vertical folds in its shell; hinge is relatively broad; mantle shows wavy bright green, blue lines with orange, yellow, black, or white spots; shell closes completely.



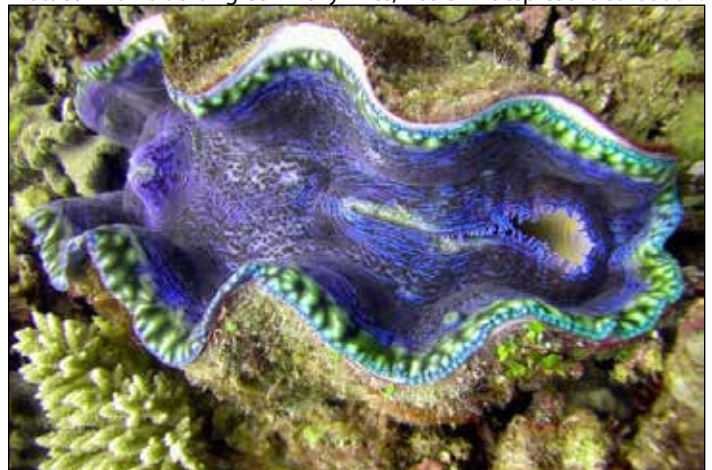
Tridacna hippopus hippopus. Palau. Photo Credit: Akvaryumist.com

Tridacna hippopus hippopus (Strawberry Clam; Bear Claw Clam): grows up to 16 inches (40 cm) in length, and weighs 22 lbs (10 kg); **thick, heavy shells** with triangular, horse-hoof like valves at the broad base, when the clam is closed; mantle is brown or green; red bands at the outer side of the shell gives it the name Strawberry Clam; mantle does not extend past the edge of the shell; and lacks small pinhole eyes in the mantle.



Tridacna squamosa. Camotes Island. Photo Credit: Philippe Poppe.

Tridacna squamosa (Fluted Giant Clam): grows up to 18 inches (45 cm) in length, and weigh 20 lbs (9.2 kg); thick-walled shell; rounded radial-ribs that look like ruffles; **fluted scaled shell**; mantle often yellow-brown mottled with blue or green wavy lines; has a widespread distribution.



Tridacna maxima. Photo credit: Giant Clam Sanctuary, Guinsiliban, Camiguin.

Tridacna maxima (Elongated Giant Clam): **largest geographical distribution**; grows up to 16 inches (40 cm) in length, and weighs 18 lbs (8.1 kg); can make little movements; asymmetrical oblong stretched shells; bright blue mantle with green or brown and black spots at mantle's edge; an aquarium-favorite; eyes are on top of raised tubercles scattered over the mantle; bores in high or low elevation islands, lagoons, and reefs; has rapid growth rate due to ability to cultivate algae inside its body.



Tridacna crocea. Apulit Island, Palawan. Photo Credit: Aquaworld Aquarium.

Tridacna crocea (Boring Clam): **smallest clam**; grows up to 9 inches (23 cm) in length, and weighs 10 lbs (4.7 kg); bores into the corral reefs; relatively smooth, roundish-symmetrical shell with thick scutes; its colorful mantle can extend to cover the shell; eyes are on top of raised tubercles all over the mantle.



Tridacna hippopus porcellanus. Palau. Photo Credit: Reef Builders USA.

Tridacna hippopus porcellanus (China clam): **Rarest species** of the **Giant Clam** and exists in Sulu and Palawan; it grows to 16 inches (40 cm) in length, and weighs 4 lbs (8 kg); they have whitish, less ribbed shells. The mantle is mostly dark, with varying degrees of fine bluish-gray and white lines with gold spots; some specimens are psychedelic. The shape and color of the China Clam is incredibly distinct from its cousin, *T. hippopus*. The overall shape of the shell is much more rounded, with fewer but wider folds but much less jagged.



