ATENEO | ATENEO SCHOOL OF GOVERNMENT

Forming Leaders. Leading Reforms.

Growing the Philippines' Blue Economy

RONALD U. MENDOZA, PHD
ATENEO DE MANILA UNIVERSITY
SCHOOL OF GOVERNMENT

Stevedore carrying a 95-kg yellowfin tuna in Palawan, Philippines.

Gills 'N' Claws vertical crab farm in Singapore -- sells at $30 to $35 a kg, while wholesale market rate is $40 to $48 a kg.

ATENEO | ATENEO SCHOOL OF GOVERNMENT

Forming Leaders. Leading Reforms.

- *Blue economy* is a version of the *green economy* made relevant to seas and oceans.
- It emphasizes the sustainable management of marine resources.

ATENEO | ATENEO SCHOOL OF GOVERNMENT

Forming Leaders. Leading Reforms.

Overview of the Philippines' Maritime Economy

Philippine Maritime Resources

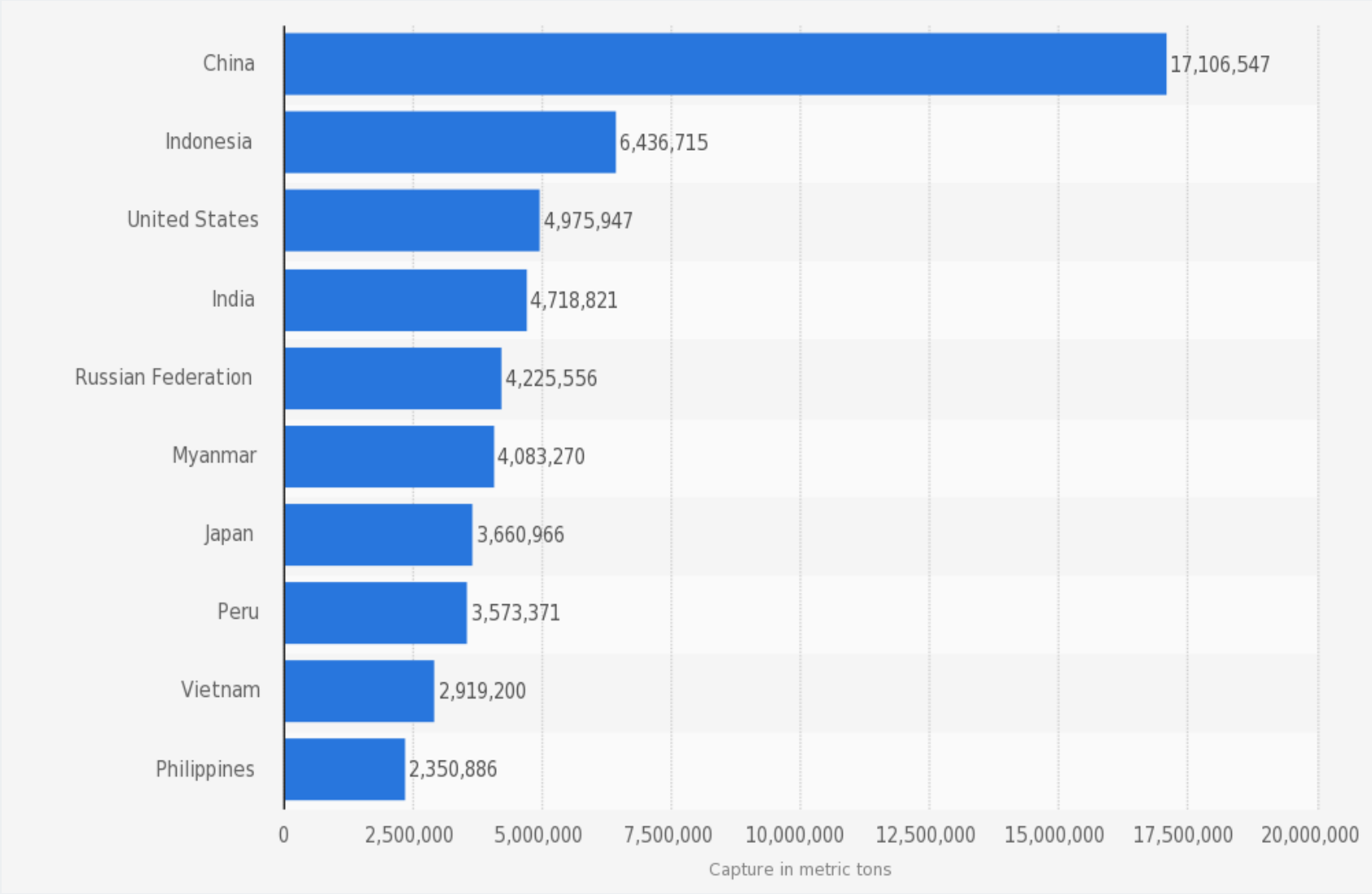
- 2nd largest archipelagic country; 5th longest coastline in the world (36,289 km), longer then China, US, and Japan
- 60% of total population lives in coastal areas (Philippine CTI NCC 2012)
- PH forms most (70%) of the **Coral Triangle**, which is the global center of marine diversity, where 76% of the world's coral species live, and at home to least 2,228 species of reef fish
- PHL resources in the maritime sector: 138 M barrels of oil, and 3.48 trillion cubic feet of natural gas reserves (IBON, 2013)

