



MARITIME REVIEW

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PCG's Brand New MRRV from Japan





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About the Cover:

This issue's cover photo, the PCG's first of 10 **Parola** class multi-role 44m patrol vessels, acquired via a JICA funded ODA loan assistance to the Philippine Government. Photo credit: Embassy of Japan, Manila.

PCG Gears Up with its First Brand New MRRV from Japan

The popular slogan of President Duterte --“Change is Coming”-- enthralled the Filipino people, as the Philippine Coast Guard (PCG) rode that wave of change. Indeed, change had come and the PCG welcomed this wave that would break the long standing shortage in PCG maritime assets. The PCG started to change within as modernization of its fleet had began with the arrival of the first PCG Multi-Role Response Vessel.

On 18 August 2016, the Japan Government formally handed-over the first multi-role response vessel, **BRP Tubbataha** (MRRV-4401) to the PCG after her “Arrival and Blessing Ceremony” at the Headquarters Coast Guard Ready Force, Pier 13, South Harbor in Manila.

The construction of the 44-meter vessel started last February 2016 and was completed on July of the same year. She was named after Lighthouse Tubbataha which is located in **Tubbataha Marine National Park**, Palawan.

Prior to her departure from Japan, a naming ceremony was held which was attended and witnessed by the PCG Commandant **RADM WILLIAM M MELAD PCG** and **Ambassador Manuel M Lopez** of the Philippine Embassy to Japan. High-ranking officials from concerned agencies in Japan headed by **Vice Admiral Hideyo Hanazumi JCG** also graced the event.

She departed Japan on 11 August 2016 with two (2) PCG officers and ten (10) non-officers onboard enroute to Naha, Okinawa for bunkering prior to its voyage to the Philippines.

Nine (9) more MRRVs will be built by the **Japan Marine United Corporation (JMUC) Yokohama Shipyard** for the PCG and will also be named after the primary lighthouses in the country to denote the important role of the lighthouse as crucial aid in navigation to the mariners.

RADM Melad lauded the Japanese

government for the continuous and unwavering support to the PCG’s capability development programs. Over the past 18 years, Japan, through the Japan International Cooperation Agency (JICA), has extended numerous assistance to the PCG in terms of human resource development, providing additional equipment for the communications, diving and rescue, personal protective equipment for oil spill combat operations, and donating small boats and rubber boats.

Looking back, BRP Corregidor (AE-891) was the first Coast Guard vessel donated by the Japan government in 1998. AE-891 is a 56-meter lighthouse/buoy tender vessel which is one of the capital ships of the PCG primarily used in the installation of buoys and other aids to navigation, and in the removal of obstructions and hazards to the safety of navigation.

The project which built the MRRV, the **Maritime Safety Capability Improvement Project**, was awarded by the transportation department to the **Japan Marine United Corporation (JMU)**. It is being implemented as an Official Development Assistance (ODA) project, via a tied loan extended by JICA.

Under the project terms, the MRRVs will be used by the PCG for the following purposes:

- Primary rescue vessels within the PCG District’s areas of responsibility (AOR) when the extent of the



disaster is beyond the capability of floating assets deployed within the area;

- Assistance in the control of oil pollution and protection of the marine environment;
- Enforcement of all applicable maritime laws within the designated AOR, particularly relating to illegal fishing and sea patrol;
- Service as platform for rapid response during relief operations in the area;
- Transport of personnel and logistical support.

The MRRVs will be deployed to various PCG Districts across the country, including Manila, La Union, and Puerto Princesa.

The project includes the supply of standard spare parts and tools, crew training, ocean transportation, and marine insurance. The vessels will have a standard cruising speed of 25 knots, and a range of 1,500 nautical miles.

The delivery of the second MRRV is expected to take place sometime in December 2016. The remaining eight (8) vessels will be delivered on a staggered mode in 2017 until the 2nd quarter of 2018. 🚢



Maritime Events Calendar

SEPTEMBER '16

- 1-10 IUCN WORLD CONSERVATION CONGRESS (HONOLULU, HI, USA)
- 2 INTERNATIONAL COASTAL CLEANUP (ICC) OLONGAPO LAUNCHING (SM CITY OLONGAPO, ZAMBALES)
- 5-9 SMM INTERNATIONAL MARITIME TRADE FAIR (HAMBURG, GERMANY)
- 6 5TH ANNIVERSARY NATIONAL COAST WATCH SYSTEM
- 6-8 CANADIAN DEFENCE SECURITY AND AEROSPACE EXHIBITION ATLANTIC - DEFSEC ATLANTIC 2016 (HALIFAX, NS)
- 6-11 CANNES INTERNATIONAL YACHTING SHOW (CANNES, FRANCE)
- 10 ICC OLONGAPO RECYCLABLES REGATTA
- 12-15 FLEET MAINTENANCE AND MODERNIZATION SYMPOSIUM 2016 (HAMPTON, VA)
- 16 **MARITIME BREAKFAST FORUM #115** (PHILIPPINE COAST GUARD (PCG); HEADQUARTERS PHILIPPINE COAST GUARD, 139 25TH STREET, SOUTH HARBOR, PORT AREA, MANILA)
- 17 INTERNATIONAL COASTAL CLEANUP (ICC) DAY
- 19-22 MTS/IEEE ASIA OCEANS 2016 (MONTEREY, CA, USA)
- 19-25 MARITIME WEEK (PHILIPPINES)
- 21-23 SEATRADE CRUISE MED (STA. CRUZ, TENERIFE)
- 26-28 PATROL VESSEL MIDDLE EAST CONFERENCE (ART ROTANA, BAHRAIN)
- 30 INTERNATIONAL COASTAL CLEANUP PHILIPPINES (ICC-PH) ENVIRONMENT SUMMIT

SEPTEMBER-OCTOBER '16

- 28-1 MONACO YACHT SHOW (MONACO)

OCTOBER '16

- 4-6 IBEX 2016 INTERNATIONAL BOAT BUILDERS

EXHIBITION AND CONFERENCE (TAMPA, FL)

- 8 **MARITIME LEAGUE 25TH ANNIVERSARY**
- 12 **MARITIME BREAKFAST FORUM #116** (DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (DENR); TBD)
- 15-19 41ST INTERFERRY CONFERENCE (MANILA)
- 17-21 EURONAVAL 2016 (PARIS, FRANCE)
- 21 **1ST MARITIME LEAGUE/MPCGA GOLF TOURNAMENT (PN GOLF CLUB, BNS, TAGUIG CITY)**
- 21-23 INTERNATIONAL CONFERENCE ON NAVAL ARCHITECTURE AND OCEAN ENGINEERING (SHANGHAI, CHINA)
- 24 BATTLE OF SIBUYAN SEA, 72ND ANNIVERSARY (ROMBLON CULTURAL & HISTORICAL ASSOCIATION)
- 24-26 ARCTIC TECHNOLOGY CONFERENCE (ST JOHN'S, NF)
- 25-26 OFFSHORE ENERGY 16 (AMSTERDAM, NETHERLANDS)

NOVEMBER '16

- 1-5 SNAME MARITIME CONVENTION (BELLEVUE, WA)
- 2-5 INDO DEFENCE 2016 TRI-SERVICES FORUM (INDONESIA)
- 3-4 FERRIES, MARINE LOG CONFERENCE AND EXPO (SEATTLE, WA)
- 8-9 ASIAN MARINE ENGINEERING CONFERENCE (SINGAPORE)
- 15-17 METS MARINE EQUIPMENT TRADE SHOW (AMSTERDAM, NETHERLANDS)
- 15-17 FUTURE OF UNDERWATER TECHNOLOGY CONFERENCE 2016 (UK)
- 16-18 CREW CONNECT GLOBAL CONFERENCE & EXHIBITION (MARRIOTT HOTEL, MANILA)

- 18 **MARITIME BREAKFAST FORUM #117**

(DEPARTMENT OF TRANSPORTATION AND COMMUNICATIONS (DOTC); COLUMBIA TOWER, ORTIGAS AVE., BRGY WACK-WACK, MANDALUYONG CITY)

- 29-30 SHIPPING 2030 ASIA (SUNTEC SINGAPORE CONVENTION & EXHIBITION CENTRE, SINGAPORE)

- 29-30 MARITIME DEFENCE WEEK 2016 (MAX ATRIA, SINGAPORE EXPO, SINGAPORE)

NOVEMBER-DECEMBER '16

- 30-2 INTERNATIONAL WORKBOAT SHOW (NEW ORLEANS, LA)

JANUARY '17

- 6-15 LONDON BOAT SHOW (LONDON, UK)
- 19 DOTC ANNIVERSARY (PHILIPPINES)

- 20 **MARITIME BREAKFAST FORUM #118** (DEPARTMENT OF FOREIGN AFFAIRS (DFA); 2330 ROXAS BLVD., PASAY CITY)

FEBRUARY '17

- 9 **MARITIME BREAKFAST FORUM #119** (CEBU PORTS AUTHORITY (CPA); NORTH RECLAMATION AREA, CEBU CITY, CEBU)

- 19-23 INTERNATIONAL DEFENCE EXHIBITION AND CONFERENCE (ABU DHABI)

MARCH '17

- 17 **MARITIME BREAKFAST FORUM #120** (MARITIME ACADEMY OF ASIA AND THE PACIFIC (MAAP); KAMAYA POINT, MARIVELES, BATAAN)

APRIL '17

- 4-6 OCEAN BUSINESS (SOUTHAMPTON, UK)

- 21 **MARITIME BREAKFAST FORUM #121** (MARITIME INDUSTRY AUTHORITY (MARINA); 984 PARKVIEW PLAZA, TAFT AVE. COR TM KALAW ST., ERMITA, MANILA)

- 25-27 SEA ASIA (MARINA BAY SANDS, SINGAPORE)

APRIL '17

- 17-19 MAST ASIA MARITIME / AIR SYSTEMS AND TECHNOLOGIES (TOKYO, JAPAN)

Maritime Wish List for the Duterte Administration

by Commo. Carlos L. Agustin AFP (Ret)

The administration of President **Rodrigo “Digong” Duterte** has started with a bang! (No pun intended) Not one, but quite a few.

It has impressed many, and may I say, including myself, who did not know him very well, and whose promises did not affect me when we first met during an AGFO fellowship at Camp Aguinaldo last year, before he even tossed his hat in the Presidential ring. One thing I regretted was, due to a previous engagement, not being able to accept his invite for a golf sortie in Davao, where he had an aide get our names for a wonderful golfing event, including billeting and round trip airline tickets. It did indicate that he had a lot of backers for the election, as that invitation must have required a lot of funds, and I recall that he did say “no” when someone asked if he was running for President.

We liked his bravado against corruption and drugs, but one thing that to me evoked some caution was his idea about federalism (attuned to his notion about the Muslim separatist movement), and aligned with this his belief in the Bangsamoro Basic Law (BBL) plan as conceived by the Aquino administration.

He is pursuing the federalism idea, and has plans to push through with constitutional change to achieve it (and perhaps carry on with changes that can make the BBL constitutional). He stated just last week that “the Comprehensive Agreement (CAB) has been signed”, when actually the CAB is by itself unconstitutional in its surrender of national prerogatives to the Moro Islamic Liberation Front (MILF) in many of its provisions.

The idea of a Maritime wish list brings to mind a most crucial development that challenges the competence or innovativeness of the Duterte administration: how to handle the Permanent Court of Arbitration’s awards to the Philippines on the West Philippine Sea. The international community lauded the President’s initial pronouncements on his cautious

approach, fearing a perceived clash of China and the U.S. should Duterte take a hard line.

To me, having been a practitioner of Confidence Building Measures for many years, that is an excellent recourse, and his proposal to use (and acceptance by) former President **Fidel V. Ramos** as a special envoy is indeed a welcome development. In last week’s Chairman’s Page, I supported the idea of Joint Development, even advancing a possible activity which I furnished the National Security Adviser, Gen. **Hermogenes Esperon**, for possible discussion in the NSC. That column was written prior to the PCA Decision, and Senior Associate Justice **Antonio T. Carpio** had come out with a statement that in his opinion, “Joint Development” is unconstitutional. This matter deserves serious consideration, and I think we can find a way to do it without conceding sovereign rights. After all, “thinking out of the box” is the norm of the Duterte administration, as we have just seen in the case of law and order, and drugs.

Let me now go to the other maritime interests.

Maritime wish list

The only President who actually had a maritime sense of development, in my opinion, is former President **Fidel V. Ramos**. He is the only one who, having really thought about the negligence of many years, decided to come out with a Maritime Development item in his “Leaf Frogging Strategy” for the 21st century that he introduced during the second half of his administration. It was entitled “Developing the Philippines as a Maritime Power” and he put he Secretary of DOTC, Sec **Arturo Enrile** at the helm of this cluster. I might say it was this role that converted Enrile, who was a retired army general, to be a maritime advocate.

I started with a DRAFT WISH LIST of 8, to be expanded to 10. After getting inputs from some Forum Members, I had the following:



1. MARITIME DEFENSE AND SECURITY
 - Developing a Maritime Security Strategy
 - Naval modernization
 - Coast Guard modernization
 - Support to the Coast Watch System
 - Establishment of Naval and Coast Guard reservations at strategic places
2. SHIPPING, MARITIME ADMINISTRATION AND MARITIME TRADE
 - Improving the Philippine Ship Registry
 - Cabotage policy
 - Improving customs administration
3. MERCHANT MARINE PERSONNEL (SEAFARERS) ADMINISTRATION
4. SAFETY OF NAVIGATION.
 - Increasing ATON density
 - PCGS Modernization
5. MARINE ENVIRONMENT AND RESOURCES
 - Development of the National Marine Policy
 - Establishing an Oil Compensation Fund
 - LGU role in coastal environmental protection
6. SHIPBUILDING, BOATBUILDING AND REPAIR
 - Exploring incentives for domestic shipbuilding
 - Developing an IACS-standard Philippine Classification Society
7. M A R I T I M E COMMUNICATIONS
8. PORTS, HARBORS AND WATERFRONT DEVELOPMENT
 - Enabling PPA, CPA and other Port Administrations to retain earnings for improved port infrastructure development
 - Institutionalizing long range master plans for port develop-

ment

- Providing a policy for developing waterfront tourism
9. STRATEGY FOR THE WEST PHILIPPINE SEA AND UNCLOS
10. ENHANCING SUPPORT FOR MARITIME TRANSPORT CONNECTIVITY

These would not be further developed, when Magsaysay Lines President and PISA Chair **Doris Ho**, a longtime colleague in the Maritime League, told me that she had her own ideas but talked to DOTR USEC **Felipe A. Judan** to oversee what we want to do, since another group is already underway along the task, and that is the **Movement for a Maritime Philippines** (MMP) under **Leo J. Santiago**. Thus, I sought Leo out, and got this update from him.

