

National Marine Policy Review

In order to realize the needs for a policy reform, a reflective analysis of the 1994 National Marine Policy (NMP) must be completed. The review proper focuses on the state of things under the four pillars identified in the framework; namely Marine Development and Conservation, Marine Regulation and Enforcement, Marine Security, and Marine Politics and Jurisdiction. This review also captures the issues and gaps encountered around these four pillars, based on experts' perspectives and diagnosis, with observations from the ground enunciated by various sectors, stakeholders and players in the community.

The review recognizes the accomplishments around the four pillars and identifies the gaps and challenges the 1994 NMP encountered. This review reckons climate change as an influencing factor to marine policy and development.

Marine Politics and Jurisdiction

Accomplishments

Definition of the country's territorial seas

Within the context of the 1994 NMP, the country's territorial seas were defined by international treaty limits based on (1) 1898 Treaty of Paris, (2) 1900 Treaty of Washington, and (3) the 1930 Convention between the United States and the United Kingdom, as well as national laws, including Presidential Decree 1596 on the KIG and the Philippine claim to Sabah (RA No. 5446), as well as the UNCLOS.

The 1994 NMP clearly defined the coverage of its politics and jurisdiction pillar based on two decision areas: (a) regime establishment policies and (b) maritime boundary negotiations policies.

In defining the country's territorial seas and archipelagic nature, the 1994 NMP mainly focused on the changes in the Philippine Constitution, the Treaty of Paris, the UNCLOS, and how these have influenced each other in defining the boundaries of the country. It provided a comprehensive review and analysis of the implications of these laws and treaties in dealing with territorial issues. In this light, the NMP provided a basic foundation for the legal basis of the country's jurisdictional claims.

In 2009 Republic Act No. 9522, the new Philippine Baselines Law, was enacted thirty years after the original baselines law was amended through Republic Act No. 5446. This was based on the framing of the UNCLOS, which allowed states to assert their sovereign rights over their territorial sea. Section 2 specifically includes a couple of disputed territories as regime of islands, namely the KIG as constituted under Presidential Decree No. 1596, and Bajo de Masinloc, also known as Scarborough Shoal. RA No. 9522, "An Act to Define the Baselines of the Territories of the Philippines," provides the foundation for our national identity as an archipelago a unity of land and sea; in our future socio-economic legislation and direction; in our international relations and reputation; or in defending our rights and entitlements.

NMP within the context of the ASEAN and other international agreements

The Maritime Security and Political and Jurisdictional Policy Areas in the 1994 National Marine Policy have been written in the context of the current international agreements and the structure of the ASEAN at the time. The ASEAN Regional Forum was specified as the country's "security buffer" at the time. Maritime boundary issues with the People's Republic of China, Japan, Vietnam, Malaysia, and Palau were mentioned in the document.

Gaps and Challenges

Standing territorial disputes with neighboring countries

The NMP has established a comprehensive legal framework by discussing how the definition of our territorial seas has evolved. According to Prof. Aileen Baviera (interview 2016), the main reason for the insufficient implementation of the economic and security aspects of the 1994 NMP was the lack of progress on clarifying the country's territorial limits and boundaries. This is why until now, territorial disputes remain as one of the most pressing concerns of the country.

The territorial disputes in the West Philippine Sea is one of the most critical national issues, wherein several ASEAN countries are involved—the Philippines, Vietnam, Malaysia, and Brunei—against China which claims that it owns the majority of WPS. The Sultanate of Sulu claim is also another pertinent territorial dispute the country has to settle with Malaysia. The ASEAN and China initially started discussing a Code of Conduct in 2002. But China has refused to proceed with the dialogs (Abbugao 2013). In so far as a single position for the ASEAN against China is concerned, the region has not completely agreed on a unified stance. While the ASEAN is taking actions toward unification, China is aggressively expanding in the WPS by reclaiming atolls and making islands. Massive island reclamation and Chinese takeover in the disputed region is being documented at Asia Maritime Transparency Initiative.¹

The growing assertiveness of China is of particular concern for a National Marine Policy and Strategic Action Plan. Its “Island Chain Strategy” contributes to the uncertainty in the regional security environment, according to a white paper published by UP (Agustin et al. 2013). The recent developments in the WPS impact have led to or are creating a new status quo where China is establishing a dominant presence through regular patrols, navy and coast guard vessels, civilian law enforcement activities, commercial shipping, and fishery activities. Future development of and in the Philippine EEZ will now need to take into consideration this new status quo of a risen China, and its consequence of more serious geopolitical rivalry among the big powers.

The WPS dispute goes beyond maritime security and territorial conflict toward terrorism and non-traditional piracy. Both implications pose threat to the stability of the ASEAN. Salvador (2015) emphasized that beyond rules formation, there is a need to establish the ASEAN Code of Conduct in dealing with China on the West Philippine Sea matter.