Philippine Maritime Industry

- 29th maritime country among top 35 flags of registration with .44% of total DWT of world fleet (UNCTAD Maritime Review 2012)
- Leading single supplier of the global maritime manpower with **25% of the world's about 1.5 million seafarers are Filipinos**, associated with about USD 4.8 billion in foreign currency remittance to the Philippine economy
- Travel and tourism industry contributed to 4.2% (PhP 533B) of GDP in 2014 (Department of Tourism)

World's top 10 fishing nations in 2014*

ATENEO | ATENEO SCHOOL OF GOVERNMENT
Forming Leaders. Leading Reforms.



Philippines ranks 10th in the world fishing industry

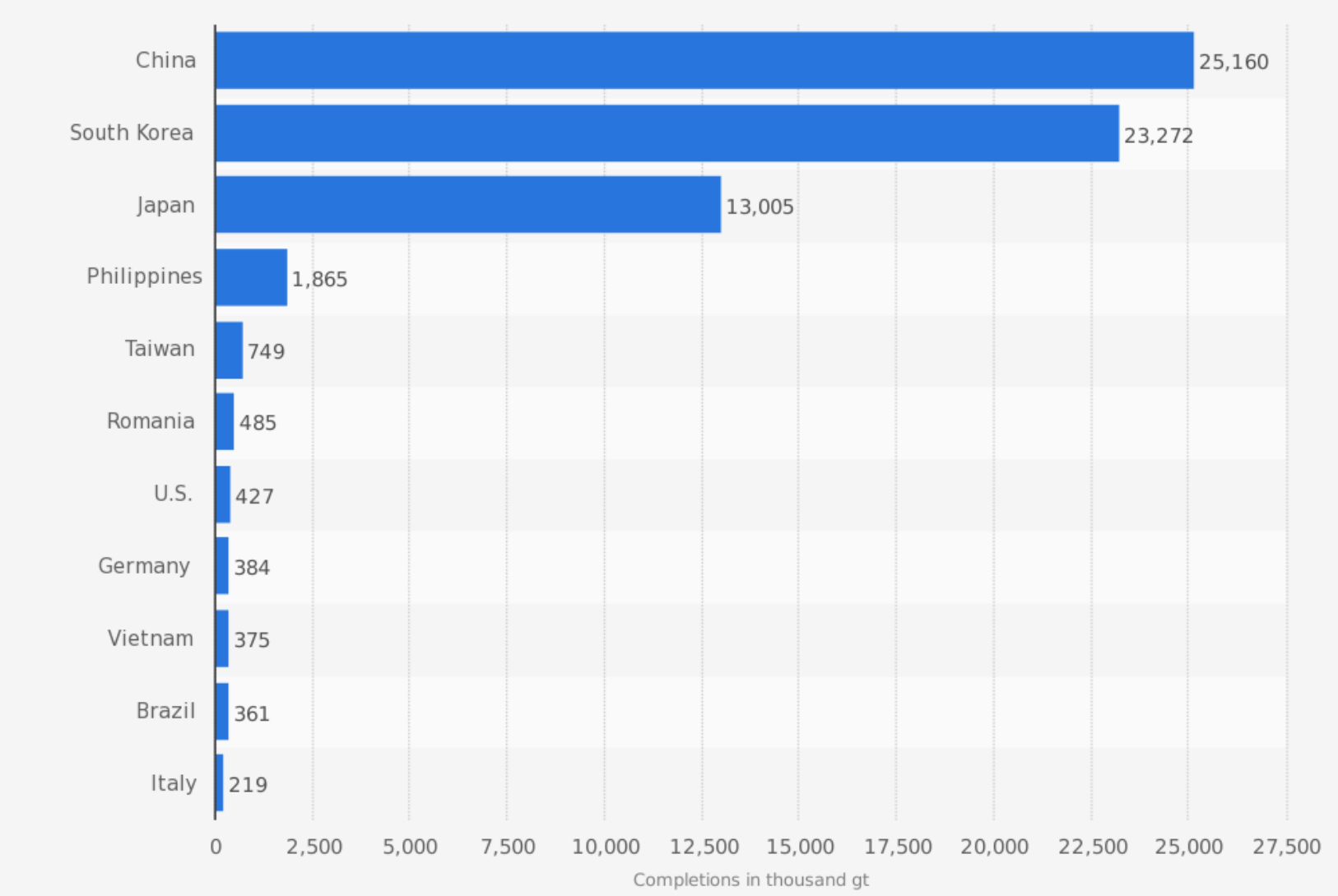
Fisheries sector contributed **1.8 percent of the total GDP** in 2014 (Philippine Statistics Authority)