THE MOVEMENT FOR MARITIME PHILIPPINES (MMP) continues to conduct forum, dialogues, consultation meetings with various maritime stakeholders on the **PROPOSED NATIONAL MARITIME AGENDA**, which will be submitted soon to President **Rodrigo Roa Duterte**, who pledged to make it one of his priorities once elected to office.

The Group had a meeting at MARINA with all sectors present: PAMTCI, the Movement for Maritime Philippines, Integrated Seafarers of the Philippines, COMMA, AOS-Manila; MJAP, PAMI-AIMS; FAME, PHIL-MRSS, JM; and PISFA. The Welcome Speaker was new MARINA Administrator Engr. **Marcial Q. Amaro III**, who disclosed his marching orders in 100 days from the President. He said like all appointees, he was made to submit plan of actions for the first 100 days, six months, and one year. He said he is into "housecleaning" at present and would welcome all the support of everyone to achieve the goals and his mandate as Marina Administrator.

Herewith is the account submitted by **Leo J. Santiago**, Maritime Forum and Convenor, **Movement for Maritime Philippines** (MMP)

Discussion focused on the proposed **National Maritime Agenda** (NMA) as drafted by the group led by Atty. **Brenda Pimentel**. A copy was distributed to all those present and everyone was urged to give their comments or suggestions. Atty. Pimentel proceeded to discuss the detailed

content of the proposed NMA one by one as some comments from the participants were also given response and/or got explained.

According to Engr. **Sam Lim**, they are interested in how the group would be able to incorporate the many issues and concerns of the various stakeholders in maritime. He mentioned that for their part under JMG, they would be ready with the "road map" of the sector that they were able to achieve after consultations and meetings with various manning groups for several months. He provided a copy of the "road map" format to MMP.

Mr. **Ericson Marquez** seconded Engr. **Sam Lim**'s comment and also sought explanation about how the Movement of Maritime Philippines would be presenting the agenda to the Duterte Administration. He asked what is the status of MMP in getting commitments from other sectoral groups and what kind of representation would MMP be with various organizations and groups involved in the project.

Meanwhile, Atty **Peter Aguilar** of PISA and domestic shipping group reported that they were able to meet up with DOTC USEC **Felipe A. Judan** of maritime cluster, and who told them that the latter would like to consult or meet with various maritime sectors to know what they want to achieve or accomplish under the new administration. Aguilar said they would welcome the opportunity to meet with DOTC official as it is one big opportunity for every group or sector to be given a chance to air their sentiments and their aspirations.

Other comments centered on whether specific concerns or demands of every sector could be included in MMP's presentation to the President and his concerned staff. It was agreed that all were welcome to send in their proposals before deadline so that MMP can include them complete with summary and required data. Capt. **Jess Morales** reiterated the need to get more convenors who can commit their group in the furtherance of common objectives.

It was noted that the **National Maritime Agenda** (NMA) would include: a national maritime goal: "An inclusive and Sustainable Socio-Economic Growth through the Maritime Industry. The vision --A Philippine Maritime Industry-- serves as a backbone of the nation's progress. The overall strategy: "Harmonize the various

industry objectives/targets and put together a cohesive and clear maritime direction."

Back to the agenda, Atty. **Brenda Pimentel** proceeded and discussed the proposed objectives, which she said consists of explanatory notes. She also said that is not yet final so more inputs from various groups are welcome up to the end of July 2016. Below are the objectives:

1. Institute good governance in all maritime industry-related agencies/entities;
2. Attract investments in the maritime industry;
3. Increase job creation in the maritime industry;
4. Raise the Philippine ship registry as a responsible flag register;
5. Ensure continuous sea transport service for domestic and international trade;
6. Optimize port capacity and performance to be at par with regional and international gateways;
7. Increase the country's share in the global shipbuilding/repair sectors;
8. Maintain safe, efficient and secure Philippine merchant fleet in domestic and international routes;
9. Develop maritime human capital; and
10. Maintain the country's advantages in the provision of shipboard manpower to international shipping.

The proposal also included action plans, strategy, and time frame. It was also mentioned during the discussion that because not many Filipinos understand maritime, a massive campaign to raise awareness and consciousness of the general public must be launched to help mainstream maritime in government all over the archipelago.

Capt. **Ronald Enrile** of Angkla Partylist pledged to support the initiative of various groups especially in crafting specific measures to achieve their goals through legislation. In the subsequent forum-workshop, groups presented their road maps, proposals, and/or demands for inclusion in the coming document for submission to the President.

Additional proposals focused on resolving port congestion, focus on elimination of corruption in various

(continued on page 9)

Enhancing Operational Interoperability

10th ASEAN Navy Chiefs' Meeting Viewpoint Exchange

by VADM Caesar C Taccad AFP



Southeast Asia straddles several of the most important maritime passageways in the world today. These arteries of global trade, transportation, and commerce are vital not only for regional but also global peace, security, and stability. Also, the region's booming economies make it a bright spot for international investment. The waters in and around Southeast Asia are believed to hold substantial mineral, oil, and gas reserves. Moreover, it hosts some of the richest hotspots for marine biodiversity.

However, there are several challenges to regional security. The region's porous maritime borders make it vulnerable to non-traditional security challenges, such as piracy, terrorism, human trafficking, and arms smuggling, to name a few. Also, large swathes of maritime Southeast Asia lie on the Pacific Ring of Fire, an area marked by increased seismic and volcanic activity. In addition to that, the area is beset by periodical typhoons, which cause direct and collateral damage to regional states. In addition, the congested maritime space of Southeast Asia presents a substantial navigation hazard to marine vessels.

In view of these security challenges, it is clear that no one country in Southeast Asia, using all its instruments of national power, can hope to address these challenges all by itself. The non-discriminatory, transnational, and shared nature of these maritime security threats necessitates a collaborative approach by regional states. ASEAN as the centre of a stable Southeast Asia serves as a venue where such a collaborative approach can be formulated.

In fact, ASEAN has just implemented its plan for economic integration, and we can expect that other pillars of ASEAN integration, such as the socio-cultural and politico-security environment integration, are to follow.

Moreover, ASEAN navies have

just adopted the Standing Operating Procedures (SOP) on Humanitarian Assistance and Disaster Relief (HADR) operations. With that in mind, ASEAN now has a viable framework for a collective response to these non-traditional security threats. The organization places great importance on respecting the diversity within itself and its individual member's interests and sovereignty. This unique feature of ASEAN, among other regional blocs worldwide, may reflect itself in particular nuances that have to be observed in coalition operations.

Operational nuances in ASEAN HADR operations may manifest themselves in participating countries having different goals and interests, logistics, naval capabilities, training levels, equipment variety, doctrines, intelligence, leadership, and legal issues.

In terms of operational nuances, it is important for ASEAN to arrange the best command relationships with all participating navies to ensure mission success. ASEAN navies must also ensure they have sufficient resources for the tasks, as not to compete with the affected population. Further, ASEAN navies have different logistics systems. As such, regional commanders-in-chief can assume the role of interoperability advocates within the ASEAN bloc, focusing on the acquisition logistics process. Also, mechanisms that shall make technologically incompatible ASEAN partners interoperable should be devised. Financing HADR may present itself as a challenge to ASEAN navies. As such, ASEAN should design mechanisms to buy time for participating navies to discuss long-term financial arrangements, without affecting their operational tempo.

It is also clear that ASEAN navies possess different degrees and types of capability. Thus, sharing burdens equitably rather

than equally can facilitate each participating navy to maximize their contribution to the overall HADR effort. In connection with that, ASEAN will have to be innovative to find effective roles for participating navies. Training levels have to be considered as well. It will do better for ASEAN navies to pursue joint HADR training to train up to a higher common standard, rather than 'train down' in making concessions to different competency levels between regional navies. These training exercises should involve all levels of command and include all staff, and rehearse operational tasks and orders, or new missions. Moreover, ASEAN navies' training for HADR must revolve around some common doctrine and standards. The training must also be routinely assessed to ensure compliance to the common doctrine and standard. The ASEAN SOP on HADR can provide some of the functions of a common doctrine for future HADR exercises. Also, exercise planners should exploit equipment interoperability where it exists, and make allowances where it does not. Interoperability should stress more on correct processes and procedures, rather than technical compatibility.

ASEAN's diversity also manifests itself in each member's different military doctrines. ASEAN HADR naval planners should prepare for the peculiarities of each member states' doctrines. This particular nuance requires understanding and adjusting for the differences involved. These differences can be managed through training exercises. Also, skilled liaison officers can be employed to smooth out doctrinal differences between ASEAN navies.

Regarding information sharing, planners should be sensitive of the historical and cultural differences of participating navies. Each ASEAN navy must have a clear delineation of information that may or may not be shared. ASEAN should

also exploit any unique contribution of its member states, in order to accomplish the HADR mission at hand. Language can also present a challenge. Although English is the ASEAN working language, all member states have yet to achieve a working degree of proficiency. Aside from cultivating English language skills through student exchanges and local programs, ASEAN navies can also employ mobile learning devices and apps, such as smartphones, tablets, e-books, mp3 players, and so on.

ASEAN planners should keep in mind that a central norm of ASEAN is to respect each member state's sovereignty. Moreover, each ASEAN navy has its own chain of command. While a unified chain of command akin to NATO is unlikely for ASEAN, planners should establish tasking that ensures unity of efforts. ASEAN too has to take into consideration legal prerequisites before engaging in HADR operations. It should look into whether its initiatives are valid based on international law, ASEAN's own norms, each member state's domestic laws, and the assisted state's domestic law. It is recommended that all participating ASEAN navies in HADR operations have access to legal advice throughout the entire operation.

Cultural nuances encompass human factors such as religion, class and gender, discipline and cultural tolerance, work ethics, standards of living, and national traditions.

ASEAN's religious diversity requires planners to be aware that each member state that religious requirements and sensitivities that must be considered in the planning of exercises or operations. Aside from religious differences, planners should also consider the interpersonal dynamics with each member state's navy to ensure a harmonious working relationship. Gender roles and sensitivities, particularly on women, should be observed. Some ASEAN countries are more willing to commit more decisions, planning, and operations to women. However, other countries may have a more conservative view. Planners should also understand the different national traditions within ASEAN's members, and have full cognizance of their implications to the conduct of coalition operations.

Despite several challenges to enhancing interoperability between ASEAN navies, the same non-traditional challenges open opportunities for a collective regional response to improve their HADR capabilities.

Southeast Asia's maritime non-traditional threat environment presents challenges that no individual member can hope to solve alone. ASEAN, as the basis of a stable regional order and cooperation, is well-placed to be a venue for crafting solutions to these challenges. Using ASEAN as the foundation for regional cooperation, ASEAN navies can come up with an

intra-bloc naval exercise for HADR capability building.

Building ASEAN navies' competencies will take time. It entails confidence-building measures, fostering people-to-people ties, and sustained capability-building. It is high time for ASEAN navies to develop their HADR capabilities to ensure the continued prosperity of the bloc, and to secure its most valuable resource, its people. It is recommended that the ASEAN navies' SOP on HADR should be promulgated in the ASEAN Defense Ministers Meeting to enshrine it as an official ASEAN policy. ASEAN should also pursue navy HADR exercises to operationalize the ASEAN navies' SOP for HADR operations.



Co-written by SN2 Gabriel P Honrada PN, this speech was delivered by the Flag Officer-in-Command, Philippine Navy during the Viewpoint Exchange of the 10th ASEAN Navy Chiefs' Meeting held in Kuala Lumpur, Malaysia, on 22-28 August 2016.

(continued from page 7)

government agencies such as NLRC, MARINA, PPA, POEA, Coast Guard, etc., creation of admiralty court, enhancement of the Philippine Ship Registry, creation of an integrated shipping commission or department of maritime affairs, and other proposals to make "maritime" as the "key-player" in the Philippine economy which the Government fails to recognize.

Most of these meetings ended with the acknowledgement of all those present and who participated actively in the discussion to make the **National Maritime Agenda** truly reflective of the demands, vision and aspirations of the various maritime stakeholders. Requested repeatedly was the need to send in their written proposals or road maps for inclusion in the proposed NMA for everyone to react and ratify later on.

Note: I acknowledge this NMA was initiated at the Forum of the Movement with President Duterte in January 27 at the **Davao Merchant Marine Academy**, well before he got elected. In that occasion, he was made to sign a "commitment wall" in front of over 2,000 people that he would give priority to the maritime sector once elected into office. Thus, my accession to this mandate of the MMP. ⚓



The 10th ASEAN Navy Chiefs Meeting, Kuala Lumpur, Malaysia. Photo credit: Akaun Twitter Rasmi Mohd Johari Baharum | Timbalan Menteri Pertahanan

Ice-Breaking During Global Warming

by former Philippine President **Fidel V. Ramos**

Recently, in his good luck year (meaning age 88), **FVR** was unexpectedly designated by President **Rodrigo Du30** as “Special Envoy” with the mission to “break the ice” between China and the Philippines – whose traditionally friendly relations had turned chilly, if not cold, with the 12 July 2016 ruling (award) by the U.N. Permanent Court of Arbitration about issues in the South China Sea/West Philippine Sea area.

dialogue perhaps with four dependable assets with links to China’s top leaders in Beijing.

We were fortunate to make initial contact with a good friend of the Philippines – former China Ambassador Madame **Fu Ying**, now Chairperson of the Foreign Relations Committee of the National People’s Congress – through the good offices of a prominent HK-based businessman

Foreign Affairs Committee of the National People’s Congress and former Ambassador to Manila 1998-2000) and Professor **Wu Shicun** (President, China’s National Institute for South China Sea Studies) – in a friendly atmosphere. They discussed, in their private capacity, the way forward in the spirit of universal brotherhood and sisterhood for peace and cooperation between the two countries.

Their informal discussions focused on the need to engage in further talks to build trust and confidence to reduce tensions to pave the way for overall cooperation for the benefit of both their peoples and the region. They explored possible human and ecological security options and suggestions for the benefit of their peoples, such as:

- encouraging marine preservation;
- avoiding tension and promoting fishing cooperation;
- anti-drug and anti-smuggling cooperation;
- anti-crime and anti-corruption cooperation;
- improving tourism opportunities;
- encouraging trade and investment facilitation; and
- encouraging Track II (think-tank) exchanges on relevant issues.

They expressed the hope to find common ground for mutual benefit, especially for the poverty-stricken sectors of their societies. They stressed that building trust is very important to the long-term beneficial relationship between the Philippines and China.

They value the long history of friendship of the two neighboring countries and the prospect of further cooperation for the sake of future generations.