The need to update territorial boundaries among local government units

The ongoing efforts to clarify territorial boundaries between and among local government units in different parts of the country should be encouraged and the sooner the territorial boundary clarification and codification is done, the better for enforcement and regulation.

The need for a more pragmatic, practical, interim measures. The NMP still leans towards the issue in identifying the physical boundaries of the country, and not on practical and pragmatic matters of economic resource management, maritime defense, and law enforcement. In coming up with a national marine strategy, it is also necessary to look beyond the legalities of politics and jurisdiction. Simply focusing on arbitration and legal technicalities creates a

¹ Source: <http://amti.csis.org/island-tracker/>

tendency to overlook wider impacts on defense and security, as well as resource management and development.

According to Baviera (2015 interview), “there may have been excessive focus on legal questions rather than exploring pragmatic, practical, interim measures or a building block approach for strengthening jurisdiction and securing maritime interests,” in contrast to what other neighboring states are doing (e.g., active oil and gas exploration, build-up of overall maritime capabilities). The institutional arrangements for the 1994 NMP implementation characterized by the frequent and idiosyncratic reorganization of the offices responsible for maritime affairs within the Department of Foreign Affairs (DFA) and between DFA and Office of the President also contributed to the lack of implementation of the NMP, when DFA was placed at the helm, resulting in prioritization of foreign policy and diplomacy rather than national development and maritime security.

Marine Regulation and Enforcement

Accomplishments

Efforts towards inter-agency collaboration and convergence

Many of the agencies have established links on their own accord. One example of this is NAPC and BFAR who have a partnership targeted to reduce poverty. BFAR works with NAPC specifically on social preparation—mostly fish landing centers on village levels for municipal fisher folk—providing technical support development of community plans and proposals for how to manage resources. Another example is the coordination between DOST and NEDA on marine resource evaluation, monitoring, and productivity from an agricultural focus, while also placing importance on environmental concerns and education.

In Palawan, law enforcement units and military detachments found a way to address “turfing” and overlap of mandates by assigning particular marine protected areas to different units. For example, the PNP-Maritime Group is assigned to manage one marine protected area, an NGO is assigned to help a local government unit (LGU) manage another, while the Philippine Navy is assigned to monitor another (FGD Palawan 2015).

Palawan is a good example of an area that has synergy between the academe and other research institutions with government agencies (FGD Palawan 2015). Governed under RA No. 7621, the province has a Palawan Council for Sustainable Development (PCSD) which helps the provincial government in making sure that development does not get in the way of conservation and protection of the rich natural resources of the area. Local universities and Palawan-based NGOs work hand-in-hand with government agencies in producing studies and

data needed to have better policies in protecting their local environment (FGD Palawan 2015).²

Implementation of measures to ensure sustainable fishing.

Complementary to the MPA management mentioned above, gear restrictions and catch size regulations are being implemented to ensure sustainability within the fishing industry (Cabral et al. 2010). Regulations regarding specific fishing zones per industry are also in place to help ensure sustainable catches.

There is also water quality monitoring and measurement of chemical parameters initiated by BFAR Cebu (PENRO FGD Cebu 2015). This is to measure water condition and identify eutrophication.

Gaps and Challenges

Institutional Fragmentation

The largest gaps emerge from fragmented implementation and lack of interdepartmental discussions on how to fully implement marine policies and programs. The lack of information transfers, sharing, and collaboration perpetuates the gaps within the progress of the policy and its programs. Open sharing and trading of information and ideas have substantially delayed proper implementation of many existing laws and policies, as well as created overlap between agencies, which is a strain on money, time, and resources.

By enabling a channel or hub for all agencies and citizens to access information, data, and updates, the issues within this document can be drastically reduced. An archipelagic country such as the Philippines is in need of this critically as information dissemination and sharing is fragmented naturally due to the vast number of islands and dispersal of citizens. An increase in transparency and sharing will allow for the drastic growth of all regions alongside increased and meaningful participation by agencies and citizens alike. This centralized hub needs to be in charge of monitoring, as suggested by Mallari (2015 interview). This will help achieve the overall goal of a shift in paradigm from terrestrial to marine, as required, according to Capt. Rommel Ong and Acedillo (interviews 2015).

Sen. Antonio Trillanes mentioned that the policy was not sufficient to address the main problems of the marine sector. These problems lie on two central themes: integration and coordination. He referred to integration as a process of achieving a “balance or point of convergence between the interests and actions of different sectors,” while coordination is the “harmonious implementation of the programs and policies so the problems are prevented or resolved immediately”

² For more information on Palawan, a case study on its local governance is attached in this report as Appendix 7.

(Trillanes 2016 Interview). He added that there are no integrative institutional mechanisms for sharing of best practices to effectively manage and implement reforms.

This is echoed by Clarisse Garcio of the National Security Council, who said that the main core of the problem with Philippine institutions involved in maintaining the country's political jurisdiction is that there are too many agencies in charge yet their mandates are not precisely stated, which leads to conflicts in administrative jurisdiction (2015 interview).