*Capture in metric tons

Source: Food and Agriculture Organization of the United Nations

World's largest shipbuilding nations* in 2015

ATENEO | ATENEO SCHOOL OF GOVERNMENT
Forming Leaders. Leading Reforms.



Philippines ranks 4th in the world shipbuilding industry

Shipbuilding industry employs more than **60,000 welders** in the country

*Based on completions in gross tonnage (in 1,000s)

Source: HIS: Shipbuilder's Association of Japan

GDP and Employment of Maritime Sector (2012)

Sector	Value added (Php millions)	Total employed
Fishing	170,330.000	1,461,000
Manufacturing	14,069.162	34,328
Processing and preserving of fish and fish products and other seafoods	6,359.367	27,938
Building and repairing of ships and boats	7,709.795	6,390
Transport, Storage, and Communication	25,991.136	30,384
Ocean passenger transport	4,302.751	1,248
Ocean freight transport		
Interisland water passenger transport	5,100.088	8,388
Interisland water freight transport	4,627.895	4,630
Supporting and auxiliary activities to water transport	11,960.402	16,118
Total	210,390.298	1,525,712
Gross Domestic Product	8,026,143	
Total Employed Labor Force		35,061,000
Percent of GDP/ Percent of Labor Force	2.62	4.35

Source: NSCB(2013), NSCB (2014), NSO (2010), NSO (2012) and Bureau of Labor Employment and Statistics (2012).

Large potential, yet relatively small economic footprint so far (if measured traditionally).

Quality of Port Infrastructure (2015)

ATENEO | ATENEO SCHOOL OF GOVERNMENT
Forming Leaders. Leading Reforms.