China has welcomed former President **Ramos** to come to Beijing as Special Envoy of Philippine President



Photo courtesy of www.facebook.com/rodyduterte

Capably assisting **FVR** in this delicate assignment were former DILG Secretary **Raffy Alunan III**, eminent expert on Asian affairs **Chito Sta. Romana**, millennial think-tanker Yale graduate **Sam Ramos-Jones**, and Ma’am **Ming Ramos** – **FVR**’s best friend, spouse and caregiver.

Hoping for good fortune in the Oriental manner, we chose the date 8 August 2016 (8-8-2x8) to push out first to Hong Kong (China’s Special Administrative Region). On that **FVR**’s + Ma’am **Ming Ramos**’ good luck day of 8888, the team’s first job was to try to

and golfing partner **Wai Sun Ng** (a.k.a. **William Go**), who is also well-known among Manila bankers.

The Final Press Statement. At the outset, in order to satisfy the curiosity of the concerned Philippine and China audiences, allow us to reprint our joint Final Press Statement which was simultaneously released thru multi-media from Beijing, Hong Kong, and Manila at 10:00 AM, 11 August 2016:

10-11 August 2016, Former President and Special Envoy **Fidel V. Ramos** met in Hong Kong with his old friends – Madame **Fu Ying** (Chairman,

Rodrigo R. Duterte. Former President Ramos, as an ice-breaker, expressed the Philippine Government's desire to hold formal discussions with the Chinese Government on issues of mutual concern and interest at the appropriate time to explore pathways to peace and cooperation.

They reiterated that they were in Hong Kong in their personal capacity and were pleased with the discussions and looked forward to the beginning of a process of formal discussions, which will be continued in Beijing and Manila and other possible venues.

The above is confirmed by the following in their private capacities (duly signed opposite their respective names): Former President FVR, Madame Fu Ying, Mr. Wu Shicun, Former Secretary Rafael Alunan III, Jose Santiago "Chito" Sta. Romana, and Samuel A. Ramos-Jones.

Atmosphere Of Friendship And Mutual Concern. The above exploratory talks was made possible through the good offices of Mr. **Wai Sun Ng** (a.k.a. **William Go**), Chairman of the **Jibsen Group** in Hong Kong and Independent Director of the San Miguel Corporation-Hong Kong. Through him, we were able to contact Madame **Fu Ying**, incumbent Chairperson of the Foreign Affairs Committee of the National People's Congress, former Vice-Foreign Minister, and former China Ambassador to the Philippines who is well-known to Chairman **Bill Go**.

Although it entailed much inconvenience and some family sacrifice on her part (since she, her husband and their one daughter were on vacation in a desert in Mongolia), she consented to talk to our team in Hong Kong and she also convinced Dr. **Wu Shicun**, a member of the Foreign Policy Advisory Group, Ministry of Foreign Affairs, to join our talks. It should be remembered that the month of August is vacation time in China (as well as in the U.S.) and it was not possible to get in touch with other possible Chinese "assets" on

short notice.

Dr. **Wu Shicun** is President of China's **National Institute for South China Sea Studies (NISCSS)** that specializes in research on issues of the South China Sea (SCS) and is active in related academic exchanges. In order to promote SCS studies and improve academic network, the NISCSS Beijing Office was established in January 2013.

After nearly 20 years of exploration and development, the NISCSS has formed a systematic scope of research including the strategy of the SCS; the geopolitics of the SCS, including neighboring countries' policies on the SCS; international law and the SCS disputes; peaceful settlement of the Spratly Islands dispute; resources development and environmental protection in the SCS; the strategies, institutions and mechanisms for developing the maritime economy and the building of the **Maritime Silk Road** of the 21st century.

Bill Go also provided the conference venue on Victoria Peak, all the inland transportation, delicious Chinese meals, and the services of his household staff which consists exactly 50% Chinese and 50% Filipinos.

Our Consul-General **Bernardita Catalla** in Hong Kong, likewise, was most supportive and helpful.

In Manila, our primary asset for back channeling is **Joseph Lim**, incumbent Chairman of the China-Philippines Chamber of Commerce who is close to Ambassador **Zhao Jianhua** of the PRC Embassy in Manila. We requested Chairman **Lim** to contact some other friends in China and to prepare his corporate premises in Shenzhen City, Guangdong Province as the possible venue for future friendly talks.

Long-range Strategic Framework. Our Philippine Team found very useful the U.N General Assembly Resolution of 25 September 2015 approved and adhered to by 195 member-nations – China, the Philippines and the U.S. included – as the long-range strategic framework plan for the avoidance of

global armed conflict that might lead to World War III.

FVR's latest book titled, *U.N. 2030 – One World, One Community, One Family*, which described the U.N.'s 17 Sustainable Development Goals to be attained by year 2030, proved to be a handy reference book for all.

Perhaps the most important talking point of our team (accepted and also reiterated by the Chinese team) was:

"The seas should be used to save lives and ensure man's survivability, and not to kill people or destroy institutions."

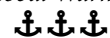
Thus, in expectation of broader and more in-depth talks in the near future between the Philippines and China, FVR's recommendations to President **Duterte** are to include, among others, to:

1. Expedite the appointment/confirmation of a Philippine Ambassador to the PRC (preferably **Jose Santiago "Chito" Sta. Romana**).
2. Continue exploratory talks in Beijing, Manila, Davao City and/or other venues.
3. Build on the initial gains, particularly on fishing, tropical fruits, tourism and infrastructure support for China's **Maritime Silk Road** programs for the Philippines.

Future Prospects. The bottom-line for all sides is to avoid shooting conflicts, and other violent confrontations in the SCS/WPS that could lead to World War III. Considering the devastating, deadly and catastrophic effects of today's weapons of mass destruction, global warfare could obliterate planet earth and all of its 7.5 billion inhabitants except those with new pacemakers like FVR's, whose a heartbeat facilitator is guaranteed for 25 years.

War definitely is not an option!

Neither is Global Warming!



Please send any comments to
fvr@rpdev.org.

Copies of articles are available at
www.rpdev.org.

Revisiting the Chain of Command Concept

By VAdm Emilio C Marayag Jr AFP (Ret)

The concept of “chain of command,” along with other leadership and management principles that were not formally published until the 20th century, has been practiced since the ancient times by military and other organizations. For one, Alexander The Great conquered territories far beyond his domain by using an effective command chain to communicate and control his subordinate commanders. For another, French Emperor Napoleon Bonaparte, who attempted to equal or surpass the exploits of Alexander The Great, utilized a robust structure to exercise control of his lower echelon units that included a special, self-sustained formation, called Army Corps, which operated independently far from the edges of the immediate battlefield to accomplish specific missions.

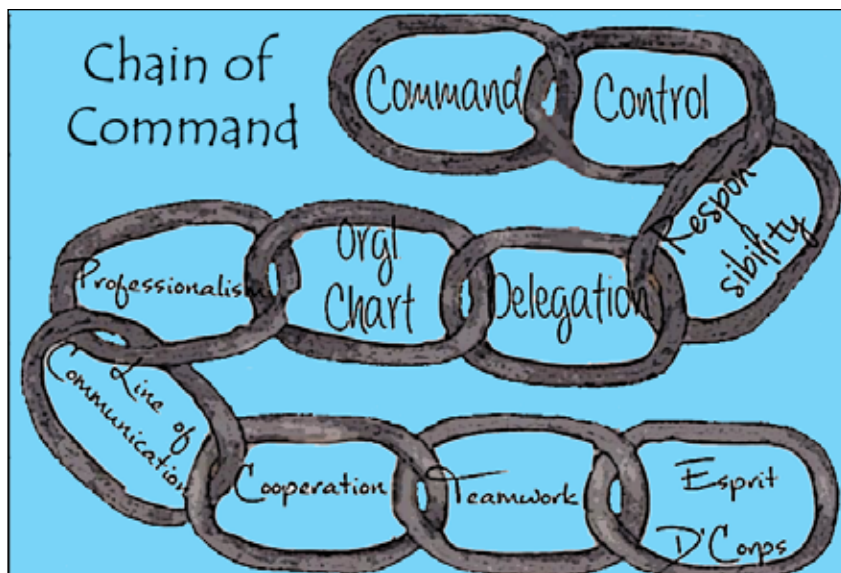
It was only in 1916, however, that the term “chain of command” emerged in a formal publication. Henri Fayol, a French mining engineer, released his “14 Principles of Management” in the book “Administration Industrielle de Generale.” Two of these 14 principles --unity of command and scalar chain-- became the bases of what is now termed as “chain of command.” Along with Frederick Taylor, Max Weber and some others, Fayol popularized the classical management theory that there is but one best organizational structure that would fit all types of organization without due regard to size, technology, workforce or environment to make them efficient -- the bureaucracy. Such structure reflects the “logic of efficiency.”

The incredible advances in technology in the last 30 years led to the creation of new forms of organization. These organizations have unconventional structures

that pose challenge to the concept of chain of command. With these recent changes can maritime security agencies, with their bureaucratic structures, address threats that emanate from non-state players or groups that use new, internet-based structures? Is there a need to strengthen the chain of command or adapt new structures?

Foundations of Chain of Command.

Some people look at the “Ten



Commandments” as the original chain of command because each “command” is as forceful and demanding as the others. For military men, civil servants, organizational leaders, and the less- and non-religious individuals, the chain of command consists of common terms: command, control, responsibility, delegation, cooperation, esprit de corps, communication, teamwork, professionalism and organizational chart. These terms that characterize the chain of command came from the theory of organization.

Organizations are a social arrangement designed to attain controlled performance in pursuit of collective goals, according to Huczynski and Buchanan. Forming an organization involves setting standards,

measuring performance, comparing actual outputs with standards, and taking corrective actions, if necessary. The hallmarks of an organization are performance and control. Most organizations have six parts as identified by Henry Mintzberg: strategic apex (top leaders), middle line (operational leaders), operating core (rank and file), techno-structure (systems planners/designers), staff support (administrative/logistics/finance) and ideology (collective/binding ethos and norms). To achieve the organizational aims in accordance with the set standards, organizations design their structure based on their objectives, strategy and operating environment.

The organizational structure depicts the arrangement of lines of authority, reporting relationships, rights and duties. It also determines how roles, power and responsibilities are assigned, controlled and coordinated. The organizational structure is illustrated in a chart, which showcases how the

organization intends authority, responsibility and information to flow within its formal structure. The organizational chart assigns people into units or departments, shows the span of control, specifies the number of hierarchical levels, puts the formal reporting channels, and depicts the system to ensure effective communication. The chain of command is based on the structure clearly demonstrated in the organizational chart.

What is Chain of Command?

Chain of Command is a formal line of authority, communication and responsibility from the top of the organization, or strategic apex, to the bottom, or the



operating core. It clarifies who reports to whom and establishes order in which authority, with attendant power, is wielded and delegated from the highest echelon to the lowest hierarchical level. Each level is considered a link in the chain, and each link represents a commander with authority and responsibility. Fayol posited that the more clear-cut the chain of command, the more effective the decision making and greater the efficiency. The logic of efficiency emanates from functional division of work, hierarchical relationship, bureaucratic forms of control, narrow supervisory span and closely prescribed roles.

The chain of command keeps order and control, ensures that directives and information are passed downwards, enhances discipline and reinforces accountability. It works by delegating authority, monitoring efficiency, coordinating effective use of resources, and building up teamwork, esprit de corps and cooperation. The command chain performs best with professional workforce that is highly competent, psychologically committed and imbued with character that manifests honesty, integrity, humility and moral courage. Just like an anchored ship, the strength of the entire chain of command is only as strong as the weakest link in the chain.

While observing the chain of command is fundamental in achieving efficiency, it also misses some opportunities. Some information requires faster decision-making especially in addressing customers' needs or unforeseen situations. Seeking approval or disapproval on urgent matters through the chain may take time. In such situations the lower echelon commanders could either take the initiative by making decisions as they deem fit, or just wait for higher ups to decide before acting on the matter at all.

Command Responsibility.

Being part of the chain of command entails responsibility and accountability. In 6 B.C., Sun Tzu ordered his commanders to take responsibility for the civility of their subordinates. In 1439, King Charles of Orleans decreed that his commanders were to be held responsible should their men commit crimes against civilian population. In 1863, U.S. President Abraham Lincoln promulgated the Lieber Code that provided humane and ethical treatment of

war prisoners. The Hague Conventions of 1899 and 1907 institutionalized the laws and customs of war or armed conflict that would prevent unnecessary sufferings of protagonists and unintended victims, and destruction of cultural properties in the conflict zone. Likewise, the Geneva Conventions of 1949 and 1977 formulated the International Humanitarian Law and additional protocols for state and non-state parties involved in armed conflict, and the treatment of POWs and non-combatants.

In the Armed Forces of the Philippines, Circular 28 highlights that "the military commander is responsible for whatever his unit does or fails to do." In the Philippine national police and other law enforcement agencies, Presidential Executive Order Number 226 makes officials and supervisors accountable for "neglect of duty" for failure to take preventive or corrective action before, during or immediately after, the commission of a crime.

Command responsibility is generally defined as the accountability of an armed force commander for the acts of his/her subordinates. It includes the duty to be instantly informed of the way the men carry out the tasks assigned to them. Control and supervision are the essence of command responsibility.

The Practice of Chain of Command.

The one on top of the chain must have a mechanism to ensure that those below comply with the orders or directives emanating from issuing authority. This system is what is termed as Command and Control, or C2. It is a set of organizational attributes and processes by which the organization mobilizes and employs human, physical and information resources to solve problems associated with mission to accomplish it. C2 is principally focused on operations that starts with planning followed by preparation and then the actual execution. Assessment completes the operations cycle.

The practice of chain of command is best depicted in the conduct of operations by uniformed, armed services. Best laid plans could either go as intended or awry. The 2015 **Mamasapano** incident in Maguindanao province of Mindanao is an example of a good operations plan with a bad chain of command and absence of command responsibility. The top commander, who personally

got the briefing before the actual conduct of operations, bypassed two links in the chain and shied away from accepting command responsibility for the large number of death of elite policemen. A field commander, in whose area the incident occurred and who had the wherewithal, did not employ his air gunships and other vital assets that could have prevented the further slaughter of government troops by the enemy. Some quarters viewed this as either that field commander received orders from the top commander to abandon the beleaguered troops to preserve the Peace Process or his way of expressing disgust for being out of the loop in the planning and actual execution. Everybody pointed the blame to the operational commander. Results: principal target (an international terrorist) killed; 44 participating troops killed and some at point-blank distance; undetermined number of government-issued firearms and equipment lost; and relief and prosecution of the operational commander. Not one killer of the beleaguered policemen was captured nor put behind bars. **Outcome:** diminished morale of the troops and immediate justice was denied to the victims.