Guidote (2016 interview) cited examples of conflicts in jurisdiction and responsibilities. In ports, for instance, continuous export and smuggling of endangered species occur as the port is under different jurisdiction. The PNP is placed outside the port, the PPA within the port, and the Bureau of Customs inside the port. Bias occurs as goods enter different jurisdictions. Culprits of oil waste into the sea also go unpunished as detection fails in moving water and as it moves to different jurisdiction.

Human resource development

While policies and programs are created and invested in, there seems to be a gap in transferring the knowledge, skills, and resources to those who will be implementing them on the ground. The level of marine awareness and effectiveness in the Philippines must be enhanced to ensure all existing and future policies, programs, and other activities are not only properly implemented but also effective with transparency and participation on all levels. Creating a system where laws, policies, and programs are complete with management processes and technical training is critical as many of the implementers are not marine experts (Alcala 2015 Interview). Inter-agency cooperation, as voiced out by Capt. Rommel Ong, will ensure the successful transfers of knowledge, learning, education, and leadership.

Recent studies have shown the Philippines to be critically in need of more scientists (Mira 2016). While current programs at a university level are considered exemplary, there is a lack of funds entering into research and studies both within academic settings and outside of this. The current gaps include the training of staff and hiring of appropriate experts in these roles. For instance, DENR is dominated by foresters, rather than marine scientists (Rosales 2015 Interview). Fisheries should not only focus on fish behavior and oceanography but also on human behavior and development (Rosales 2015 interview).

Enhancement of legal/administrative procedures.

Among the challenges are the improper incentives and disincentives for protecting the environment and natural resources. Penalties and fines are not

appropriate for the damages. The damage may be based on the economic value of the affected marine habitat or resources.

As the country has no established metric of its resources, demanding fines is not based on the actual damage. However, efforts have been done to estimate the blue economy of the country (Menez 2016 Interview). Penalties are very low relative to illegal gains (Armada 2015 Interview). Moreover, penalties can be meted out by the regulatory agency without court proceedings. The courts provide the venue for administrative agencies to seek enforcement of their needs and review of actions of administrative agencies to see to it functions are performed in a proper manner (CRM GB2). Weaknesses in the judicial system and the current regime of testing for cyanide mean that fishery violations for the use of sodium cyanide are usually not prosecuted (Fabinyi and Dalabajan 2011). There may be a need to review and reform the current system of penalties (ArcDev).

Legal aspect and prosecution of intruders and violators, including the managing and securing of the pieces of evidence, must be taught to enforcers. In Calamianes Island, Palawan, violators may be detected; however, they can escape penalty as violators are asked to submit their fish samples to prosecutors in Puerto Princesa (Fabinyi and Dalabajan 2011). There must be capacity-building for courts (familiarization with fisheries and environmental laws and international conventions) leading to improved handling of cases.

There are delays in carrying out administrative processes and funds and resources for prosecution are not enough. How quickly and frequently violators are detected, arrested, and prosecuted is a process variable to efficiency or effectiveness while how violators are treated and how consistently is the law enforced is a process variable to procedural justice (Kuperan 2010). Slow justice, a poor system of incentives, and a lack of trained law enforcement units and patrol assets may encourage the people to break the law (CRM GB2).

Funding and financing mechanisms

Funding and financing the initiatives required for the Philippines to become a leading marine nation. A thorough account needs to be produced to ensure funds exist and are dispersed to the right projects with full transparency.

Marine Development and Conservation

Accomplishments

Emphasis on the framework to balance demands for marine resource utilization and conservation

The 1994 NMP stresses the need to protect coastal and marine resources against any threats of pollution through an integrated coastal zone management network, while utilizing marine areas for resources in a sustainable development paradigm. To ensure a balanced approach to marine revenue, utilization and conservation, recognition of national and international cooperation, polluters pay principle, education, and research are at the core of the conservation and development trajectory within the 1994 policy. Considerable efforts have been made towards ensuring that the marine environment is secure from threats of environmental degradation, done through inter-agency collaboration to abate marine pollution. For instance, the Philippine Coast Guard (PCG), Philippine Ports Authority (PPA), Department of Environment and Natural Resources (DENR), and Maritime Industry Authority (MARINA) all work with marine pollution abatement, which demonstrates the success of this policy suggestion in agency relations. While this is a seemingly terrestrial issue, much of the solid waste produced ends up in the ocean, and creates serious issues for the wildlife and environment – thereby the focus on waste management feeds directly into the ridge to reef agenda.

The 1994 NMP focused on coastal community development and empowerment, including livelihood protection and development. The approach aims to uplift the socio-economic conditions of fisherfolk and coastal dwellers through community-based management, balancing socio-economic demands with the rehabilitation and enhancement of the country's coastal areas. The policy is visibly progressive and in line with the current popular thought on resources conservation by allowing for community engagement, management, and ownership, environmental conservation is far more likely to succeed (Rosales 2015 interview).