Tridacna noae. Negros. Photo credit: James W. Fatherree/Advanced Aquarist

Tridacna noae ningaloo (Noah's giant clam; Teardrop clam), grows to 16 inches (40 cm) in length, and weighs 20 lbs (9 kg). This species was described and named *T. noae* (Röding, 1798). Rosewater (1965), however, assessed it as a variant of *T. maxima* based purely on shell structure, and *T. noae* lost its status as a unique species. Recently, several researchers looking at shell morphology, mantle patterns, and genetic evidence said that it is truly a unique species, thus *T. noae* is no longer a variant of *T. maxima* (Su et al 2014). It lives in Negros. Those called "Teardrop maxima" due to numerous oval spots on their mantle bordered by a thin ring of gold to white are now *T. noae*. It has eyes in the middle of the mantle that look like dimples.

Reproduction. The **Giant Clams** are hermaphrodites –producing both eggs and sperm– but self-fertilization is not possible. This allows clams to reproduce with any other member of the species, and reduces the burden of finding a compatible mate, while doubling the number of offspring produced.

Since **Giant Clams** are immobile, they adopt "broadcast spawning," releasing sperm and eggs into the water. A transmitter substance called "spawning induced substance" (SIS) helps synchronize the release of sperm and eggs to ensure fertilization. Clam spawning coincides with incoming tides near the second, third, and fourth quarter of the moon's phase. Spawning contractions occur every 2-3 minutes, with intense spawning ranging from 30 minutes to 2.5 hours. However, not all clams respond to the spawning season of neighboring clams, indicating that they may be reproductively inactive at that time. **Giant Clams** release eggs and sperm into the water, and the eggs are fertilized by sperm from another Giant Clam. They release more than 500 million eggs at a time (Knop 1996).

Development. The larva has 3 stages of development: (1) Trocophore; (2) Veliger; (3) Pediveliger. The Trocophore is a free-swimming larva that hatched from a fertilized egg. The larva swims in search for plankton and **Habitat**. At roughly one week of age, the clam settles on the ground. The larva does not yet have symbiotic algae, so it depends completely on plankton. Many small clams die at this stage. At the **Veliger** stage, the larva develops the first shell and an organ called "velum" that has a ring of cilia for swimming and **Feeding**. Lastly, during the **Pediveliger** stage, the larva develops a "foot" to probe the ground and find a suitable place to settle. Once the larva sets, the clam will no longer move to another location, and is referred to as a "spat" (Learn.weatherstem.com). The clam is considered a juvenile when it reaches 8 inches (20 cm) in length.

Legend. The **Giant Clam** has been historically misunderstood to be a "killer clam" or "man-eating clam," and reputable scientific and technical manuals once claimed that the great mollusk had caused deaths. The **U.S. Navy Diving Manual** even gave detailed instructions for releasing oneself from its grasp by severing the adductor muscles used to close its shell. Today, the **Giant Clam** is considered neither aggressive nor dangerous. While it is capable of gripping a person's limb, the shell's closing reaction is defensive, not aggressive, and the shell valves close much too slowly to pose a serious threat to humans. Moreover, the largest clams, *T. gigas*, are unable to completely close their shells.

Predators. Smaller species like eels, shrimp, snails, fish, sea snakes, crabs, lobsters, and starfish are all known to snip small parts of the **Giant Clam's** mantle.

Human interest. The **Giant Clam** is considered a delicacy in Japan, where it is known as "Himejako;" same in France, South East Asia and Pacific Islands. Some Asian foods include the meat from the muscles of clams. In the black market, the enormous **Giant Clam** shells are sold as decors. Large amounts of money are offered for the adductor muscle, which the Chinese people consider to be an aphrodisiac. American

and Italian researchers teamed up to analyze the bivalves, and found the clams rich in amino acids that trigger an increase in sex hormone levels (Knop 1996). Also, the **Giant Clam's** high zinc content can aid in the production of testosterone (Kurlanski 2006).

Classification Status. The IUCN 2017-3 Redlists the ***T. gigas***, ***T. derasa***, ***T. rosewateri*** and ***T. tevoroa*** as "Vulnerable" but they have already become extinct in some areas (Neo et al 2017). The rest are just as endangered but are misclassified as "Lower Risk/Conservation Dependent." Now considered rare to find are ***T. hippopus porcellanus*** (J. Adams 2017, Reefbuilders Inc.), and ***T. costata squamosina*** (Hawkins et al 2017).