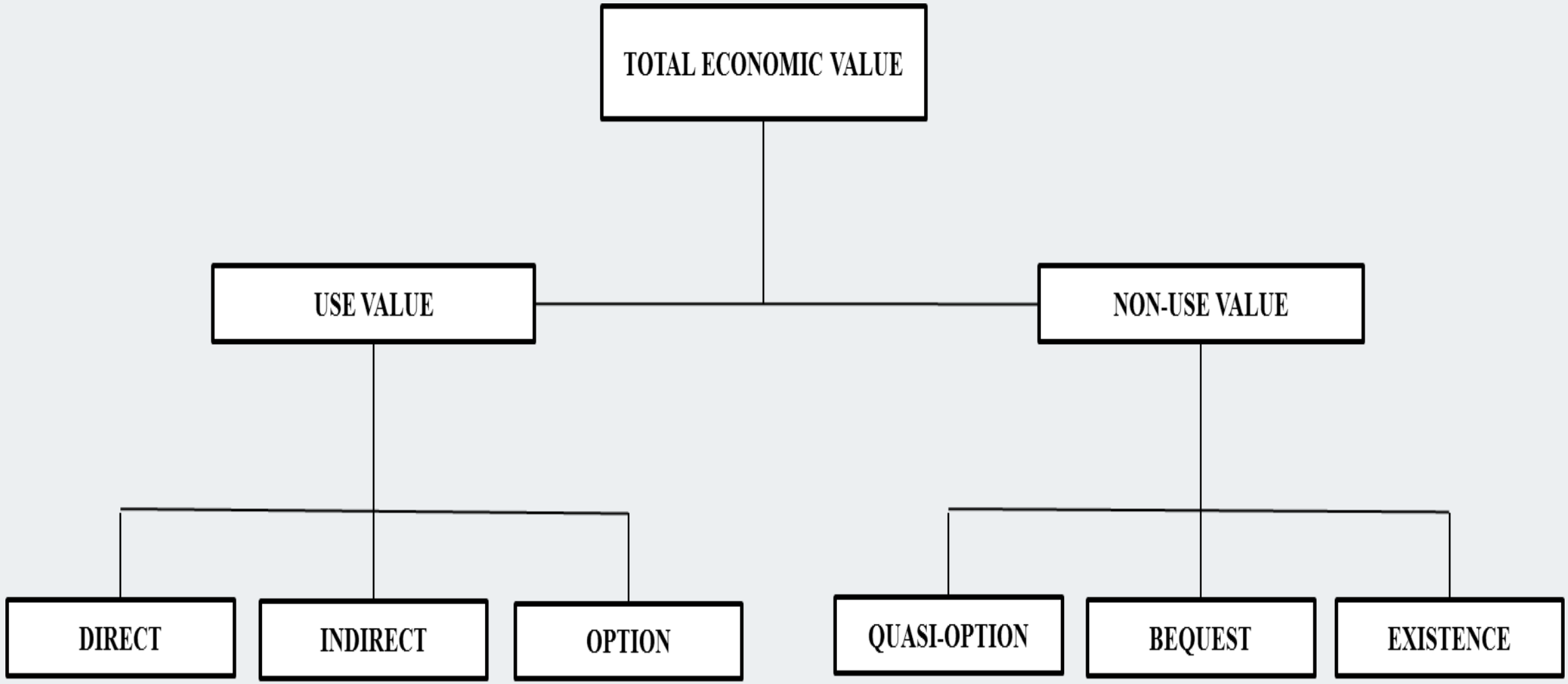
Rank	Economy	Value*
1	Netherlands	6.8
2	Singapore	6.7
3	United Arab Emirates	6.5
4	Hong Kong	6.5
5	Finland	6.4
6	Belgium	6.4
7	Panama	6.3
8	Iceland	5.9
9	Spain	5.8
10	Denmark	5.8
101	**Philippines**	**3.5**

Source: World Economic Forum Global Competitiveness Index

Philippines ranks 101st in the world in terms of quality of port infrastructure

Value:
1 = extremely underdeveloped
7 = extensive and efficient

Addressing Undervaluation of Natural Capital by Estimating TEV



Monetary Value of Marine Ecosystems

Azanza et al (2017) examined the economic and social activities in relation to the seas and coastal areas, and provided updated estimates of the real value of the country's marine ecosystems' goods and services (in total ***annual indirect and other benefits****).*

Marine ecosystems can contribute a conservative monetary value of about ***US$970 billion up to US$1.5 trillion per annum*** *to the economy* (in PPP US$ billion, 2007 prices) .

Total monetary value associated with coral reefs, seagrass, and mangroves estimated to be PPP US$98.298B or PhP1.553T (in 2007 prices), which is ***almost at par with the contribution of the manufacturing sector*** *to the country's nominal GDP in 2007 (PhP1.568T).*

ATENEO | ATENEO SCHOOL OF GOVERNMENT

Forming Leaders. Leading Reforms.