Government capacity can also be enhanced when the community and stakeholders are involved. Management projects have highlighted the significance of incorporating stakeholders during scoping, reviewing, decision making, and monitoring and evaluation. Community vigilance can detect poor implementation and lead to corrective actions against violators. The community is also able to anticipate benefits and adverse impacts from development activities due to their knowledge of the local environment and their vision for their future. The Apo Island marine reserve is an internationally recognized best practice example of community development succeeding with conservation at

the forefront, with huge economic incentives intertwined (Alcala 2015 Interview). On the other hand, there are cases where fisheries failed due to the absence of conservation initiatives by the community (Cabral et al. 2010).

The fishing ban, particularly in Cebu, is being observed as there are information caravans and information drives brought to communities before its implementation (FGD Cebu 2015). The Bureau of Fisheries and Aquatic Resources (BFAR) coordinates with the local government for dissemination of information about the ban (FGD Cebu 2015). With that, Cebu realized the importance of an action-based school with environmental education. In Bohol, education campaigns among students also become helpful for the implementation of protection of Danajon Bank (Armada et al. 2009). An agreement was ratified to protect Danajon Bank, to coordinate intervention, to share information and expertise, and to harmonize municipal fishery ordinances together with the community (Armada 2010).

The effort of non-governmental organizations (NGOs) in coastal and marine protection and management cannot be neglected as they play a critical role in implementation, funding, management, and continuity of many MPAs. In Zamboanga, private companies are also being involved for policy coordination and first response, as in incidents of oil leaks and spills (FGD Zamboanga 2016).

Increasing research and marine resource assessments

In the past 22 years the Philippines has seen a multitude of research papers produced, which demonstrate the quality of research outputs and development nationally. Alongside academic research, government agency information is increasing as an output. In terms of agency research, the Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development of the Department of Science and Technology (PCAARRD-DOST) has a more research-based output and supports research in marine biodiversity and climate change. The Mines and Geosciences Bureau of the Department of Environment and Natural Resources (MGB-DENR) conducts geosciences surveys and mineral exploration and coastal quarrying research. From a social science standpoint, both National Anti-Poverty Commission (NAPC) and DA-BFAR work on poverty reduction and livelihood development.

Prioritization of the establishments of marine protected areas

Government agencies, notably the DENR, have prioritized the establishment of marine protected areas (MPAs) and set a target of 20 percent of Philippines waters to be protected, in conjunction with coastal resource management. Establishment and management of MPAs are being done to address the issues

of overfishing, climate change, and poverty alleviation. More MPAs are being established and managed, and exploited marine habitats are being rehabilitated.

A key example of successful MPA management is the Batangas Network. This is an MPA network composed of 43 MPAs within 12 municipalities, including Batangas City. A large part of the success of this MPA network can be attested to the joint regular meetings of the management body every two months. Through their MPA Networks Action Planning Workshops, the members received training in capacity building, technical assistance, and specialized training on sea grass monitoring, rescue management of marine mammals and marine turtles, paralegal aspects of management, sea patrolling (deputizing of Bantay Dagat or fish wardens), and water safety and rescue.

A 15-kilometer municipal water has been delineated to help the local government in managing water on their jurisdiction. Among municipalities, 15 percent of their jurisdictional area must be allocated to be a marine sanctuary. Mariculture zones are also delineated as part of development (ArcDev 2001). Zoning has been implemented with an attempt for fair allocation of fishing grounds and resources between the highly efficient trawlers and the less efficient traditional gears (Susilowati 1998).

Participants in the Zamboanga FGD have also noted the success of the seasonal ban of catching sardines (tamban fish), which demonstrates the willingness of LGUs and fisherfolk alike to protect, conserve, and improve the marine environment, a practice that could be transferred to the national level. This is a critical example to demonstrate the flexibility of MPAs as they are not simply areas with prohibited access; rather, MPAs can be adapted to meet the needs of the community while still conserving the natural environment (Alcala 2015 interview). Creating this paradigm shift in communities will also encourage support and leadership of MPAs.

The DENR is redrafting the Sustainable Coral Reef Ecosystem Management Program (SCREMP) into a comprehensive program to include all marine ecosystems. Another major development is the formation of the Coral Triangle Initiative (CTI) which is a collaboration among all nations included in the Coral Triangle³ in efforts for regional conservation. This has been institutionalized through the issuance of EO 797: Adopting the CTI National Plan of Action.

The Philippines as among the top shipbuilding and maritime nations

The Philippines has been touted as the leading shipbuilding and maritime nation in Southeast Asia, and the fifth largest globally (Phil Marine 2016). This shows the significance of the industry to the Philippines, highlighting the need to prioritize the development of the industry domestically, including the workers

³ The Coral Triangle Initiative is an agreement among six nations, sometimes referred to as the “CT6.” The countries are Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands, and Timor Leste.

within these sectors. Since the inception of the 1994 NMP, the Philippines has focused a large part of manpower capabilities and educational centers on seamen, shipbuilding, and maritime-related fields. Because of the success of the shipbuilding industry, the maritime sector is placed at the forefront of economic growth and a critical factor to consider in any marine policy.