Contrast this with the 2013 **Lahad Datu** incident in Sabah, Malaysia. When the intruders established pockets of influence inland, the state police commissioner took all the necessary steps to dislodge and arrest them. Instead of getting relieved for that inland intrusion reflective of failure of intelligence, the top commander in Kuala Lumpur provided everything needed by the police commander, from military war chest to local civilian leaders' and population support, during the dislodgement operations. The chain of command worked and the police commander accepted command responsibility. Results: intruders were either killed or captured; the police commissioner got promoted in rank; and the creation of Eastern Sabah Security Command with military-civil servants partnership. **Outcome:** improved morale of the troops and swift resolution of the incident.

These two incidents show that results and outcomes of operations are reflections of the type of chain of command executed, which is crucial in establishing control and accountability in the field. The more clear-cut the chain of command, the more effective

(continued on page 23)

FerrySafe, FerryFast, FerryConvenient FastCat

By Vicky Viray-Mendoza



APFC's *FastCat* M5 catamaran ferry near the waters of the Port of Batangas. Photo credit: Hariboneagle927

The Archipelago Philippine Ferries Corporation (APFC) is a ferry company based in Muntinlupa, Philippines. It also operates a *FastCat* line of catamaran ferries, which is the first in the Philippines. APFC's slogan is *FerrySafe, FerryFast, FerryConvenient*. APFC's mission is to connect the Philippine islands and neighbouring countries by providing safe, fast and convenient ferry transport system for passengers and cargo, designed specifically for Philippine water conditions, and follows international standards. The *FastCat* is certified and classed by the **American Bureau of Shipping**, and therefore complies with the latest international safety rules and regulations. (Rey Gamboa, 10-Feb-2016, *Philippine Star*)

In the early 1990s, **Christopher S. Pastrana** found the sailing conditions pitiable as he traveled by sea to his father's hometown in Matnog, Sorsogon. He operated **Capp Group of Companies**, which transported bulk cargo of fertilizers. His company later acquired the Ro-Ro division of bus firm, **Philtranco**. (Ivy Mendoza, 3-May-2016, *Philippine Daily Inquirer*)

APFC was incorporated in 2002 and started its vessel modernization program in 2010 under the brand of *FastCat* headed by **Christopher S. Pastrana** as CEO, and his wife, **Mary Ann Ibuna-Pastrana**, as

Executive Vice President/Treasurer.

In 2004, the Philippine government invited the firm to be part of the **Road-RoRo Terminal System Strong Republic Nautical Highway** project of the government.

The fleet of APFC was upgraded in 2010, when it partnered with Australia-based **Sea Transport Solutions** to acquire 10 RoRo vessels, built by China-based **Boni Fair Development**, with an extended sub-loan from the **Japan International Cooperation Agency (JICA)** for the first 10 *FastCat* vessels. (Ronnel Domingo, 17-April-2014, *Philippine Daily Inquirer*)

With the acquisition of the vessels, APFC became the first ferry company in the



APFC Chairman Christopher Pastrana. Photo credit: *Philippine Daily Inquirer*

Philippines to operate catamaran-type RoRo vessels (Asia Business Chanel, 9-October-2015). The firm later joined the modernization of Philippine ports in the east and west sea corridor. By 2015, APFC's operations in the country were 65% cargo-based and 35% for passenger-based transport. (Ivy Mendoza, 3-May-2016, *Philippine Daily Inquirer*)

In September 2015, *FastCat* began operating in Bacolod (Banago) and Iloilo (Lapuz River Wharf). Also, the Negrenses can now travel north to Luzon, through Aklan and Mindoro via island-crossing *FastCats*. In December 2015, APFC linked Eastern Visayas and Mindanao by opening a route between Liloan (Leyte) and Lipata (Surigao). In July 2016, APFC linked Negros southward to Mindanao through the Dumaguete-Dapitan route. The firm plans to connect Palawan to Luzon through Bulalacao, Mindoro.

By 2020, routes to countries in Southeast Asia, namely Malaysia and Indonesia, are planned.

Ship Design. The ships were specifically designed for climate conditions of the Philippine seas. The ships also have a double hull with 10 watertight compartments, no ballast tanks for stable buoyancy, a fire security system, and navigation and control systems. The top speed of the vessel is 16.5 knots or 29 kms per hour, "faster than most RoRo vessels," according to Christopher Pastrana. The



FastCat is designed to carry 275-320 passengers with accommodations for the senior citizens and the disabled, as well as 30-40 passenger cars and 6-7 trucks or buses.

Maritime Safety. With its focus on ensuring passenger safety, welfare and comfort, **APFC** partnered with **Sea Transport Solutions** of Australia, the leading designer and builder of mid-speed Ropax/RoRo vessels built for freight vehicle transport with passenger accommodations. This partnership would bring in 10 brand-new custom-made Ropax vessels fitted with world-class amenities and fully compliant with international standards for lifesaving, firefighting, and stability.

A typical RoRo in the Philippines has only one hull. In contrast, the **FastCat** has two hulls and 10 watertight compartments. Its twin-hulled design makes her more stable since her center of buoyancy and gravity is wider than a mono hull. The **FastCat** also keeps the water out of the vessel. This is why she doesn't have a ballast tank like other RoRo vessels, and this makes her safer, lighter and faster than the rest. The **FastCat** uses a state-of-the-art navigation and control system. She has two steering control systems. In case of engine failure, she can shift from automatic to manual steering. Therefore, this catamaran is capable of taking passengers safely to shore.

FastCat has a clearance between the water and hull of three meters. It stands 3 times higher than most RoRo vessels. If a one-meter wave hits the vessel, water will not get inside the car deck or the hull, mitigating the risk of a major maritime incident. Also, most RoRo vessels only have one engine. In case of emergency, a mono hull single engine RoRo vessel has to stop its voyage and

is thus unable to return to port. In contrast, the **FastCat** has 4 internationally classed and ABS-certified Yanmar engines that power the **FastCat**, and a twin hull. Therefore, it is better equipped to handle engine emergencies than most RoRo vessels. **FastCat** is the only ferry compliant with the International Maritime Organization's safe return to port regulation. All of the state-of-the-art features in the bridge equates to a 100% redundancy on performance and safety, and therefore, minimizes the risk of maritime incidents. (Rey Gamboa, 10-February-2015, Philippine Star)

FastCat Fleet. To serve the inner islands of the Philippines and its neighboring countries, 20 more RoRo vessels would be added to the initial 10 vessels. With a total of 30 new RoRo vessels built by 2020, annual cargo capacity will increase from 1.5 million tons to 12 million tons, and passengers will increase from 3 million to 10 million. (Daphne

Magturo, 7-April-2016, BusinessWorld)

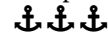
However, EVP-Treasurer **Mary Ann Ibuna-Pastrana** said, "MARINA data show that even if we complete the 30 vessels, we can only serve 25% of the whole industry," adding that the company would build a shipyard facility, mini-hotels near ports, and a training center for seafarers.

Environmental Sustainability. The **FastCat** has two hulls and auxiliary engines that provide electricity, but Solar panels and wind turbines also power the **FastCat**. (Rey Gamboa, 10-February-2015, Philippine Star)

Land and Sea Connectivity. To help strengthen the **Road-RoRo Terminal System-Strong Republic Nautical Highway**, the sister bus companies of **FastCat** namely, **Jam Liner** and **Philtranco**, with a combined fleet of 700 buses, gives logistical support to the RoRo operations to enable in-land travel connectivity along their routes: Manila-Laguna-Batangas-Quezon for **Jam Liner**; and Manila-Pampanga, Bicol and parts of Visayas and Mindanao for **Philtranco**.

The first routes of the 10 FastCats include these pairs:

- Batangas-Calapan (Mindoro);
- Bulalacao (Mindoro)-Caticlán (Aklan);
- Matnog (Sorsogon)-San Isidro (Samar);
- Bacolod-Iloilo;
- Lipata (Surigao)-Liloan (Leyte);
- San Carlos (Negros Occidental)-Toledo (Cebu);
- Talisay (Cebu)-Tubigon (Bohol);
- Jagna (Bohol)-Balingoan (Misamis Oriental); and
- Dumaguete-Dapitan.



Shipping 2030 Conference
Singapore, 29 November – 1 December, 2016

The Road to SHIPPING 2030: What's the Big Idea?



by K.D. Adamson

“As change accelerates, future success in shipping and maritime depends on developing a holistic, digital vision, and some big, hairy, audacious goals. The Shipping 2030 conference series is ours,” says K.D. Adamson. As a Futurist, the question I get asked often is, “*what’s going to change?*” But the question you should be asking is, “*what isn’t going to change?*” Many in shipping feel that change is occurring much faster than they’re used to. We’re entering a unique period where a range of global megatrends are combining with new generational mindsets and colliding head-on with a group of breakthrough technologies growing at an exponential rate.

The Rise of New Arenas. The result is a raft of wholesale disruption that is touching every area of human life including the global economy and the businesses we create. The evidence is that no industry or sector will be immune from digital disruption. In fact, digital is sweeping away the traditional boundaries of what we called **vertical markets**, what my **Futures Agency** colleague **Gerd Leonhard** now describes as **Arenas**. As technologies move horizontally across organizations we’re seeing traditional silos break down too. HR, Marketing and Procurement could all be using the same underlying technology platform.

Changing Digital Paradigms. Recent research by **Gartner** shows the movement of IT budget towards other departments and individuals is accelerating. 14% of cloud storage, 13% of social media, and 11% of office productivity software is purchased without the IT department even knowing about it. In fact, IT is no longer the lead purchaser of technology. According to Gartner, the marketing department is the new frontrunner and will outspend the IT department on technology by 2017. The pressure to survive and thrive in this new digital paradigm is enormous, but some

industries are better equipped than others to meet the challenges. Shipping is often described as being backward when it comes to technology. “Operating in the stone age,” was how one analyst described it.

Shipping’s Definition of Technology. It includes artificial intelligence to smart materials, 3D printing and nuclear fusion. But shipping’s definition of technology has tended to be narrower, and bound up almost exclusively in engineering terms. On that measure, shipping has seen technological advancement, but the kind of specific domain engineering expertise that is not the “technology” the rest of the commercial world has been steadily adopting over the past decades. In contrast, it’s the kind of technology that is based on digital operation, efficiencies, data, analysis and collaborative working, and underpinning all of that is connectivity. That is why shipping has lagged other industries, because it’s been handicapped by the expense and complexity of deep sea connectivity, dividing it from data, assets and its people, and from the technology platforms and applications which have driven innovations for others.

The Value of Connectivity. When you put this “expensive” airtime into the overall context of operating the multi-million pound assets that ships represent, for the average **Inmarsat** user it equates to less than 1% of operating costs which brings you to the real crux of the matter. Connectivity, the gateway to all the digital operation, efficiencies and insight that other industries know to be essential, has continued to be viewed simply in cost terms in the shipping industry. The real question is not how much connectivity costs, but how much value it can deliver for the enterprise. Yet, suppliers are still talking to IT departments about connectivity where cost is the only metric, when it is other departments like marketing, procurement, and HR that could realize

genuine value and competitive advantage from enterprise-grade connectivity. As Gartner indicates, they are beginning to spend more on technology than IT is.

Facing the Digital Transformation. Together with the unique challenges of the harsh domain in which we operate, shipping and maritime companies lag other industries on the road to digital transformation, and that’s the case on both an individual organization and broader industry level.

Futureautics has been working hard to identify and contextualize the technology and wider trends shipping needs to understand to effect a fast and successful digital transformation, but that’s hard when the industry doesn’t approach digital in a holistic way. There are plenty of narrowly focused conferences in the maritime industry where subjects like connectivity, big data, analytics, autonomy, and sustainability pop-up in isolation, but that just isn’t enough. The evidence is that successfully navigating the digital future requires an organizational vision, plan and appetite, and real direction from the top. These are dangerous times for big, well-resourced incumbent companies in every industry. Falling technology costs and access to scalable platforms are leveling the playing field for lean, agile start-up companies with big ideas which are threatening to undercut, out-manoeuvre and in some cases, disinter-mediate the legacy organizations.

The Bigger Picture. It isn’t just about technology. Technology can enable the competitive advantage, but it won’t be the advantage in and of itself. What’s really required is an innovative mindset to find the new ideas and make new collaborations often in unexpected places. You could say that **Futureautics’** partnership with **KNect365** to create the **Shipping 2030** conference series is kind of an example of that, because one of the most profound changes will be around what we’ve traditionally understood to be the

Why the Shipping Community Needs a Change of Mindset

by Lena Göthberg



How does the shipping and wider maritime industry need to evolve in order to keep pace with a fast-moving landscape? “*It must begin with a change of mindset,*” writes Lena Göthberg. The maritime industry is slow to embrace change, and not just in the digital sense. We’re an old industry, with little interest in the new. Our sector is steeped in tradition, governed by fixed mindsets with the over-arching thought: “*If what we’ve done in the past has worked, why mess with a winning formula?*” Now faced with the reality of a broken system and the realization that something no longer works, we’re being forced to re-analyze our thinking and answer the big question as all others have asked several times before . . . “*What needs to change?*”

What Needs to Change? Rather than wiping our hands of the issue and passing it onto a team that may vaguely deal with digital, what is needed now is a collective change of mindset – one that urges and spurs everyone, both inside and outside shipping, to open up to new possibilities and ideas, encouraging an open conversation around change. It still fascinates me to see that whilst the shipping industry is often on the cutting edge when it comes to the vessel itself, it still continues to lag far behind other industries when it comes to the basics. In my opinion, it is time for senior management to embrace the fact that every shipping company needs a digital

strategy and that we, the first movers, can assist this by speaking about digital, in terms which they understand, explaining that there is a competitive advantage over those that are not as progressive. Companies will need to form a digital team, capable of strategic thinking, prepared to adopt new challenges and innovations, and committed to an ongoing program of education to improve their understanding of the digital world.

Giving the Shipping Industry a Voice.

Who from outside the industry subscribes to a maritime newsletter? How many maritime journalists write about our industry in a way that the public can digest? How many maritime blog sites do you see that engage younger generations? We need to get the message out that this is an interesting industry to work in, explain how much we contribute to society, and prove that we are much more than how we are portrayed in the media. Shipping has never had a voice that reaches beyond ourselves. We need to think about where people consume their news and be prepared to focus our attention there. I have put the **Shipping Podcast** on channels that are largely uncharted waters for the maritime including iTunes and mobile apps. After a year of podcasting, I rarely speak to anyone within the industry about shipping, but instead I get so much feedback, questions and new ideas from my wider audience.