Domestic and International Policies Relevant to the Maritime Sector

Collective Action and International Cooperation

Well-defined cooperation frameworks:

- the Barents Sea Fisheries Management (i.e. several quota and zonal agreements between Norway and Russian Federation),
- the Pelagos Sanctuary for Mediterranean Marine Mammals (i.e. an agreement to create a sanctuary signed by France, Italy and Monaco),
- Danube River Basin Preservation (i.e. the Danube River Protection Convention signed by EU countries) and
- the Western and Central Pacific Tuna Management (i.e. several agreements to regulate quotas and catch areas signed by Pacific Island countries).
- Joint Development Agreement pursued by countries involved in maritime disputes (e.g. Malaysia-Thailand Joint Development Area)

Organizations for International Cooperation

Creation of **organizational entities** tasked with facilitating cooperating countries' collaborative actions to carry out the agreements and treaties.

icpdr iksd
International Commission for the Protection of the Danube River
Internationale Kommission zum Schutz der Donau

AGENCE DE GESTION ET DE COOPERATION ENTRE LE SENEGAL ET LA GUINEE-BISSAU

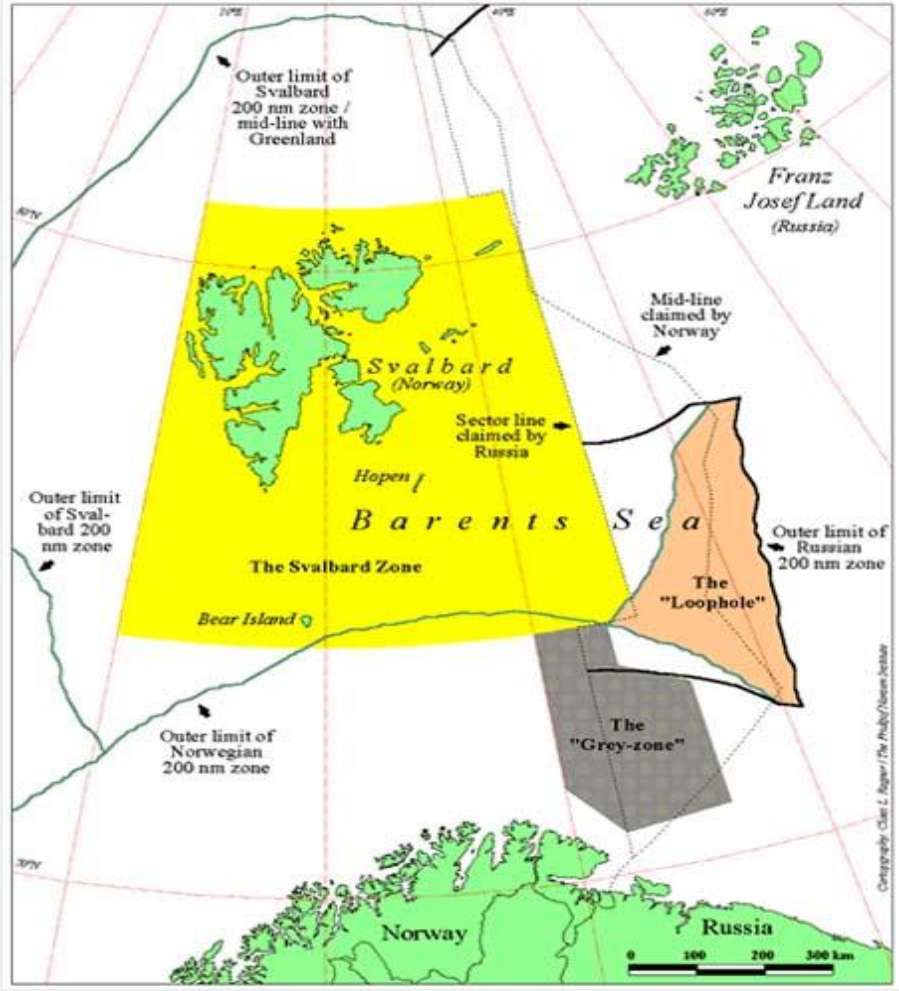
PACIFIC SALMON COMMISSION

Western and Central Pacific Fisheries Commission

Role of Evidence

Importance of generating **credible and unbiased data and evidence** to sustain and spur collective action.