This industry was propelled to a leading sector with the arrival of foreign shipbuilders, thereby increasing export growth in the international market. This recognition ignited a spur in development, with more ships of larger tonnage capacities being constructed, such as bulk carriers, container ships, and passenger ferries. These accomplishments further prove the Philippines as globally competitive in building work class ocean vessels (Phil Marine 2016). Republic Act (RA) No. 9295, 2004 promotes the development of the Philippine shipbuilding industry, a positive action to ensure the progress of the industry in the Philippines.

Gaps and Challenges

Weak development planning model reflecting the marine paradigm shift

While there are a multitude of programs targeting marine awareness and conservation, there is still a visible bias towards the terrestrial paradigm of Philippine development. Arguably, the increase in MPAs, the rise in NGOs related to marine conservation, and the increase in media articles related to the marine environment show a shift towards this, yet this has not been fully realized. Capt. Rommel Ong of the Philippine Navy still sees the need for this shift, mentioned in the 1994 NMP (2015 interview). The 1994 NMP, while stressing the need for a paradigm shift, did not supplement this idea with the archipelagic development model (Batongbacal 2000). This issue is also evident in the Philippine development plan which has been criticized for being too land-focused (Acedillo 2015 Interview).

To realize this, the ridge to reef approach to inclusive management must be at the forefront of all policies and guidelines, as it is difficult to manage the coast with an unmanaged upland area.

Need to have a unified national marine research agenda coupled with monitoring, evaluation, and extensive dissemination of research outputs

Research on the critical topics for development and conservation is currently being conducted by government agencies, academic and independent research institutions, as well as NGOs. But they are done in a fragmented manner. Efforts to come up with comprehensive marine and fisheries studies, even for the maritime sector, have been initiated by various institutions; among them are the University of the Philippines Marine Science Institute (UP-MSI) and BFAR.

The cohesiveness of the research agenda in the marine and maritime sectors is yet to be set and determined.

Further, UP-MSI advocates for intensifying oceanographic research, particularly in the country's EEZ, signifying the country's ability to manage resources. This, according to the UP-MSI, is considered a major gap in research in the country. Although progress has been made in the conduct of resource assessments, it has yet to be fully realized (Batongbacal 2016 interview). There is still a gap in the understanding of the resources as there are no comprehensive assessment or baseline studies which are critical in monitoring targets. This poses a problem for both living and nonliving resources, especially for sustainable development in regions such as the Kalayaan Island Group (KIG) and Benham Rise.⁴ Both areas are rich in natural resources for extraction and conservation.

The international community recognized Benham Rise, a region to the east of the Philippines, as Philippines territory in 2012. This relatively unexplored area has the potential to provide an abundance of information for research and potential resources – particularly for energy. UP-MSI has already conducted an exploratory trip, but much more financial and human resources have to be poured into this area.

Leading marine scientists, together with economists, unravel the real value of the marine resources that wait to be enhanced. Certainly, the marine resources are invaluable to what scientists call a “Blue Economy” (Azanza et al. 2016 unpublished) if only the Philippines could harness and invest on the resources for sustainability.

Having a strong research base for the nation will feed into the underlying goal of national progress for the Philippines. Funding research will increase high-level jobs as well as encourage more marine scientists to remain in the Philippines, and potentially lead to channels of experts working within government departments (Alcala 2015 interview).

Not all plans, decisions, and laws are science-based

Since the country has no well-established/accessible and comprehensive resource base of scientific information, it can be inferred that most of the decisions did not seek scientific data as bases for those decisions. Laws and policies should be supported by science-based data and information to determine possible impacts and consequences (FGD Cebu 2015). Some of the decisions and projects that entail science information are the designation of MPAs, locations and species of mangroves for mangrove rehabilitation, construction of coastal developments such as ports, jetties, seawalls, etc.

⁴ The National Coast Watch Council has formed a Technical Working Group (TWG) for the Benham Rise. The task of the TWG is to come up with a National Research Program on the Benham Rise.

A particular example extrapolated from the Palawan FGD shows that while there is an abundance of studies and researches, the application of the studies for local policies and decision making remains limited “There have been voluminous studies in Palawan, but the translation of these studies into policies is difficult. We have to be frank: politicians who make policies are not patient—they don’t have time to read” (FGD Palawan 2015).

Human induced environmental threats to marine environment

The marine environment is at risk because of the increasing human activities that exert pressures on it. There is an increasing threat to the marine environment as a result of land-based sources of pollution and wastes. The Philippines is the third highest producer of plastic waste found in the ocean (after China and Indonesia) (Jambek et al. 2015). Alongside this, waste management facilities are still lacking, as mentioned in the Zamboanga FGD. This is notwithstanding the existing laws on waste management in the country.