This shows willingness from the public to learn about maritime, and to connect with us. We’re dependent on world trade, so when the underlying drivers for trade, consumption and energy start changing, then shipping simply must follow suit. When industries embrace digital change, it’s easy to see the difference between how they used to do things, and how efficient they have now become. We need to respond to the demands of our customers who are becoming increasingly digital-minded. Apart from data and technology that improve efficiency, it’s the collaboration that digital platforms facilitate that makes the real difference.

In 10 years’ time, the first movers will have perfected today’s trend and new ones will take their place. It’s not easy to be the first movers. The average ship-owner has a fleet of 5-10 ships and if those were delivered before or during the recession, there is little you can do to stay afloat. What you can do is open up, share your knowledge, and collaborate. This is the new mind-set that is making waves, and we will see the result of this paradigm in the coming years. ⚓

Lena Göthberg is the Host and Producer of the Shipping Podcast who has worked in the industry for over 25 years. Her goal is to give the shipping community a voice and take the maritime industry online, helping it to connect with the digital world that surrounds it. Go to Twitter @lenagothberg.

rules of competition and value creation. The energy and resources wasted in competing on everything can be far outweighed by the value created by collaborating with each other towards a shared objective. The world it serves is undergoing a major shift, but shipping is so used to analyzing threats and opportunities within its narrow silo that it’s missing the bigger picture. From internal processes to asset optimization and utilization, smarter product development, maintenance, business development, and delivering, **digital innovation** offers huge opportunities.

The Need for Big Ideas. With intelligent transport and logistics systems, ubiquitous connectivity, data and analytics, autonomous

vehicles, and unprecedented transparency of operations, shipping needs some innovative big ideas. Finding them requires 360° thinking, approaching the connected future holistically, understanding our suppliers, our customers, and their customers, the new consumers. Connecting people, with technology, ideas and each other, from ship operators to customers, suppliers, start-ups and regulators, will enable companies to be more agile, collaborative, knowledgeable, attractive to new talent, and guide them as they invest in the digital infrastructure and competence they need to thrive in the future. I’ve been saying this for a while, so I’m really delighted to be part of this event, one whose

purpose is to provide the platform that shipping needs to share the big ideas and accelerate its speed of innovation. That’s what’s known as a “big, hairy, audacious goal,” the touchstone for rudely successful companies in the digital era. If you haven’t got one, come to Singapore in November and let’s help you find it. ⚓

K.D. Adamson is a Futurist, an expert in digital paradigms, exponential technology, global megatrends, and generational mindsets on business and society. As CEO of Futureonautics, she is the world’s foremost ‘blue’ domain futurist, author, presenter, and keynote speaker. Go to kdadamson.com or Twitter @KAdamson.

Friend of the Sea confirms Philippines' Frabelle Tuna

by Vicky Viray Mendoza

The Philippine fishing company, **Frabelle Fishing Corporation**, has recently concluded the **Friend of the Sea** (FOS) certification renewal audit. Yellowfin, skipjack, bigeye, and bullet tuna products from Frabelle can continue to display the FOS official seal of approval.

Fishing Method. The tuna is caught through the purse seine method by the company's certified vessels in the Western Central part of the Pacific Ocean.

As of May 2015, **Frabelle** had 22 tuna purse seiners; 9 sardine and mackerel purse seiners of different sizes; and 2 more purse seiners being built for larger fishing capacity, and to replace some of the older vessels.

As reported by **Alex Hafford** of **Greenpeace** in 2012, purse seiners use fish aggregation devices (FADs) to set nets around the vessel, which Greenpeace finds to be a highly destructive method of fishing, that it continues to stand against the purse seine method, and wants it banned.

Nonetheless, **FOS** finds **Frabelle** fishing as medium scale in volume with a minimal bycatch. Thus, **Frabelle** is found as neither overfishing tuna nor harming bycatch, which are set free and returned back to sea.

Distribution. **Frabelle** distributes its seafood products locally and internationally, including Asia, Europe, Middle East, and North America.

History. **Frabelle** was established in the Philippines in 1966 and based in Navotas, a city in Metro Manila well-known as the fishing port central, and one of the biggest in Asia. **Frabelle's** small business grew from one Japanese second-hand deep sea trawler, to one of the largest fishing companies in the world. President **Francisco Tiu Laurel** named his fishing company **Frabelle** after his name,

Francisco, and that of his wife, Bella. From trawl fishing, **Frabelle** moved into purse seining. The initial target species were small pelagic fishes like sardines, mackerel, and scads fished within the Philippine waters.

Expansion. In the mid-70's, Frabelle started purse seining of tuna, and in 1981 it expanded its fishing operations beyond the Philippines into the waters of the Western and Central Pacific region, but particularly in Papua New Guinea. Neil Ramsden reports in **Undercurrent News** that **Frabelle** vessels began landing skipjack and yellowfin caught in the waters of the 8 PNA islands (Parties to the Nauru Agreement). The islands collectively control 25–30% of the world's tuna supply, and approximately 60% of the western and central Pacific tuna supply. **Frabelle** also plans to expand operations in Kiribati, Micronesia, and the Solomon Islands, beyond tuna processing.

Janina C. Lim reported in **Business World** on 16 April 2016 that **Frabelle's** President said, "The company does not target to increase fish catch this year so as to stabilize prices for the industry." He further added, "Frabelle usually catches around 130,000 tons of fish annually." This translates to a catch of 356 tons of fish per day. Earlier in 19 May last year, **Neil Ramsden** reported in **Undercurrent News** that **Frabelle** would need to process just 120 tons of fish per day to break even.

Lim also reported that discussions with government authorities on **Frabelle's** intended exploration in **Benham Rise** happened as early as last year. To recall, in

2012, the Philippines won its claim of the **Benham Rise** plateau, east of Luzon, under the United Nations Convention on the Law of the Sea (UNCLOS), and has since conducted experiments showing bigger sizes of fish, and the presence of various species of tuna in the area. According to **Asis G. Perez**, Bureau of Fisheries and Aquatic Resources Director, "**Frabelle** is, so far, the only big private corporation set to fish in Benham Rise."

Frabelle has started fishing recently in May this year at the **Benham Rise**, the country's newest maritime territory. With an estimated monthly catch of 500 tons at \$1,700 per ton for 7 months of operations in a typhoon belt area, the total estimated annual revenue amounts to \$5.95 million.

Sustainable Fishing. The Philippine fishing company, **Frabelle**, relies on strict sustainable procedures that reflect an environmentally friendly business approach. "**Friend of the Sea** has

become the leading certification program," says **Floyd T. Laurel**, Senior Vice President of **Frabelle**. "We are happy that our sustainability values and goals have aligned over the last years."

Friend of the Sea is an international certification program for products from sustainable fisheries and aquaculture. Over 500 companies in over 50 countries rely on FOS to assess the sustainable origin of their seafood. The audits performed on the companies are based on the best and the most updated available scientific data, and are run by accredited independent certification bodies. 📍



Letter to the Editor:

A Jury System for the Filipinos

by Daisy Brett-Holt

The **JURY SYSTEM** is a judicial process where a group of ordinary people are called by law to decide serious legal cases brought to court for investigation and trial. It is a means for the ordinary Filipino to file a case against anyone, rich or poor, who have allegedly done a serious crime to his fellow man.

Advantages of the Jury System

1. It empowers the Filipinos in indirectly running the government and administering equal justice to all.
2. With the presence of the Jurors, bribery and coercion will be less likely to take place.
3. The serious civil and criminal cases will be swiftly decided upon. Cases

- may take just 3 days to 2 years to close. Accused persons may only be jailed if proven guilty.
4. The cheating and corruption of government and private officials and staff would be stopped because if caught, they will face jail time and/or heavy fines/penalties.
 5. "Land grabbing" cases will be swiftly investigated and decided upon.
 6. Victims of crime will be compensated appropriately.
 7. The Jury System can unite the Christians, Muslims, and Ethnic groups when they sit together as Jurors.
 8. The Filipino character will change

from corrupt to fair, and will stand proud to be of Maharlikan race.

Types of Juries

1. The **GRAND JURY** is composed of 23 highly educated members called **JURORS**; chosen by lottery from the electoral register, and remain anonymous. They serve as juror for a term of 6 months, and receive a compensation that is twice the minimum wage. The **GRAND JURY** has the power to:
 - Investigate a suspect in secrecy to determine probable cause within 45 days;
 - Decide with a fixed majority rule by secret ballot; and
 - Indict directly the crime offenders

YES to *Jury System* for Filipinos

**ORIENTATION SEMINAR
PARA SA LAHAT**

Puano tayo magkakaroon ng pantay-pantay na katarungan?

VENUE: BRGY. 649 – ZONE 68, COVERED COURT
DATE: APRIL 24, 2015
TIME: 9 AM – 10 AM
FOR MORE DETAILS: 02 294 9994, 0906 586 4072, 0907 706 1947

Baseco Compound , Manila

in court.

- The **TRIAL JURY** is composed of 12 ordinary citizens, also called **JURORS**, at least 21 years old, can read and write, and are educated enough to be able to process simple facts. They need not be professionals. They are chosen by lottery from the electoral register to participate in deciding serious civil or criminal cases. They serve for the duration of the trial, and are paid the minimum wage.

The **TRIAL JURY** has the power to decide whether the accused is guilty or innocent with a fixed majority rule by secret ballot. Their decision is final. Postponement of a trial is not allowed.

The **Presiding Judge** enforces court order; rules on the admissibility of evidence and advises the jurors on the laws involved in the particular case and how to serve in the jury. He does not participate in the decision-making.

What our Constitution says

Article II Section 1 of the Constitution states, “The Philippines is a Democratic and Republican state. Sovereignty resides in the people and all government authority emanates from them.”

As a Democratic country, we the people are given the right to one and only one vote. As a Republican country, we have two more votes to spare: The right to vote through a **GRAND JURY**, and the right to vote in a **TRIAL JURY**.

This is the best means (a) to stop government officials and private individuals from being corrupt, who then cheat and use the legal system in their favor; and (b) to combat private citizens who take the law into their own hands.

Article VI Section 32 of the Constitution states, “The Congress shall, as early as possible, provide for a system of initiative and referendum, and the exceptions there from, whereby the people can directly propose and enact laws or approve or reject any act or law thereof passed by the Congress or local legislative body after the registration of a petition...”

Therefore, we have the power to directly propose and enact laws, and approve or reject any act or law passed by the Congress after the registration of a petition.

How do we accomplish this?

According to RA 6735 ACT or the People’s Initiative Referendum Act, “The power of the

people to directly propose, enact, approve or reject, in whole or in part, the Constitution, laws, ordinances or resolutions passed by any legislative body upon compliance with the requirements of this Act is hereby affirmed, recognized and guaranteed.”

What are the requirements?

- Collect 5.4 Million (or 10%) registered voters’ signatures on a petition to enact the **National Jury Law**.
- Submit to the COMELEC the completed Signature Sheets for signature authentication and verification of the number of signatures. 7 Million signatures shall be collected to make up for the disqualified signatures.
- COMELEC to set the date for a Referendum about 90 days or less from the date 5.4 Million voters have been registered, and verified.
- Hold a National Referendum asking the 5.4 Million voters if they are in favor of a **JURY SYSTEM**.
- Supreme Court to implement National Jury Law if majority of the voters are in favor of a **JURY SYSTEM**.

Ask Congress to do this

We need not amend or revise the Constitution. We will simply be using a new law called the **National Jury Law**. This will be implemented by the Supreme Court, following

the people’s approval at the Referendum.

We urge you to join the World Philippine Jury Initiative (WPJI), contribute to fund the collection of 7 Million signatures, and sign the petition for a National Jury Law.

For more information about WPJI, go to www.philippinejury.com.

Please donate to NatWest, Camberley, WPJI Account No. 602203-62612387; or BDO, Pasig, Worldwide Philippine Jury Initiative (PH) Account No. 7890029079.




The author, Daisy Brett-Holt, is a BSE graduate of UP Diliman. Upon graduation in 1971, she taught Physics at Jose Abad Santos High School. After 10 years and a Master's degree, she was recruited to teach in Bornu State, Nigeria. She then took a one-year Post Graduate Course in Education at Reading University to qualify as a Secondary School teacher in UK. In 2008, she became involved with a Filipino association based in London that advocated the Jury System. Later, some members and Brett-Holt founded the Worldwide Philippine Jury Initiative (WPJI). She retired from teaching in 2012 and went straight to being a full time Jury System advocate. After personally learning and experiencing the effects of the Jury System, the author believes it is the missing piece in our Constitution that would make it complete or whole, to function well.




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The Manila Yacht Club

The Country's Premiere Yacht Club

The Manila Yacht Club (MYC), established in 1927, is a member's only Club and is the country's premier yacht club. Considered as a social and sporting Mecca, much of the Philippines boating activities are based at the MYC.

89 years on, the Club remains today, the country's premiere yacht club due to its strong traditions and rich historic past. The Club is a yachting hub in Southeast Asia committed to the promotion of all forms of water activities.



Past MYC Commo. Juan Marcos C. Arellano
Offshore Sailing



When it comes to maintenance of member's yachts, the MYC Yard facilities have been upgraded to include a 15-ton travel lift capable of lifting yachts up to 50 feet and a slipway for larger heavier yachts. A hardstand area, work dock, and concrete launching ramp are also available.

The 2015-2016 Boating Season formally began with the Club's traditional Opening Day celebrated last Saturday, October 10, 2015.



RAdm. Bayani R. Gaerlan AFP, Chief of Naval Staff, was guest of honor. He joined **Commodore Francisco P. Garcia**, Club Directors and other club members to celebrate this colorful annual event.

The Philippine Coast Guard 101st Auxiliary commanded by **Rear Admiral Winifredo E. Villanueva**, together with the MYC 201st Naval Affiliated Reserved Squadron, joined the day's festivities.



The MYC offers members extensive dining and restaurant facilities; The Clubhouse Veranda now features an attractive array of Chinese, Spanish and Filipino cuisine in its daily menu offerings and the opportunity to enjoy the famous Manila Bay Sunset. Formal Dining is offered at the Diamond Helm Room. And a range of private function facilities can cater to anything from small family gatherings or business lunches to grand ball functions catering to 100 or more.