- McKelvey, Miller and Golubtsov (2003): Greater returns associated with cooperation with higher quality of information regarding the shared resource available to each country
- Gulland (1980): Cooperation in research as the first stage of cooperation in the joint management of shared resources
- Role of cooperation in research in the case of Barents Sea Fisheries Management



ASEAN Efforts to Boost Maritime Economy

ASEAN Cooperation In Fisheries 2016-2020

Strategic Thrusts:

1. Enhance quantity and quality of production with **sustainable, 'green' technologies**, resource management systems, and minimise pre and post-harvest losses and waste;
2. Enhance **trade facilitation**, economic integration and market access;
3. Ensure **food security**, food safety, better nutrition and equitable distribution
4. Increase **resilience to climate change**, natural disasters and other shocks
5. Assist resource constrained small producers and **SMEs to improve productivity**, technology and product quality, to meet global market standards and increase competitiveness.
6. Strengthen ASEAN **joint approaches** on international and regional issues affecting the Food, Agriculture, and Forestry sector

ASEAN Efforts to Boost Maritime Economy

Roadmap Towards An Integrated And Competitive Maritime Transport (2014)

- Calls for the implementation of an **ASEAN Single Shipping Market**
- Implementation progress on the Establishment of **ASEAN RO-RO** Shipping Network

ASEAN Regional Forum Workplan for Maritime Security

Priorities:

- Shared Awareness and Exchange of Information and Best Practices
- Confidence Building Measures based on International and Regional Legal Frameworks, Arrangements and Cooperation
- Capacity Building of Maritime Law Enforcement Agencies in the Region

SINGAPORE's Initiatives to Boost Maritime Industry

- Investment on maritime research and development through the Maritime Innovation and Technology (MINT) Fund
- Simplified port dues structure which lead to lower port dues – the changes will save the industry an estimated additional $11 million a year
- Implementation of the Maritime Sector Incentives Scheme, which streamlined the tax incentives for shipping companies, encouraging international shipping owners and operators to establish operations in Singapore

VIETNAM's Sea Strategy

Adopted in 2007, the "Sea Strategy up to 2020" of Vietnam aims to

- Increase contribution of marine economy to GDP from 20% (2014) to 56%;
- Build 15 coastal economic parks with maritime industry as the leading economic sector, followed by oil and gas, seafood, and tourism industries; and
- Increase the standard of living of coastal residents 2.5 times compared to the general living standards of non-coastal residents

INDONESIA's National Sea Policy

Global Maritime Fulcrum (GMF) vision

- aims to transform Indonesia into a "global maritime axis" and assert itself as a force between the Indian Ocean and Pacific Ocean