While the Philippines is signatory to multiple international treaties regarding marine pollution,⁵ the reality shows that there are still serious issues within the national territory of the Philippines. Currently, the PCG upholds the international agreements, but they have cited a lack of a reception facility for pollution. This was echoed in the Zamboanga FGD. Violations of dumping at sea could in part be tied to the lack of monitoring abilities of the Navy and PCG due to a shortage of ships available. The lack of regulatory presence translates to the higher potential for abuse or neglect of policy.

Overexploitation of marine resources and illegal wildlife trade also pose a threat to the marine environment. The Philippine seas host a multitude of rays, six of the seven sea turtle species, pelagic species, whale sharks, and other migratory and endangered species and endemic corals (Coral Triangle Initiative 2014). Unfortunately, many of these species are sought after by poachers who harvest them for fins, shells, and eggs, or are caught by fisherman for food and profit.

The problem of overfishing has been a continual concern for over 20 years. The status of the country’s fisheries seems to worsen with the growing demand for food. As global and national demands for fisheries escalated, Philippine fisheries showed decline and clear signs of overexploitation as evidenced by declining catch per unit effort, declining size and quality of fish caught (Lacanilao 1998 in CRM GB8). Among the fishing areas of the world, Philippines seas are among the most heavily fished. Fish stocks in major fishing grounds have been reduced drastically to less than 10 percent of the 1950s level (Green et al. 2003 in Mualil et al. 2011).

As a result of depleting fish stocks and a lack of education, framed within the deleterious impacts of climate change among other problematic causes, fishermen

⁵ See Appendix 5: International Agreements and Treaties Related to the National Marine Policy

are increasingly resorting to unsustainable and illegal methods to catch fish, such as the use of small nets and dynamites. These are hugely detrimental to the entire ecosystem and destroy a chance of habitat restoration or recovery.

Likewise, the conversion of marine habitats to other uses affects the quality of the marine environment. The current risk of unsustainable and destructive tourism is already visible in some areas of the Philippines, and this has a detrimental impact on the environment. The Philippines is currently undergoing a huge tourism boom, both from domestic travel and international visitors. If strict regulations are not put in place, tourism will not only cause environmental destruction but cause negative effects on local communities and the entire nation.

Poverty in coastal communities

The poverty incidence in the coastal fishing communities is generally higher than the national average (Cabral et al. 2014). Fishing households in the Philippines had a poverty incidence rate of 49.9 percent which is twice the overall poverty incidence rate in the country, based on the 2006 report of the National Statistical Coordination Board of the Philippines (Castro 2009 in Muallil et al. 2006).

Under the pressures of an increased cost of living, depleted fish stocks and climate change, fisherfolk are in need of an alternative source of income to supplement the lessening fish yields nationally. To roll back overfishing and restore coastal habitats, there is a need to create land-based alternative employment opportunities for young fishers (D' Agnes et al. 2010). As not all fishers are willing to exit fishery, livelihood programs must target willing fishers to reduce the fishing pressure and allow fish stocks and other marine ecosystems a chance to recover while improving fisherfolk's well-being (Mualil et al. 2011).

As BFAR implements closed fishing seasons, it is necessary to provide substitute and supplementing income sources for fishing communities (Beger et al. 2010). In Cebu, their Provincial Environment and Natural Resources Officer (PENRO) provides small enterprises such as sari-sari stores for livelihood. This is to augment, if not divert, short- or long-term impacts of MPAs to stakeholders (FGD Cebu 2015). They also provide sustainable marine-based industrial and entrepreneurial activities such as fish and seaweed culture (FGD Cebu 2015). Seaweed farming has been considered a major source of livelihood in many coastal communities (Barut et al. 2003), though post-harvest technologies and services are not always available in the municipalities (FGD Davao 2016). BFAR and LGUs coordinate to distribute seaweeds among stakeholders.

Seasonal bans are implemented in different areas in the country, such as in Visayas and Mindanao (FGDs Cebu, Davao, and Zamboanga 2016). There were oppositions during the initial implementation; however, later on, stakeholders realized the benefits and advantages (FGD Zamboanga 2016). The last closed season ended last February 2016. Prior to implementation, closed fishing bans

were announced and disseminated to the general public through newspaper and social media in coordination with the LGUs for dissemination to their respective constituents (PENRO FGD Cebu 2015).

Mismanagement of Marine Protected Areas

As it stands, around 5 percent of coral reefs are protected in the Philippines (Alcala 2015 interview). This falls short of the 20 percentage proposed by DENR. While many MPAs have been declared, the majority are defunct—of the 565 marine reserves and coastal management schemes in the Philippines, only 10 percent have been effective (Alino et al. in Beger et al. 2010). This is due to mismanagement and the lack of expert knowledge, information transfers, access to information, and funds, among a variety of other issues.