Photo credit: Storm-Crypt, Tourism-Philippines.com

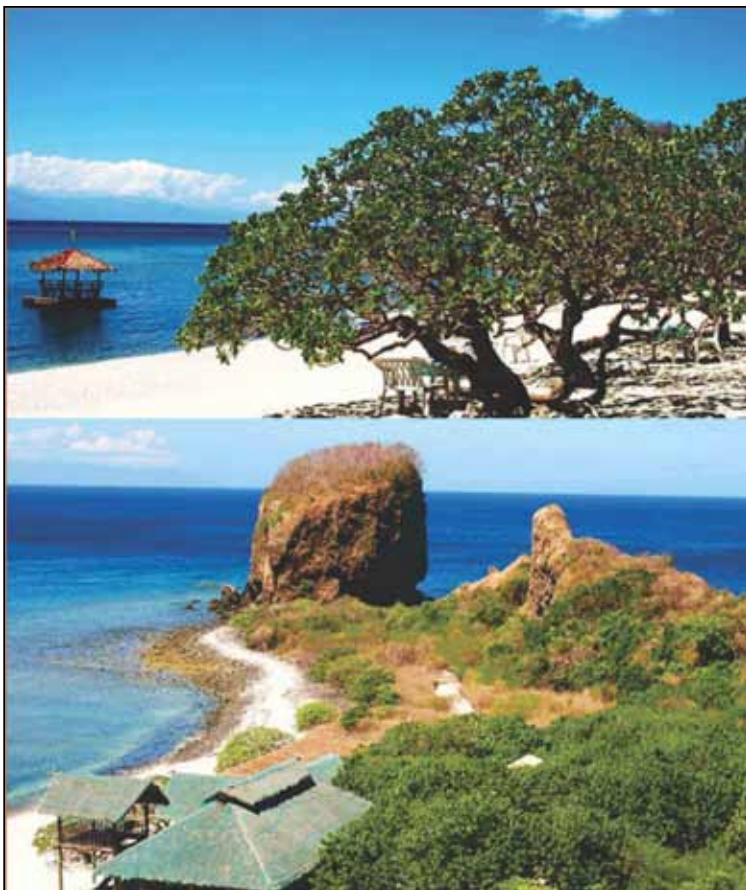
Visiting yachts and their crews are welcome to the Club. The Manila Yacht Club is situated within a closed basin protected by a typhoon-proof breakwater.

Visiting yachts up to 60 feet may be moored inside the basin, Yachts above 60 feet may anchor outside the basin and transfer by dinghy or service boat to the main clubhouse. Upon arrival, visitors should register with the Administration office and introduce themselves to the Club officers.



MYC Maricaban Properties

75 Nautical Miles from Manila, Maricaban Island, Batangas, is a good out-of-town destination for MYC boat owners of both sailboats and motorboats, and for the other MYC Sailing and Boating Programs.



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The Yellow brick tracker is a rugged and fully self-contained battery operated tracker which works anywhere on Earth. The stand-alone marine safety, tracking, and communications unit is now available for Rent from the MYC Sailing and Race Office.

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The Manila Yacht Club is located at 2351 Roxas Boulevard, Malate, Manila. Contact No. 521- 44-58 to 59. marinamyc@gmail.com web: www.myc.org.ph



PACIFIC COAST CITIES

The Future of the Philippines

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A Nationwide Problem



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Development Strategy



(continued from page 13)

the decision-making, and the greater the efficiency of operation. Whoever is at the apex of the command chain must possess full appreciation of the concept. Short cuts could undermine the very foundation of the chain of command and deliver devastating results and outcomes.

Challenges.

With new types of organizations emerging from the continuing information revolution, will the chain of command still work? Recent reports indicated that a terrorist group succeeded in using a new web application in inflicting physical harm, including death, on some people in Paris. The speed of giving instructions to the individual terrorist with such mission and the delay in intercepting those directives by the authorities due to hierarchal structures in the flow of information contributed to the swift execution of the terrorist operations. Similar incidents could happen on merchant ships especially on cruise or passenger ships. Are concerned security agencies prepared to confront such threats?

Fayol's theory that there is but one best structure to fit any organization to attain the desirable level of efficiency by adopting the hierarchical model with the chain of command in place may not be able to address the emerging organizational types. Already, the so-called "virtual" and "network" organizations practically operate in boundary-less domain with enormous speed and voluminous transactions. Advanced armed forces and police organizations have capabilities to counter threats in the maritime sphere but for less-advanced security forces the challenge of protecting their maritime areas from terrorism, piracy and other crimes will continue.

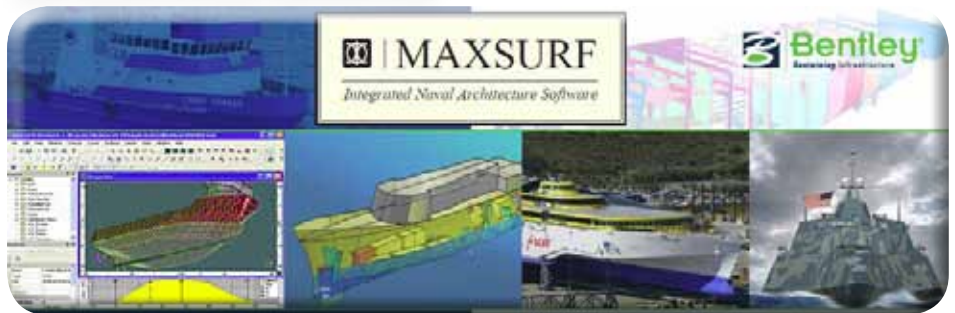
Dealing with security threats posed by non-traditional organizations requires adaptation but not necessarily discarding the whole concept of the chain of command. Inter-agency cooperation and collaboration like the National Coast Watch System, public-private security dialogues at the grassroots level with the local government units and the religious organizations at the forefront, international and regional security arrangements, and capability building for effective command, control, communications, intelligence, surveillance and reconnaissance for security units and elements will entail serious planning, considerable resources and strong political will to be effective. ⚓

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Is there a WIN-WIN for China, Philippines, US, etc.?



By Former Philippine President Fidel V. Ramos

PART 1 of 2

In the aftermath of the recent award (or ruling) by the U.N. Permanent Court of Arbitration on the South China Sea/West Philippine Sea, new opportunities in our foreign relations have opened up which might lead to win-win solutions for the Philippines, China, U.S. and other countries in the Asia-Pacific region.

Before getting into the national events and international developments of the past week, however, particularly the National Security Council meeting convened by President **Rodrigo R. Duterte** last 27 July, and the visit of U.S. Secretary of State at Malacañang earlier that same day, allow us to revisit the “Joint Celebration of the 36th Anniversary of Diplomatic Relations, and the 10th Friendship Day Between the Philippines and China” at the PICC last 09 June 2011. On that important occasion, China’s distinguished Ambassador **Liu Jianchao** and **FVR** were the two keynote speakers.

For his part, **FVR** asserted: “Against the background of the ancient relations between our two countries – china, a continental civilization of great antiquity, and the other, our strategically-positioned Philippine archipelago alongside the Asian mainland. This is an important episode in the collective life of close neighbors, who are also distant relatives.”

China’s ancient supremacy. “China’s empire reached its acme in the 15th century under the Ming Dynasty because of its supremacy in education, invention, manufacturing, diplomacy, and maritime outreach.

The question --“Did China or Spain discover the Philippines?” emanates from China’s dominance of Asia-Pacific commerce and politics at that time. To this day, the historical debate continues about which empire first discovered the scattered islands of the Philippine archipelago.

China Daily reported on 08 July 2004, “The famous Chinese Admiral

Zheng circumnavigated the globe many years before the European explorers **Christopher Columbus** and **Ferdinand Magellan** did.”

During the Ramos Presidency, a historical and archeological book entitled -- *The Pearl Road* -- was published early in 1998 as part of the ‘Centennial Series’ of publications to highlight the observance of the 100th year of Philippine Independence from Spain.

The book recorded in detail an exceptional archeological discovery in June 1993 in Palawan, Philippines, thus: “The wreck of a 15th century Chinese junk yielded thousands of artifacts including jars, ceramics, and coins (bearing date 1414 that coincided with the time frame of **Zheng**. His expedition to our part of the globe), revealing a wealth of information about years of commercial and cultural interactions between the people of this country and their Chinese neighbors long before the Europeans came.”

Therefore, “these Findings, which are now prominently displayed in our national museum, provide concrete evidence that it was the Chinese – not the Europeans – who first discovered the Philippines...”

“The third Ming Emperor, **Yong Le**, needed to prove his fitness for the throne. In May 1403, he ordered 300-plus ocean going vessels to be built in the provinces of Fujian, Jiangsu, Jiangxi, Zhejiang, Hunan, and Guangdong. From 1405 to 1433, under Admiral **Zheng He**, seven large naval expeditions, some carrying as many as 28,000 soldiers, sailed throughout the world’s oceans.”

The Pearl Road states that robust trade had been present throughout Southeast Asia for some 2,000 years, and ancient Chinese texts already mentioned our archipelago.

The treasure ships of **Zheng** sailed forth as worthy ambassadors of the Dragon Throne bearing precious silk and porcelain. The ships, however, did not only establish pioneering trade routes in

the Orient. They also opened the doors to new cultural influences in Southeast Asia. Thus, as early as 600 years ago, covering the entire Asian world, The Pearl Road already led to the Philippines.

In our islands, the precious gems of the sea were abundant. Indeed, accounts about pearls as trade items accumulated for as long as Chinese traders had been sailing down the Pearl Road in search of precious gems. This led them to Philippine waters, which both then and now are regarded as the world’s largest prolific harvesting ground for pearls of extraordinary size and beauty.

“Thus, various trade networks ran from China through the warm waters of this ‘Southern Ocean’ reaching principal ports as far away as the Bay of Bengal, the Gulf of Thailand, the Malacca Straits, the Java Sea, and the Sulu Sultanate. From these ports, Chinese junks sailed along the seasonal winds – outward with the north-east monsoon and homeward with the southwest. They exchanged the silks and porcelains of China for the sea-and-forest products of Southeast Asia.”

A future world without great-power wars. The long tradition of friendship between the Philippines and China, and the continuing expansion of our diplomatic and commercial exchanges will carry us safely beyond present-day tensions towards closer neighborliness, and our mutual and harmonious development as well.

Both Beijing and Manila realize fully well our mutual need to preserve the continuous condition of stability that has made East Asia the world’s fastest growing region. And so does Washington, D.C.

We believe that global interdependence, technology, and the emerging power balance offer us the possibility of a future world without great power wars.

We believe that science, globalization, and people empowerment -- plus the assertion of ordinary people of their political and human rights -- are making

wasteful and obsolete any future wars among the great powers. Increasingly, all our nations are linking their economies and politics with that of the modern, interdependent international community.

The distribution of power in the world is changing undeniably, and in a basic way. The center of global gravity is moving away from the Atlantic – where it has been for the last 150 years – and shifting to the Pacific Ocean.

And it is doing so, not so much because the West is weakening, either economically or militarily – but because other power centers are rising in relative strength – in Asia, in Latin America, and in Africa.

“Since the most highly populated and most economically weighty of these stakeholders in the international system are Asian – particularly China, Japan, India, and Asean – the center of global gravity is moving eastward. By 2025, it is calculated

that Asia is projected to be the home of three of the world’s largest economies. By then, China, India, and Japan will be sharing top honors with the U.S. and European Union.”

Respecting the diversity of civilizations. The global community of the future should be a harmonious concert of civilizations – meaning all our nations must learn to live by the rule of law and their international commitments.

Asian leaders have emphasized that we all need to respect the diversity of cultures and to translate the immense potentials of Asia into a driving force for increased mutual understanding, higher levels of cooperation, and even more dynamic progress.

We need to transform our patterns of development and strive for balanced development; share opportunities; avoid conflicts; fight terrorism jointly; and meet challenges together.

We must seek common ground based on mutual trust, mutual benefit, and unforced equality by shelving our differences and by enhancing regional security.

Then, too, we must also adhere to open regionalism, respect the interests of countries outside the region, and welcome their participation in the East Asian process of integration.

At the Boao Forum for Asia last 15 April 2011 (in which FVR participated), President Hu Jintao asserted, “Peace and development remain the overriding themes of the times. The world needs peace, countries deserve development, and people want cooperation...”

“China’s neighbors, the Philippines included, must take seriously this unequivocal commitment to peace and development by **President Hu**, and hope that it will be respected by future Chinese leaders and other statesmen elsewhere.”

Philippine-Chinese Relations: focus on the positives. Bilaterally, we Filipinos need to fully tap into China’s fast-moving economy. Among other opportunities, we should cooperate in dealing with the global food shortages and food price inflation that the experts anticipate in the near future. Chinese capital and expertise can certainly help us cultivate our vast agricultural and aquatic farms.

As we know, China is racing ahead of everyone else in the race to develop clean and renewable energy. Already, it is the world’s largest maker of wind turbines and a leader in solar panel technology. Chinese expertise can also help us harness more of our geothermal resources.

Given its tremendous foreign exchange reserves, Beijing should be a prime source of official development assistance for the countries of Southeast Asia as well as soft loans for public utilities and other infrastructures.

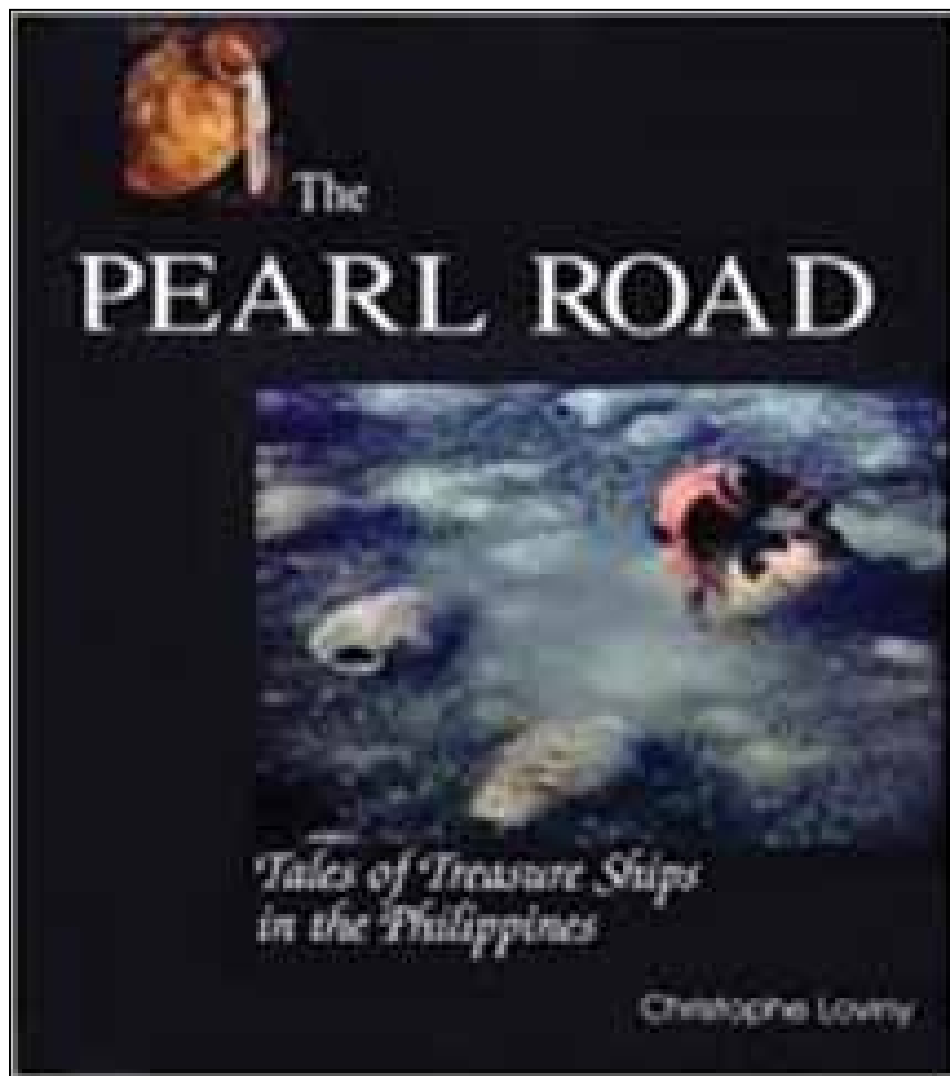
New opportunities opening before China and the Philippines through wider socio-economic, tourism, and people-to-people exchanges now beckon at the start of the **Duterte** Administration! Also, soon to come are U.S.-China-Asean expansions – according to the U.S. Secretary of State, **John Kerry**, on 27 July 2016 in Manila.