Presidential Regulation No. 16/2017

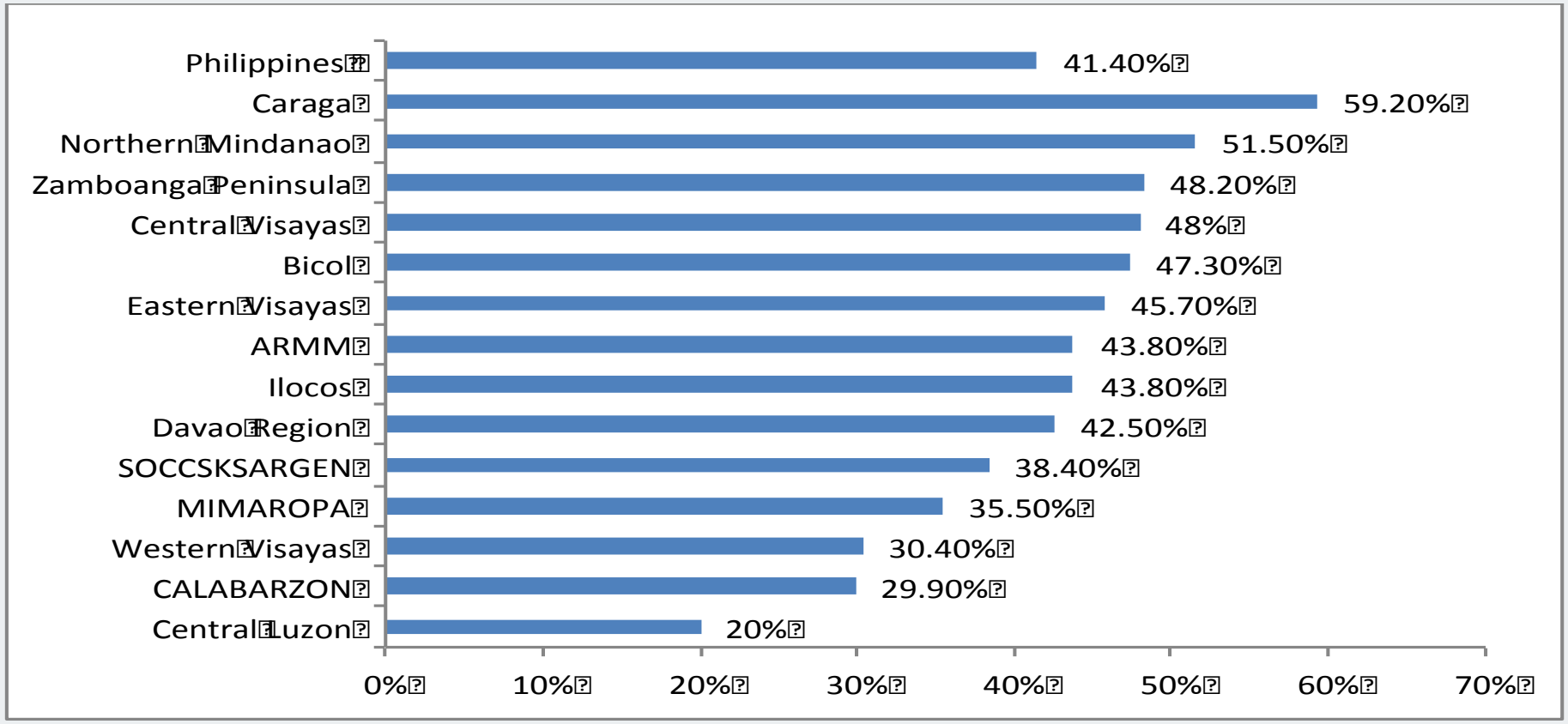
- Signed by President Widodo in March 2017
- A big step in realizing the Global Maritime Fulcrum (GMF) vision as it provides structure and substance to the vision
- Effectively a "bureaucratic umbrella" document, as it emphasizes connecting preexisting policies and programs rather than proposing new ones

PHILIPPINES's National Maritime Agenda

- **National Maritime Summit** set on April 2017 to convene stakeholders in the crafting of the National Maritime Agenda, with the theme of "Achieving Inclusive and Sustainable Socio-Economic Growth"
- A **draft** National Maritime Agenda was presented by the **Movement for Maritime Philippines (MMP)**, an association of maritime organizations in the country, during stakeholders consultation last July 2016
- President Rodrigo Duterte pledged to adopt a national maritime agenda during the Presidential Forum in Davao City in January 2016

Poverty and the Maritime Sector

Poverty incidence among fishermen across different regions, 2009



Source: NSCB

Philippines: Compensation for Local Communities

DRRM-CCA IN THE PH MARITIME SECTOR
Visualizing Sea-level Rise in Navotas

ATENEO | ATENEO SCHOOL OF GOVERNMENT
Forming Leaders. Leading Reforms.