The goal of protecting 20 percent of Philippine waters is still an ideal target, but it is vital that all declared MPAs are examples of best-practice management. In order to ensure preservation of vital marine resources and ecosystems, it is advocated that not only a minimum of 20 percent of the oceans be protected under law, but the protection of all marine environments, from coral reefs, to mangroves, areas of upwelling, and deep sea regions (Alcala 2015 interview). By combining protection measures with community engagement and education, MPAs will be successfully managed and supported.

The challenge to maintain the country's position as a top maritime nation

In order to maintain the global position among the top five shipbuilding nations, and potentially expanding the industry to number one globally, the Philippines needs to ensure maintenance of shipbuilding yards, increase the number of students studying, solidify the industry into law, expand RA 9295 to have additional safeguards, and keep a competitive edge on pricing and technology. Port facilities all over the country need not only be increased but also upgraded. Traffic decongestion on terrestrial roads and the worsening public air navigation situation could be improved if the maritime transport sector will also be developed.

Improper valuation of marine resources

According to Azanza et al. (2016, unpublished), the 'blue economy' has not been properly valued. For instance, as it currently stands, the cost of damaging a coral reef is set at PHP 24,000 per square meter. This value is not comparative to the value of a healthy coral reef, considering the multitude of benefits coral reef ecosystems provide if healthy. Marine ecosystems are also not valued in terms of services; rather, they are valued based on commercial prices, or how much they can be sold for human consumption. Because of this, the country lacks incentives

and disincentives based on the economic value of the environment and natural resources (Rosales 2015 interview).

Marine Security

Accomplishments

The security concerns outlined in the 1994 National Marine Policy, namely: territorial integrity, ecological balance, socio-political strategy, economic solidarity, cultural cohesiveness, moral-spiritual consensus, and external peace have established a solid basis for a progressive and inclusive national development policy. The NMP is also based on international laws and treaties, thus ensuring that the Philippines has a more substantial basis for actions and programs, and can gain support and structural assistance from the international arena. As marine security is a very contextual arena, accomplishments cannot be numerated as such.

Gaps and Challenges

Sea lanes are undefined;⁶ weak mapping of the EEZ

The Philippines is a major hub for sea trade, with over 80 percent of international trade passing through the exclusive economic zone (EEZ) of the nation. While the Philippines is signatory to the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, International Regulations for Preventing Collisions at Sea 1972 (COLREGs), and the ASEAN Economic integration (on maritime transport), there is believed to be an imminent threat to freedom and safety of navigation due to interference in marine communication and trading lanes. One stark example of the necessity to clearly define sea lanes is Tubbataha Reef, the Philippines' only World Heritage marine site, which was damaged by three shipwrecks over the past decade. In two of the reef grounding incidents, the ships cited poor mapping of the area as the reason why they entered the restricted territory.

Internal and external threats

In the case of the Philippines, the internal threats include separatist movements in Muslim Mindanao, while immediate external threats include territorial disputes in the KIG, Scarborough Shoal, and Sabah. The task of this

⁶ The National Coast Watch Council has created a Technical Working Group composed of representatives from various government agencies to identify the Archipelagic Sea Lanes of the Philippines. Get copy of the NCWC Resolution creating the TWG.

assessment is to determine whether the NMP that was crafted more than 20 years ago is still sufficient and flexible enough to cover issues that the current regime has to resolve.

Security-wise, the West Philippine Sea has become a “grey zone” where there is no active conflict, yet neither is there stable peace. In fact, there are enough triggers for the accidental outbreak of conflict to take place. This raises the question of what rules of engagement apply to the different zones. These include peacetime rules, wartime rules of engagement, revisiting the United Nations Convention on the Law of the Sea (UNCLOS), the intervention of the International Maritime Organization (IMO), and stronger domestic laws. Internally, there are geographic areas which are simultaneously subject to multiple sovereignty claims, are within contested exclusive economic zones for fishing or continental shelves for energy exploration, and are vital sea lanes of communication.

Issues in the KIG involve not only territory but various aspects of security as well: human, food, energy, and the environment. Aside from the KIG, the Philippines also faces marine security issues in other parts of the country: the Muslim South’s efforts to achieve autonomy, extremely close and overlapping EEZ with Brunei and Malaysia, and porous borders to the north and east. Territorial security issues are thus at the forefront of the nation’s priorities.

Illegal fishing in the exclusive economic zones

The Philippines is currently facing pressures on its territorial borders (Acedillo 2015 interview). This extends far beyond conservation yet impacts greatly on the health of the oceans as well as the economic development of the fisherfolk within the Philippines. Illegal fishermen from Vietnam, China, Korea, Malaysia, and other regional neighbors are entering the Philippine EEZ with more advanced fishing vessels, allowing for a high yield. Batanes participants (2016) discussed the issue of having many fishermen feeling powerless and unable to catch fish. While the navy conducts anti-illegal fishing operations (Ong 2015 interview) the capabilities are limited due to resource constraints.