Threats. Many who choose **Giant Clams** as a source of livelihood are over-exploiting the trade. Clam numbers in the wild have been greatly reduced by the excessive harvesting for food and aquarium trade by locals and bivalve fishing vessels, and by corral reef habitat damage due to fishing vessels that do illegal dredging. Mainly the large adults are harvested and killed since they are the most profitable among the clam species (Lucas 1994). Nevertheless, overfishing has also stimulated successful efforts at industrial scale aqua and mariculture (Klumpp 1991) to breed and conserve the various **Giant Clam** species.

Regulations. In the 1980's, the local extinction and decimation of **Giant Clams** led to legal sanctions. Now, all species of **Giant Clams** are listed in Appendix II of the Convention on the International Trade of Endangered Species of Wild Flora and Fauna (CITES). There are special legal regulations in the Philippines (FAO 158 and 168; RA 550; Philippine Fisheries Code) that prohibit the collecting, theft, eating, sale and export of **Giant Clams** with the risk of paying fines or facing prison. Although these regulations exist, the enforcement of the law is ineffective. More local commitment working together with maritime police control-efforts is needed. The high price for clam-meat still provokes continuance of illegal fishing and trade.



Conservation of various **Tridacna** clams. Samal Island. Photo: Deng Fuentes

Conservation. A large Australian government-funded project during 1985-1992 had mass-cultured **Giant Clams**, particularly ***T. gigas***, at the James Cook University's Orpheus Island Research Station, that had also supported the development of **Giant Clam** hatcheries in the Pacific Islands, and in the Philippines (Braley 1988). **Giant Clam** aquaculture farms have successfully bred various types of **Giant Clams** in Samal, Camiguin, and Silaqui Islands. When the larval phase ends after 15 days, and the juvenile clams nestle on the tank floor, they must be at least 4 mm in length to be transferred to a cages the ocean where they can grow faster. When they grow to about 20 cm in size, they are freed from the cages, and laid on the seabed. Some clam farms raise their animals entirely on land while others transfer their stock to the ocean at the earliest possible time. There

are advantages and disadvantages to both land-based farms and ocean-based nursery farms.

The heavy investment necessary to build large nursery facilities and the 7-year growing period to bring species like ***T. gigas*** ready for meat harvesting size is not within reach of many coastal community villagers throughout the Indo-Pacific region. Instead, villagers turn their attention to the smaller species like the ***T. crocea***, ***T. maxima***, and ***T. squamosa*** to service the salt-water aquarium trade. It only takes 5-7 months for these species to reach a suitable size to be shipped, making them the economically feasible option (Foyle et al. 1997) compared with the ***T. gigas***. The ability to breed tridacnids in captivity also creates opportunity to reseed depleted reefs (Beckvar 1981). In the ocean, **Giant Clams** can counteract excessive algal growth by filtering the algae off the water, for a healthier ocean reef ecosystem (J.Keegan 2015, Miami University). They help filter the ocean waters, recycle nutrients, and provide food and habitat for small organisms particularly in the scales of its shells, which also help form the corral reef structure.

BML Adopt-A-Clam. If you would like to help conserve our **Giant Clams**, please consider adopting a clam. The University of the Philippines Marine Science Institute (UPMSI) recently announced **Giant Clams** in the coastal town of Bolinao, Pangasinan are up for adoption. The Bolinao Marine Laboratory (BML) said:

- ◆ A baby **Giant Clam** will be tagged with your name, and will be placed in a special area in the ocean nursery;
- ◆ You will receive an adoption kit with a certificate; and
- ◆ BML will care of your adopted clams and regularly track their growth to adulthood.
- ◆ 3 cm-5 cm, 1-year-old clam is P200; 8 cm-12cm, 2-year-old is P300; and 15 cm-25 cm, 4-year-old is P400.
- ◆ For more information, text UP MSI at 0920-4311640 or send an e-mail to bml@msi.upd.edu.ph



Main References:

- Beckvar, N. (1981). Cultivation, Spawning, & Growth of the **Giant Clams** ***Tridacna gigas***, ***T. derasa***, & ***T. squamosa*** in Palau, Caroline Islands. *Aquaculture* 24: 21–30.
- Braley, R. (1988). Farming the Giant Clam. *World Aquaculture*. 20 (1): 7–17.
- Foyle, T.P., J.D. Bell, M. Gervis, & I. Lane (1997). Survival and growth of juvenile fluted **Giant Clams**, ***Tridacna squamosa***, in large-scale grow-out trials in the Solomon Islands. *Aquaculture* 148: 85–104.
- Hawkins, S.J., A.J. Evans, A.C. Dale, L.B. Firth, D.J. Hughes, I.P. Smith (Eds). (2017). *Oceanography and Marine Biology: An Annual Review. Volume 55*, CRC Press, 488 pages.
- IUCN 2017-3 Red List.
- Klumpp, D.W., B.L. Bayne, & A.J.S. Hawkins (1991). Nutrition of the **Giant Clam** ***Tridacna gigas*** (L.). I. Contribution of filter feeding and photosynthates to respiration and growth. *Journal of Experimental Marine Biology and Ecology* 155 (1): 105–122.
- Knop, D. (1996). **Giant Clams: a comprehensive guide to the identification and care of Tridacnid clams**. Ettlingen: Dähne Verlag, ISBN 3-921684-23-4.
- Kurlansky, M. (2006). *The Big Oyster: History on the Half Shell*. Penguin Group. p. 160. ISBN 0-345-47638-7.
- Lucas, J.S. (1994). The biology, exploitation, and mariculture of **Giant Clams** ***Tridacnidae***. *Rev. Fish Sci* 2:181-223.
- Neo, M.L. et al. (2017). **Giant Clams: A comprehensive update of species and their distribution, current threats, and conservation status**. *Oceanography & Marine Biology Annual Review* 55: 87-388.
- Su Y., J.H. Hung, H. Kubo, and L.L. Liu. 2014. ***Tridacna noae*** (Röding, 1798) - a valid **Giant Clam** species separated from ***T. maxima*** (Röding, 1798) by morphological and genetic data. *Raffles Bulletin of Zoology*, 62:124-135.

Protection of Marine Wildlife

by Josephine M Viray

Our seashores are drenched with discarded plastics, particularly plastic bags and water bottles. What is astonishing to know is that this very same debris often washed ashore could be found in our deep waters as well. Deep-sea mammals such as whales, for instance, digest this debris, which is often the cause of finding them washed ashore lifeless. Floating plastic bags simulate a swimming jellyfish, which is a favorite delicacy of the green turtle. Ocean going vessels, be it cargo or passenger, are mainly responsible for this deep-sea debris. There has to be a way for maritime vessels to recycle used plastics and water bottles so as to avoid pollution of our oceans and shorelines, and help preserve marine wildlife that have been ingesting a large portion of these plastics over the decades.

An alternative option could be to manufacture thicker plastic water bottles instead, as they can be used and reused several times over, without adding to the current health hazard to marine life. Empty bottles should not be left on the shore, neither should they be disposed off in the ocean. In all green buildings, employees and their cleaning staff dispose off the used plastics and water bottles properly into recycling bins. However, some scientists contend that plastics never decompose completely which means that recycling plastic can only help up to a certain extent. Plastic, therefore, must not be replaced with yet another plastic product, rather, with a fully biodegradable product instead. Items made of plant-based materials can turn into food for marine life when tossed into the ocean.

Narayana Peesapaty, a researcher from India, developed edible spoons made of compressed millet, rice, and wheat flours in 2010. They contain no toxic preservatives and come in a variety of flavors: sugar, ginger-cinnamon, ginger-garlic, cumin, celery, black pepper, mint-ginger, and carrot-beetroot. The spoons have a shelf life of 2-3 years. The spoons can be thrown out to sea and will degrade in 4-5 days after your picnic at the beach. In doing so, you provide edible food for marine life as well.

A gelatinous water blob labeled as "Ooho" made by the Skipping Rocks Lab of the UK, brainchild of Pier Paslier and Rodrigo Garcia Gonzalez, is an edible 100% biodegradable water blob made of brown algae that encloses within the blob a gulp of potable water.