Kaya Natin Ito!



Please send your comments to www.rpdev.org

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Climate Change in the Philippines and 9 selected Asian Countries



by Vicky Viray Mendoza

Climate Change is the long-term change in the earth's global or regional climate patterns that began particularly in the mid to late 20th century and onwards. Research attributes climate change largely to the increasing levels in the average atmospheric carbon dioxide produced by the use of fossil-based fuels by humans. It takes place in small gradual changes in temperature that includes warming and cooling, but can cause a long-term shift in the planet's weather patterns or average global temperatures. The **Conference of Parties (COP21)** agreement reached in Paris at the end of 2015 by 195 countries that ratified the **UN Framework Convention on Climate Change (UNFCCC)** in 1992 at the Earth Summit in Rio de Janeiro, is set to ensure global warming stays below 2°C, and to pursue efforts to limit the temperature rise to 1.5°C. The Philippine Atmospheric, Geophysical and Astronomical Services Administration (**PAG-ASA**) reports that the current global temperature has increased to 0.74°C.

Gases that trap heat in the atmosphere

are called greenhouse gases (GHG). These are carbon dioxide (CO₂), methane (CH₄), Nitrous Oxide (N₂O), and Fluorinated gases. In 2015, the PBL Netherlands Environmental Assessment Agency Report indicated the top 4 emitting countries or regions, which together account to 61% of the total global CO₂ emissions are: **China** (30%), **United States** (15%), **European Union [EU-28]** (10%), and **India** (6.5%). The UN's IPCC chart below shows the temperatures during 1860-1940's below the global mean, in contrast with the increasing temperatures during 1960's-2000 rising above the global

Country	1990	1995	2000	2005	2010	2014	1990 as a % of Rest of World	2014 as a % of Rest of World	Est. Growth since 1990	Est. Growth since 2000
Indonesia	159,309	234,219	291,788	358,588	419,709	452,977	0.71%	1.29%	184%	55%
Thailand	92,750	161,095	170,911	225,699	246,982	271,978	0.41%	0.77%	193%	59%
Malaysia	55,493	86,641	122,860	173,041	203,178	227,482	0.25%	0.64%	310%	85%
Vietnam	20,358	33,951	55,753	98,968	154,354	190,222	0.09%	0.54%	834%	241%
Philippines	42,048	63,455	74,985	81,008	85,534	96,940	0.19%	0.27%	131%	29%
Bangladesh	13,166	19,451	25,471	37,977	59,765	66,471	0.06%	0.19%	405%	161%
Singapore	30,242	43,373	48,677	40,310	45,427	47,786	0.13%	0.13%	58%	-2%
Myanmar	4,417	7,358	10,013	11,019	8,474	9,129	0.02%	0.03%	107%	-9%
Papua NG	2534	2402	2979	5093	6106	7118	0.01%	0.02%	181%	139%
Cambodia	934	1489	1987	2676	4152	4760	0.00%	0.01%	410%	139.60%
World	22,515,632	23,624,485	25,610,746	30,160,210	33,607,985	35,669,108			58%	39%

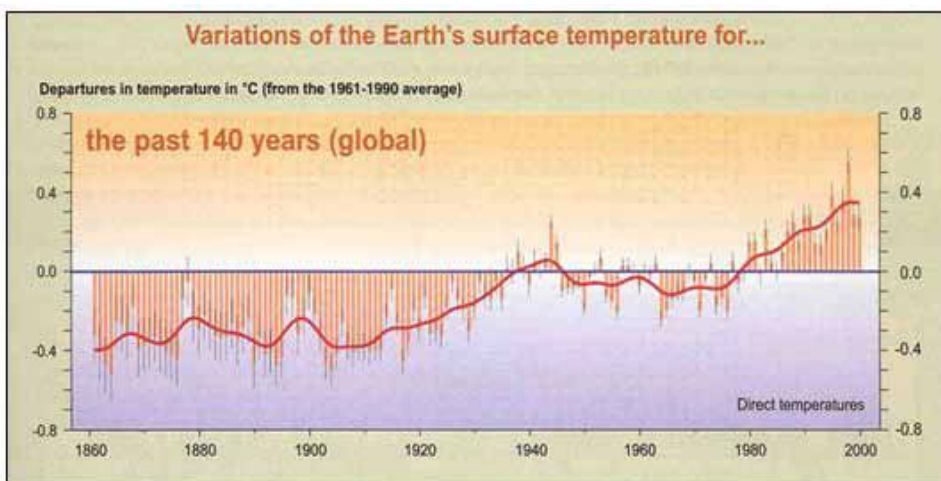
Table 1. CO₂ Emissions (in kton/Gg)

mean.

Pag-Asa also reports that in 2007, the UN's Intergovernmental Panel on Climate

Country	1990	1995	2000	2005	2010	2014	Est. Growth since 1990	Est. Growth since 2000
Singapore	10.03	12.45	12.42	8.97	8.94	8.66	-14%	-30%
Malaysia	3	4.2	5.2	6.7	7.2	7.5	150%	44%
Thailand	1.6	2.7	2.7	3.4	3.7	4	150%	48%
Vietnam	0.3	0.4	0.7	1.2	1.7	2.1	600%	200%
Indonesia	0.9	1.2	1.4	1.6	1.7	1.8	100%	29%
Philippines	0.7	0.9	1	0.9	0.9	1	43%	0%
Papua NG	0.61	0.51	0.55	0.84	0.89	0.95	56%	73%
Bangladesh	0.1	0.2	0.2	0.3	0.4	0.4	300%	100%
Cambodia	0.1	0.1	0.2	0.2	0.3	0.3	200%	50%
Myanmar	0.1	0.2	0.2	0.2	0.2	0.2	100%	0%

Table 2. CO₂ Emissions (in tons CO₂) per capita



Source: IPCC AR4

Global mean temperature anomalies since the mid-19th century

Change (IPCC) report made its strongest statement on climate change in its Fourth Assessment Report, when it concluded that global warming is unequivocal, and most of the warming during the last 50 years is due to the observed increase in GHG concentrations from human activities. It is very likely that changes in the global climate system shall continue, and that these changes would be larger than those seen in the recent past. The IPCC report further states that the substantial body of evidence includes rising surface temperature, sea level rise, and decrease in snow cover in the Northern Hemisphere. According to VAdm. **Emilio Marayag AFP (Ret)**, a widely known impact is the melting of ice caps in the Arctic but a lesser-known fact is the Carteret Island of Papua New Guinea that was forecasted to fully submerge by

2015 amidst fast rising sea levels. The 2000 Carteret inhabitants who left their island for good are the first official refugees of global warming.

Based on the Emissions Database for Global Atmospheric Research (EDGAR) of the European Union, Table 1 shows all the countries in this Southeast Asian group decreased carbon emissions growth since 2000. In particular, the Philippines' carbon emissions growth decreased to 29%. The global carbon emissions growth decreased by 18%. However, as % of the Rest of the World, the Philippines' emissions growth increased by .08%, from 0.19% since 1990 to 0.27% since 2000, but at a much lower growth than Indonesia, Thailand, Malaysia, Vietnam, and Bangladesh.

Table 2 shows that, except Papua New Guinea, all the countries in this group reduced carbon emissions per capita growth since 2000.

Table 3 shows that the growth of Philippines' CO₂ emissions by GDP decreased by 23%, from -13% since 1990 (the base year of the Kyoto Protocol) to -36% since 2000. While most of the countries in the group reduced growth of carbon emissions by GDP since 2000, only Singapore's and Papua New Guinea's emissions growth by GDP have increased.

Table 4 shows many Southeast Asian countries decreased or slightly increased/maintained GHG emissions as % of Rest of the World. Global GHG emissions growth decreased by 18% since 2000. However, Philippines' GHG emissions increased by .06%, from 0.25% in 1990 to 0.31% in 2012; emissions also increased in Thailand, Vietnam, and Cambodia. GHG emissions of China (30%), and India (6.5%) are much higher than the rest of Asia. In terms of International Shipping, global GHG emissions grew by 0.26% in 2012.

Table 5 shows Philippines' GHG emissions per capita growth decreased to -10.4% since 2000 in contrast to global emissions growth that increased by 9% during the

same period. However, as % of Rest of the World, while Philippines' emissions increased by 2% in 2012, most countries in this group decreased emissions substantially, except Thailand and Vietnam.

Country	1990	1995	2000	2005	2010	2014	Est. Growth since 1990	Est. Growth since 2000
Vietnam	205	231	271	345	396	390	90%	44%
Bangladesh	99	118	120	137	161	140	41%	17%
Thailand	257	296	307	316	290	289	12%	-6%
Malaysia	300	298	334	373	352	320	7%	-4%
Papua NG	379	238	298	458	412	359	-5%	20%
Indonesia	208	209	252	245	217	187	-10%	-26%
Philippines	169	229	228	196	163	147	-13%	-36%
Singapore	290	275	235	153	125	113	-61%	-52%
Cambodia	97	127	119	102	115	100	3%	-16%
Myanmar	328	411	373	224	101	88	-73%	-76%

Table 3. CO₂ Emissions (in kg CO₂/1000 USD and per capita) by GDP

Victims of climate change are not only the poor farmers in low-lying coastal areas subject to sea level rise but also city workers who would have to endure the heat waves. British firm, Verisk

Country	1990	1995	2000	2005	2010	2011	2012	1990 as % of Rest of World	2012 as % of Rest of World
Indonesia	1,165,113	1,315,571	622,465	1,171,043	744,790	763,553	780,551	3.14%	1.47%
Myanmar	875,447	943,040	185,137	223,013	325,367	526,920	528,416	2.34%	0.99%
Thailand	208,063	281,624	283,870	364,316	421,228	431,312	440,412	0.55%	0.82%
Vietnam	99,054	120,659	155,792	232,510	278,994	285,091	310,664	0.26%	0.58%
Malaysia	198,588	252,185	171,394	246,665	263,676	271,819	279,098	0.52%	0.52%
Bangladesh	126,702	136,508	136,013	151,092	177,504	180,498	183,301	0.33%	0.34%
Philippines	96,355	125,623	150,079	146,434	159,940	163,798	167,298	0.25%	0.31%
Cambodia	19,521	20,790	42,118	101,252	126,272	126,839	127,400	0.05%	0.24%
Singapore	32,561	44,513	48,134	47,598	52,732	54,414	55,910	0.09%	0.10%
Papua NG	29,504	35,410	8,257	9,453	10,668	10,888	11,087	0.08%	0.02%
World	38,232,170	39,040,328	40,563,437	47,216,059	50,911,114	53,197,386	53,937,188	58%	39%
Intl Shipping	378,468	427,909	477,490	532,988	626,066	648,594	668,589	1.00%	1.26%

Table 4. GHG Emissions (in kton (Gg) CO₂ equivalent)

Maplecroft, predicted in October 2015 that the biggest drops in labor productivity in Southeast Asia would be in Singapore (25%), Malaysia (24%), Indonesia (21%), Cambodia (16%), Philippines (16%), Thailand (12%), and Vietnam (12%).

Country	1990	1995	2000	2005	2010	2011	2012	Est. Growth since 1990	Est. Growth since 2000	1990 as % of Rest of World	2012 as % of Rest of World
Singapore	10.79	12.78	12.28	10.59	10.38	10.48	10.54	-2.30%	-14.20%	-301%	-356%
Malaysia	10.9	12.17	7.32	9.54	9.33	9.45	9.55	-12.40%	30.50%	-295%	-485%
Cambodia	2.16	1.93	3.45	7.58	8.79	8.68	8.57	296.80%	148.40%	43%	-866%
Thailand	3.68	4.77	4.55	5.56	6.34	6.48	6.59	79.10%	44.80%	105%	666%
Vietnam	1.44	1.59	1.93	2.74	3.13	3.17	3.42	137.50%	77.20%	25%	82%
Indonesia	6.52	6.78	2.98	5.22	3.09	3.13	3.16	-51.50%	6.00%	959%	71%
Philippines	1.56	1.8	1.93	1.71	1.71	1.72	1.73	10.90%	-10.40%	28%	30%
Papua NG	7.1	7.51	1.54	1.55	1.55	1.55	1.55	-78.20%	0.60%	7100%	26%
Bangladesh	1.18	1.14	1.03	1.06	1.17	1.18	1.18	0.00%	14.60%	20%	18%
World	7.2	6.81	6.63	7.26	7.38	7.56	7.58	5.30%	14.30%		

Table 5. GHG Emissions (in metric ton (Gg) CO₂ equivalent) per capita

"Climate change will push heat stress impacts to boiling point with significant implications for both national economies and the health of vulnerable workers," said James Allan, Environment Head, Verisk Maplecroft.

Climate Change in the Philippines.