Poaching

Poaching is rife in the Philippines. While an issue of conservation, poaching poses a threat to the environment, human safety, and sovereignty. Poaching has a detrimental impact on the economy because of its high frequency. Roughly 71,400 metric tons of captured fisheries, with an estimated value of PHP7.1 billion, are lost every year to poaching. A 2008 APEC Fisheries Working Group study found that 90 percent of foreign vessels operating in Philippine waters are engaged in illegal fishing (Pitlo 2013). The illegal poaching trade is suspected to yield at least \$19 billion per year, and, as such, has become a lucrative business

for criminal syndicates because the risk involved is low compared with other crimes (Schonhardt 2014). Loss of income generated in post-production of fishing, such as storage, is lost. The availability of fish for local livelihood is also a critical factor caused by poachers.

Weak navy and coast guard presence

The Philippine Navy is burdened by the lack of resources provided to naval services, making monitoring the country's marine resources a near impossible task. The Batanes FGD revealed that Taiwanese ships constantly enter and conduct fishing activities inside the Philippine EEZ due to the absence of patrol boats. The country has a 50-nautical mile area to protect, multiplied by 350 baseline points. Ideally, the Philippines should have state-of-the-art offshore territorial defense capabilities, especially in contested areas such as the West Philippine Sea and the Sulu Sea. However, this is not the case. The PCG is assigned to patrol the Philippine coast and implement management. Ideally, the PCG should be 18,000 to 20,000 in number, but the reality is they are only 4,000 in number (Acedillo 2015 interview). Magdalo Partylist Rep. Ashley Acedillo suggested that the navy needs at least four cutter ships to be used in the West Philippine Sea, the Eastern Pacific side, the Sulu Sea, and the Bashi Channel (Philippine-Taiwan border). These cutters should be complemented by rotary helicopters and fixed-wing assets.

Aside from floating assets, communication equipment and infrastructure is lacking. According to law enforcement specialist Mar Guidote, the navy and the coast guard may have state-of-the-art equipment and infrastructure on the ground, but if they do not have the ability to coordinate with each other efficiently, these assets will remain useless.

Lastly, some of the country's military assets may not be appropriate for the environments in which they operate. A specific case in Batanes proved that Taiwanese vessels could easily enter the country's borders because the boats used by the coast guard were not built for the rough seas of the island province.

Energy security

As it stands, the Philippines is in need of an alternative source of energy to power the island of Luzon, and the entire nation, as the Malampaya Gas Sound is expected to run dry in 2020. By harnessing the ocean's energy, the Philippines will be able to, sustainably develop itself as a leading nation in energy provision for its citizens. Creating alternative energy sources to compliment fossil fuels will ensure a steady supply of energy and lead to the increased development of all regions, create new jobs and innovation positions, and reduce national debt. This can include tidal energy, marine current power, and wind farms in coastal

areas, thermal energy, and many other new innovations. Securing reliable and alternative sources of energy will ensure full operational capabilities of the Philippines and enhance energy security, while setting the benchmark for the entire world.

Cross-cutting Issue: Climate Change and Disaster Risks

Accomplishments

The United Nations Framework Convention on Climate Change (UNFCCC) was implemented on March 21, 1994, a few months before the NMP was published. Still, aspects of climate change action were mentioned in the 1994 document: enhanced preparedness for natural calamities, and the policy statement on ensuring proper management of marine and coastal resources against any possible pollution from marine and land-based sources.

Gaps and Challenges

The six marine biogeographic regions of the Philippines belong to different climate clusters and thus have varying levels of climate vulnerability. Mangroves and sea grasses, equally important to coral reefs, face threats of conversion to aquaculture ponds (Primavera et al. 1991 in Barut et al. 2003), and siltation, pollution and eutrophication (Fortes 1995 in Barut et al 2003), respectively. From 1965 to 1975, the rate of conversion of mangroves to aquaculture ponds was measured at 243 km² per year (Primavera et al. 1991 in Barut et al. 2003). This mangrove loss has been linked to the decline of fishery stocks, such as that of shrimp stocks (Cabral et al. 2010).

Marine habitat destruction, together with unsustainable fishing practices, exacerbates the impacts of climate change. Other visible climate change impacts in the marine ecosystem are the changing waves and storm surges, rising sea-surface temperatures, sea level rise, and ocean acidification (though no available information on ocean acidification has so far been recorded).

Storm surges and tsunamis may have direct influence and effect on the coastal and marine environment resulting in other socio-economic disturbances. Among the possible effects of these hazards are destructions of coastal and marine habitats (sea grasses, mangroves, coral reefs) and resources (marine organisms and their juveniles), contamination of food and water supplies, disruption of transportation, communication, and power lines, disruption of livelihood and human settlement, loss of human and animal lives, and reduction of the country's economic productivity. Hazards may have direct effects on these coastal and marine environment and resources, facilities, industries, developments and

infrastructures (roads and ports) if they occur nearby or within the coastal and marine environment.

The government should consider these hazards not only for protection and conservation but also for its holistic marine policy implementation and strategic plan for inclusive growth and sustainable developments.