Table 8. Affected population and area in Navotas by 1-meter SLR (2000)

Barangay Name	Area of Barangay (ha)	Affected Area after 1-m SLR (ha)		Population 2000 (NSO Census)	Affected Population by 1-m SLR	
Tangos	31.00	14.81	47.77%	31,663	15,124	47.77%
San Jose	71.00	38.99	54.92%	22,983	12,621	54.91%
Daang Hari	26.00	8.97	34.5%	17,678	7,754	43.86%
San Roque	27.00	11.84	43.85%	16,274	5,616	34.51%
Sipac-Almacen	27.00	11.77	43.59%	11,232	4,897	43.6%
Navotas-West	7.00	4.00	57.14%	7,851	4,489	57.18%
Bagumbayan	5.00	3.61	72.2%	3,754	2,713	72.27%
Navotas-East	6.00	2.49	41.5%	2,248	931	41.41%
Total	200.00	96.49	48.25%	113,683	54,145	47.63%

Source: Galgana, G. A., Abad II, S. C., Villarin, J. R. T., & Vicente, M. C. T. M. (2004). Visualizing Sea Level Rise in Navotas by GIS and Terrain Modeling. Journal of Environmental Science and Management.

DRRM-CCA IN THE PH MARITIME SECTOR
Simulating Sea-level Rise in Areas Around Manila Bay

Table 9. Affected Areas around Manila Bay to be affected by 1m and 2m SLR

Area	Area (ha)	Affected Area after 1-m SLR (ha)		Affected Area after 2-m SLR (ha)	
Metro Manila	59,583.11	5,374.99	9.02%	7,866.66	13.20%
Cavite	56,392.87	1,608.96	2.85%	2,701.02	4.79%
Bulacan	67,631.46	22,691.41	33.55%	27,967.61	41.35%
Pampanga	143,961.57	30,115.34	20.92%	41,594.57	28.89%
Bataan	288,928.47	37,959.70	13.14%	51,651.15	17.88%
Total	616,497.48	97,750.4	15.86%	131,781.01	21.36%

Source: Partnerships in Environmental Management for the Seas of East Asia. (2012). Integrating Climate Change and Disaster Risk Scenarios Into Coastal Land and Sea Use Planning in Manila Bay.

Defense and Security

Under President Duterte's 3.35 trillion peso (around $70 billion) budget for 2017 signed into law on December 22, 2016, PhP137.2 billion was allocated for defense, compared to PhP117.5 billion for 2016.

Defense Secretary Lorenzana -- we need a rather dramatic increase from around 1 percent of GDP (what the Philippines spend now on defense) to around 2.4 to 2.5 percent of GDP.

ATENEO | ATENEO SCHOOL OF GOVERNMENT

Forming Leaders. Leading Reforms.

Selected References

- *Azanza et al (2017). Valuing and Managing the Philippines' Marine Resources Toward A Prosperous Ocean-Based Blue Economy. UP-MSI, AIM Policy Center and Ateneo School of Government.*
- *Castillo, K. G. (2013). Harmonizing FORIN for Climate Change Adaptation (CCA) and Disaster Risk Management (DRM) to Develop Multi-sectoral Narratives for Metro manila, (627839).*
- *United Nations Framework Convention on Climate Change. (2016). Paris Agreement. Paris Agreement - Pre 2020 Action. Retrieved from http://ec.europa.eu/clima/policies/international/negotiations/paris/index_en.htm*
- *Galgana, G. A., Abad II, S. C., Villarin, J. R. T., & Vicente, M. C. T. M. (2004). Visualizing Sea Level Rise in Navotas by GIS and Terrain Modeling. Journal of Environmental Science and Management.*
- *Magnan, A. K., Colombier, M., Billé, R., Joos, F., Hoegh-Guldberg, O., Pörtner, H.-O., … Gattuso, J.-P. (2016). Implications of the Paris agreement for the ocean. Nature Climate Change, 6, 732–735. https://doi.org/10.1038/nclimate3038*
- *Mendoza, Ronald U. and Siriban, Charles Irvin S., Regional Public Goods in the Blue Economy: Lessons from 14 Cases of International Cooperation (July 2013). Asian Institute of Management Working Paper No. 13-020. Available at SSRN: https://ssrn.com/abstract=2292276 or http://dx.doi.org/10.2139/ssrn.2292276*
- *Partnerships in Environmental Management for the Seas of East Asia. (2012). Integrating Climate Change and Disaster Risk Scenarios Into Coastal Land and Sea Use Planning in Manila Bay.*
- *United Nations Development Program. (2016). Pursuing the 1.5 °C Limit: Benefits and Opportunities.*