The temperatures in the Philippines area of responsibility have slightly increased. The mean temperatures during 1951-2010 indicate an increase of 0.648°C or an average increase of 0.0108°C annually. Pag-Asa's analysis of extreme daily maximum vs. minimum temperatures (hot-days vs. cold-nights) show an increasing number of hot days, and a decreasing number of cool nights, as statistically significant. During the last 60 years, the maximum vs. minimum temperatures have increased by 0.36°C vs. 1.0°C. The analysis on tropical cyclone passage over the three main regions -- Luzon, Visayas and Mindanao -- reveals a slight mean average increase in the Visayas region from 1971-2000, as compared with the past periods. An analysis of trends of tropical cyclone formation or passage within the Philippine area shows that an average of 20 tropical cyclones form or pass through the area annually, but with no indication of an increase. However, there is a very slight increase in the number of tropical cyclones with maximum sustained winds of greater than 150kph at typhoon-level category being displayed during an El Niño event.

Mitigation and Adaptation.

The ultimate global objective is to stabilize GHG concentrations in the atmosphere to a level that will prevent danger to humans and the planet as a whole. Otherwise, an increase in water-based diseases, pulmonary illnesses, and cardiac diseases are likely to be the major health risks. Reducing GHG emissions from human activity includes a reduction in fossil fuel usage, in individuals, corporate or industrial operations, and land degradation. Altogether, the reduction of GHG emissions is called Mitigation. Reducing the adverse impacts of climate change while taking advantage of its potential benefits is called Adaptation.

(continued on page 30)

Technical Observation on Sea-Keeping Performance of SSV Tarlac



By Capt Tomas D Baino PN (Ret), Naval Architect

INTRODUCTION

The Objectives of this Technical Evaluation Briefing is to mitigate the technical risk on the suspected poor sea-keeping performance of SSV TARLAC as manifested in the photograph of said vessel while enroute to the Philippines.

Suspected Patent Defects and Design Flaw need to be corrected (once proven that it exists). If said deficiencies is present, the operation and maintenance of the ship will incur penalty increase in fuel consumption, higher life cycle cost, and shorter engine life span.

The Combined Operational Effectiveness Investment Appraisal Study (COEIAS) is a comparative evaluation and matching of capabilities on performance versus cost implication to operate and maintain the ship for the next 30 years need to be established.

Patent Design Flaw of the SSV means it has some design weaknesses and imperfection acquired from design stage up to construction of the ship (as evaluated during sea trial performance of the ship).

A. BACKGROUND OF SSV TARLAC ACQUISITION

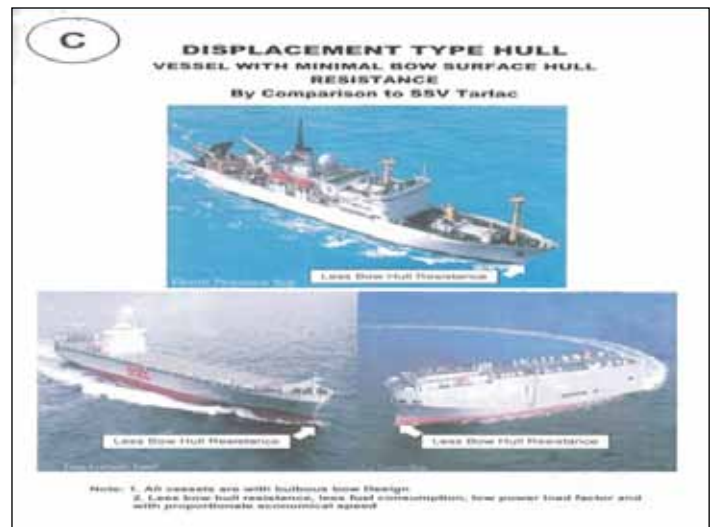
- Contracted by the Philippine Government with PT PAL of Indonesia under DND Memo No. 2012-060 on 30-October-2013;
- Two (2) Units SSV Procurement Project at a cost of Php3.8B (USD 46M) last 15-November-2014. Total Cost of two (2) units SSV Php7.6B (USD 96M);
- Said SSV was launched on 17-January 17, 2016 and designated by PN SSV Tarlac with bow number 601;
- Design speed is 16 knots; and
- Second unit is under construction in Indonesia.

B. PHOTOGRAPH OF SSV TARLAC WITH SUSPECTED TREMENDOUS BOW WAVE



RESISTANCE AND WAVE TURBULENCE LAYER.

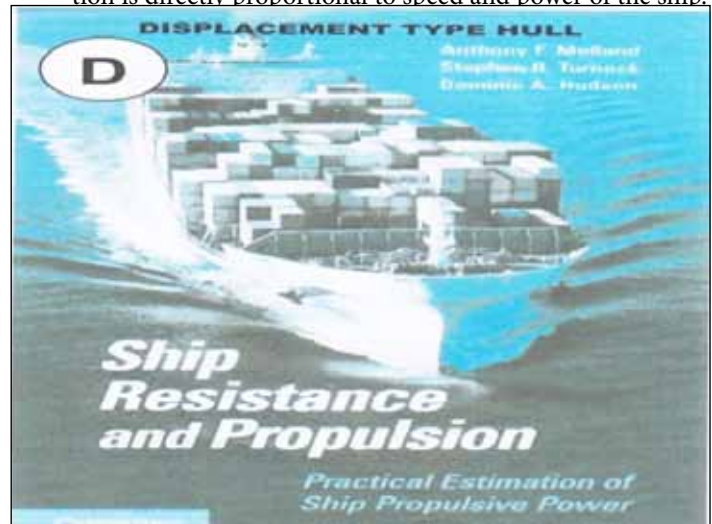
C. PHOTOGRAPHS OF EIGHT (8) OTHER



VESSELS SHOWING EFFICIENT SEA-KEEPING PERFORMANCE.

D. EFFECT OF BOW WAVE RESISTANCE, IMPLICATIONS OF OPERATIONS ON THE ECONOMY, AND LIFECYCLE COST OF A SHIP.

- Higher bow wave resistance is an indication of high angle of water entry (port/starboard) forward of the bow. This condition is directly proportional to speed and power of the ship.

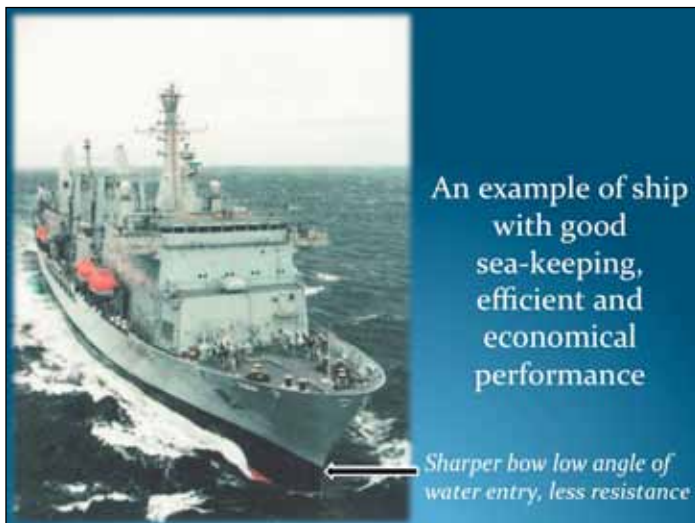


Additional expense of energy needed means extra amount of fuel and a constant stress to marine diesel internal combustion engine in order to overcome “drag” of the ship.

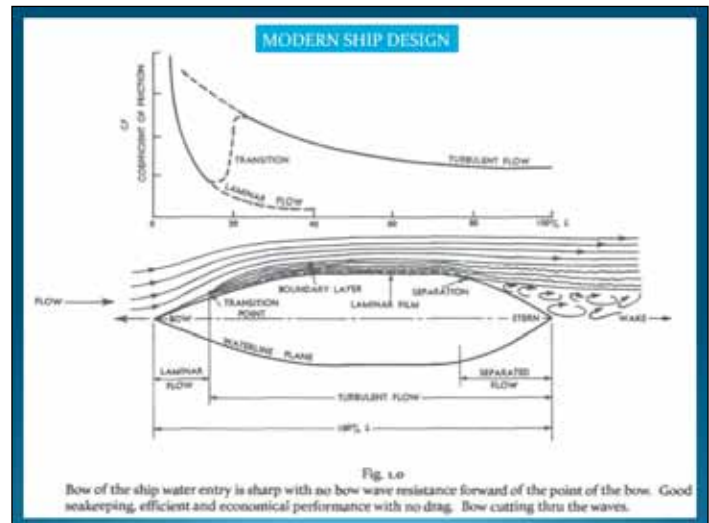
- At the time of the photograph, presumably the SSV was in lightship condition with displacement of 7.2K tons (low draft). If the SSV was in full load displacement of 11.7K tons (5-meter draft) there would be greater wetted hull surface in contact with the seawater viscosity that could result in greater frictional resistance added to bow resistance forward of the bow.
- During long period of dry-docking intervals of the SSV, said condition will continue to aggravate, and pronounced vibration will be felt exceeding normal frequencies, which is not good for sensitive electronic equipment onboard.
- Because of excessive bow wave resistance, the ship hull will continue to propagate greater than normal values of acoustic signature due to the interaction of the bow to the waves wherein the bow is pushing through the waves, instead of cutting through the water.

E. IMPORTANCE OF RESISTANCE TANK SHIP TEST MODELING BASIN.

- Testing is important during the inspections of the existing vessels as specified in the modernization law or before con-



Resistance Tank Test Ship Modeling Basin



Resistance Tank Ship Testing Model Report (Ref: Modern Ship Design, 2nd Ed. by Thomas C. Gillmer)

tract signing. Resistance tank test results must be evaluated in order to predetermine good sea-keeping performance of the vessel in order to conclude that said vessel is a proven design rather than relying on the claim of the ship proponents.

- Although there are existing vessels already used by navies of the proponent countries or other countries, the question to ask is: “Are we satisfied with the sea-keeping characteristic?” Without doing this simple evaluation approach, we will end up buying a very expensive ship with poor sea-keeping performance, in essence, a veritable white elephant.
- Resistance tank testing is a time honored practiced in shipbuilding in order to mitigate technical risk of the ship, specially in ensuring good sea-keeping, efficient and economical performance. Tank test results on a ship model is integrated to actual ship design. This practice was devised by a British Naval Architect Mr. William Froude and Rear Admiral David Taylor of the United States Navy (to avoid embarrassing design flaws and lessen a very costly mistake). From said two personalities, what evolved is the International Tank Test Conference (ITTC) Standard, recognized worldwide in ship design.

G. AFORESAID OBSERVATION COULD HAVE BEEN AVOIDED IF PROPER SELECTION PROCESS WERE DONE DILIGENTLY THROUGH THE FOLLOWING MEASURES (before making a decision in the selection of the winning bidder).

- Verification and interpretation of resistance tank test report on ship model of SSV Tarlac original design;
- Inspection and observation of the mother ship of SSV Tarlac on the sea-keeping performance in reference to tank test records;
- Examination of lines drawings, plans and hydrostatic curves of said vessel design;
- Naval architect’s recommendations of the combined operation, evaluations, integrations, and appraisal study on the total ship systems of SSV Tarlac;
- Technical evaluation of the life cycle cost with reference to

the proposed deployment cycle and propulsion operating profile of the ship; and

- Technical evaluation of the ship focused on sea-keeping performance, efficiency, operations and life cycle cost, capability as priority, secondary is the inventory of all hardware of the ship.

SUGGESTED FURTHER TEST AND EVALUATION FOR THE SSV TARLAC

- Vibration Analysis;
- Hull Resistance, Sinkage, Trim and Wake Profile of the SSV;
- Dynamometer Test Result Evaluation and NOX Emission;
- Ship Response Amplitude Operation (RAO);
- Ship Motion Behavior for Recovery and Launching of helicopter at maximum sea state condition;
- Welding and X-ray Test Result of the Hull; and
- Stability and Trim Calculation at Light and Full Load Displacement.

H. To Establish the Combine Operational and Investment Appraisal Study (COEIAS)

- Operational Effectiveness versus cost implication to operate and maintain the ship system for next 25 to 30 years.



References:

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2. Ship Model Basin (Wikipedia Encyclopedia).
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4. Wave Making Resistance (Wikipedia Encyclopedia).
5. Fine Bow Wave Entrance (Radiance of the Seas).
6. Daihatsu Marine Diesel Publication.
7. Blunt Bow (Wikipedia Encyclopedia).
8. Dera, UK Ministry of Defence Publication.



Photographs of two vessels for comparison: SSV Tarlac and LSD Foudre

(continued from page 30)

The **World Bank Group's Climate Change Action Plan 2016-2020** "sets ambitious targets in high-impact areas, including clean energy, green transport, climate-smart agriculture, urban resilience, and in mobilizing the private sector to expand climate investments in developing countries. Globally, the poor will be at high risk because of climate-related shocks such as crop yield losses and the consequent high food prices. Floods, droughts, sea-level rise, threats to water and food security, and the frequency of natural disasters will intensify, threatening to push 100 million more people into poverty in the next 15 years alone."

In the Philippines, GHG emissions are far lower than China's or India's emission levels. Nevertheless, the Philippines has room for **Mitigation** to improve or contribute

towards reducing the effects of global emissions in the world mainly through renewable energy, large scale tree planting, agro-forestry, rational forestry management, and by avoiding forest fires. On an individual or family-unit level, the reduction in usage of fossil-based fuel in everyday activities is possible by using hybrid cars; or cooking food using gas instead of briquettes because gas emits fewer CO₂ emissions than charcoal. The Oak Ridge National Laboratory finds that gas grills generate 5.6 lbs of CO₂/hour, while charcoal grills generate 11 lbs of CO₂/hour; or the use of solar roof panels as source of electricity.

Due to the extensive coastlines covering more than 36,289 km, the Philippine coastal resources are highly vulnerable. Low-lying islands would face constant deluge due to sea level rise. The combined effects of changes in

temperature, rainfall resulting in droughts and floods, sea level rise, tropical cyclones, and storms would expose coastal areas to higher levels of hazard to life, labor, and land. Livelihoods of poor coastal communities are at risk, particularly in fishing, the poisoning of crops, and loss of productive agricultural lands due to saltwater intrusion. **Adaptation** planning for the coastal areas is, therefore, high priority. It ranges from building physical structures like sea walls; or cleaning drainage systems to reduce flooding; using risk maps avoid land degradation; planting mangrove forests to reduce saltwater intrusion, introducing climate-resistant crops and livestock, installing early warning systems to broadcast severe weather advisories; to developing resilient livelihood alternatives in addition to traditional fishing or sustainable farming. ⚓



Maritime Academy of Asia and the Pacific - Kamaya Point

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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.

Testing Assessment Center of TESDA

Center for Advanced Maritime Studies



AMOSUP Seamen's Training Center



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Full Mission Engine Simulator

Full Mission Bridge Simulator on Motion Platform

Japanese Compact Ship Handling Simulator

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