Body of a dead Humpback Whale is seen in Omonville-la-Rogue, northwest France, a rare species to the Channel. French fishermen brought the whale back in his nets, saying that it was already dead when it was caught in the nets. Entanglement in plastic bags and fishing gear have long been identified as a threat to sea birds, turtles, and smaller cetaceans. Photo credit: Marlowe Hood, courtesy of Phys.org

But altogether, the way I see it, marine plastic pollution is now much too pervasive. Indeed, based on the study, "**Proceedings of the National Academy of Sciences (PNAS)**," the finding was that at least 88% of the Earth's ocean surface is polluted with plastic debris. Researchers from both the University of Cadiz, Spain, and the University of Western Australia conducted this study. Plastic replacement is just half of the solution; the other half is plastic cleanup of the accumulated debris in the oceans and waterways.

There are patches of successful entrepreneurial efforts here and there to replace the use of plastic, but perhaps what we need is a global solution to solve a global problem, to turn the tide against usage of non-biodegradable plastics that somehow unwittingly end up in our oceans and shores.

The major plastic manufacturers themselves must take the lead to develop and implement massive green technology to clean up the planet's oceans of discarded plastic products that have now turned into deadly ocean debris to marine wildlife.



The author is a graduate of Political History from U.C. Berkeley, CA. Prior, she graduated from Assumption College (San Lorenzo, Makati) majoring in Business Administration and Entrepreneurship.



SONAME & PRS Hold 2nd Joint Golf Tourney

by Joanna Kristel C. Ligon

In celebration of the 68 years of Naval Architecture in the Philippines and a decade since the inception of the Society of Naval Architects and Marine Engineers, Inc. (SONAME) and 29th Founding Anniversary of the Philippine Register of Shipping (PRS) and with the success of last year's tournament, SONAME and PRS held its Second Joint tournament under "SONAME-PRS GOLF CUP" last April 27, 2018 at the Aoki Course, Eagle Ridge Golf & Country Club, Cavite City

The event was attended this year by 32 golf players. With good weather condition, participants enjoyed their game at the scenic and well maintained golf course. Cong. Jesulito A. Manalo of ANGKLA Partylist graced the ceremonial tee off with Engr. Sammuel T. Lim – Chairman of SONAME, Mr. Roberto A. Umali – Chairman of PRS and Mr. Augusto Arreza Jr. – Executive Director of Filipino Shipowners Association.

During the awarding ceremony, Engr. Jerome Manuel, President of SONAME, welcomed and acknowledged all sponsors and participants who supported the event for a cause. The players had their fair share of luck as some triumphed in their respective playing divisions while some got lucky to win fabulous raffle prizes.

Results of the tournament are as follows:

LOW GROSS CHAMPION: HONORIO CASALME
LOW NET CHAMPION: ROBERTO UMALI

CLASS A CHAMPION:	REYNALDO PABICO
CLASS A 1ST RUNNER UP:	KENNEDY PADUA
CLASS B CHAMPION:	SAMMUEL LIM
CLASS B 1ST RUNNER UP:	MARCUS LESLIE SUNTAY
CLASS C CHAMPION:	JUN SY
CLASS C 1ST RUNNER UP:	JIKIE ILAGAN
WOMEN'S CHAMPION:	RAFONCHELLE LIM
SPECIAL AWARDS:	
LONGEST DRIVE:	KENNEDY PADUA
MOST ACCURATE DRIVE:	VICENTE PONO
NEAREST TO THE PIN:	ROBERTO UMALI

At the end of the program, Engr. Thaddeus T. Jovellanos, President of PRS, thanked again everyone who supported this year's joint Golf tournament of the two organizations. The event could not have taken place without the continued support of the many companies that attended each year.

Proceeds from this golf tournament will be allocated in continuity of its different projects & initiatives on the promotion of maritime safety in the country.

It was another successful golf event and we thank all the participants and sponsors for the continued support. We look forward to see you again in the greens next year. ⚓



Fireworks Trade
Exhibitions & Conferences
Philippines Inc.



The Maritime
League



National Defense
College of the
Philippines

The Maritime League at MOA SMX Convention Center

June 29, 2018

10:00 am **134th Maritime Forum**
2:00 pm **General Membership Assembly**

For more details, please contact the ML Secretariat

✉ secretariat@maritimeleague.com

☎ +63(999)788-9595 / +63(906)213-9328



COMMODORE
Maritime Solutions Inc.

+63(46)4724685
info@commodore.com.ph
<http://www.commodore.com.ph>

BOATS · EQUIPMENT · SERVICES



Quality high performance defence / pilot / patrol / SAR / offshore aluminum workboats from **Maritime Partner AS**.



Custom and ready-made 38' to 100' monohull / catamaran / trimaran FRP interisland ferry boats from 36 to 150 pax.



Routinary dry-docking services & repair; Equipment installation, maintenance repair & quality restoration services.



Turn-key and custom marine materials handling equipment (davits, cranes, winches, etc).



Custom and ready-made FRP cruising / speed / recreation / leisure boats using the latest composite technologies.



Naval Architecture & Marine Engineering using advanced 3D CAD/CAM software tools.

iSoftware

iSoftware Systems Technologies, Inc.

🌐 <http://issti.com>

☎ +63 (2) 874-2006

✉ info@issti.com

📠 +63 (2) 874-1522

Software Solutions for...

3D MODELING & ANIMATION



SHIP-DESIGN & NAVAL ARCHITECTURE



SHIPBUILDING & SHIP CONSTRUCTION DETAILING



STRUCTURAL ANALYSIS FOR SHIPCONSTRUCTOR



ARCHITECTURE, ENGINEERING, CONSTRUCTION, ETC.



ALUMINUM BOATS

Small & Capable



The Philippine Coast Guard needed 300 light boats to patrol our 7,000 plus islands. The boats had to be small yet swift to be able to watch our territory effectively – and they had to be delivered in less than 12 months.

Propmech Corporation delivered all the boats to the Coast Guard in the appointed time and locations, handling the training of its crew as well. Today, the boats are in operation in various parts of the country.

As a marine integrator, Propmech is ready to meet any challenge.



Give us a call today. Be Propmech Ready
(02) 527-9055 www.propmech.com

PARTS & SERVICE

745 Solana St.
Intramuros, Manila
Telefax: (02) 5361827
(02) 5369711

SUBIC

Bldg. 39 Gridley Rd. Cor
Luna St. Global Ind'l Park, SBFZ
Fax: (047) 2523514
(047) 2500995

CEBU

J. King Warehouse M. Sanchez St.
Alang-alang, Mandaue City, Cebu
Fax: (032) 3440624
(032) 3440738

BACOLOD

2749 Hillado Street
Bacolod City
Fax: (034) 4334910
(034) 4334910

PALAWAN

Eastville Citywalk
G/F 02 National Highway
San Pedro, Puerto Princesa
(048) 4331298

ZAMBOANGA

Kasanyangan, Sta. Catalina
Zamboanga City
Fax: (062) 9931906
(062) 9931905

GENERAL SANTOS

123 P. Acharon Blvd.,
Silway Park, Gen. Santos City
Fax: (083) 5525503
(083) 3024576

We combine decades of industry savvy, smart technologies, top-rate equipment and expert workforce to move your goods through our ports swiftly and safely.



Because your customers can't wait...

We keep moving to keep your business moving and growing.



**International
Container Terminal
Services, Inc.**

EXCELLENCE UNCONTAINED

ASIA-PACIFIC

Philippines: Manila | Subic | Laguna | Batangas
Davao | Gen. Santos City | Misamis Oriental
Tagum City | Indonesia: Jakarta | Makassar
Muara, Brunei Darussalam | Karachi, Pakistan
Yantai, China | Melbourne, Australia

AMERICAS

Portland, Oregon, USA | Mexico: Manzanillo | Tuxpan
Puerto Cortes, Honduras | Guayaquil, Ecuador
Pernambuco, Brazil | Buenaventura, Colombia
La Plata, Argentina

EUROPE & MIDDLE EAST

Gdynia, Poland | Batumi, Georgia | Rijeka, Croatia
Umm Qasr, Iraq

AFRICA

Toamasina, Madagascar | Lagos, Nigeria
Matadi, DR Congo

www.ictsi.com