A PROPOSED FRAMEWORK FOR LOCAL MARINE ENVIRONMENTAL PROTECTION IN THE PHILIPPINES

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INTRODUCTION

International Environmental Law and Local Government

Throughout history, the development of systems of government has been characterized by expansion of regulation or governance into human affairs. Thus, between the long-drawn and troubled birth of the progenitors of the nation-state in Italy in the early sixteenth century to the vibrant democracies of scores of countries of the present-day, the concept of government has developed from simple feudal duties, obligations, and vassals to today's highly complex systems of laws, rules, regulations, and bureaucracies.

The scope of human behavior brought under government influence and control has broadened to include practically all aspects of individual life. Meanwhile, the magnitude of social, economic, and political interaction between populations has likewise increased, as well as the complexity and interactivity of individual, corporate, and state conduct. The creation of the "Global Village" is well under way, spurred by events such as the fall of the bipolar balance of power between the U.S. and U.S.S.R., and the slow but sure integration of the world's economies, bringing to fore the need for joint, complementary, and standardized efforts by states to attain common goals. Thus, in the realm of international relations there is a marked trend towards bringing more and more aspects of state conduct under some common and standard system of regulation or control.

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Recent environmental crises and incidents have proven that states can no longer remain parochial and isolationist within their imagined political boundaries. The transboundary nature of environmental issues has encouraged states to push further toward a globalization of efforts to combat environmental degradation. Major international agreements such as the U.N. Convention on the Law of the Sea $(1982)^1$ and the Vienna Convention for the Protection of the Ozone Layer (1985)² and its subsequent protocols have implicitly recognized the need for concerted state action and relative commonality in state objectives and approaches in order to ensure a healthy and sustainable environment. In the past three decades, international environmental law has developed by leaps and bounds with respect to substance and to procedures such that in several fields, like control of oil pollution, ocean dumping, nuclear materials, and ozone-depletion, elaborate institutional mechanisms are now in place and stand a much better chance of effectively addressing these issues on a global level. UNCED Agenda 21 has been highlighted as a worldwide plan that sets the pace and direction for future environmental efforts and agreements and attempts to set the directions for improvement of international institutional mechanisms to address global environmental issues.³ And although it may be admitted that progress has been slow when compared to the urgency that nature demands, the trend toward global standards is still remarkably strong and manifesting itself more and more in regional and subregional approaches.

However, it has been pointed out that even the most recent development of institutional mechanisms in international environmental law has overlooked a key area in the management of the environment: the pivotal role that local governments (LG) may play in the implementation of an internationally-mandated system of environmental standards and policies. At least one author has pointed out that the manner in which Agenda 21 has been formulated, especially in the management of the oceans, ignores the primacy and

¹ 21 I.L.M. 1261 [hereafter UNCLOS].

² 26 I.L.M. 1529.

³ United Nations Commission on Environment and Development, Rio Declaration on Environment and Development: Program of Action for Sustainable Development (1992) [hereafter cited as AGENDA 21].

significance of LG interventions, and the inherent financial, regulatory, and development challenges that they face within their jurisdiction.⁴ Agenda 21 appears to implicitly emphasize centralized national planning and the provision of support to locally-based non-government organizations and entities, while bypassing the middle level of LG which is actually the primary interface between the two.⁵

It is not difficult to understand why international environmental law in general has historically glossed over LG participation in worldwide management strategies. In the first place, the very nature of international law assumes that the subject of regulation or influence is state conduct, i.e. actions attributable to a nation-state taken as a single unit. International law assigns duties and obligations to a state regardless of the latter's internal organization and structure, with the expectation that once such duties and obligations are undertaken; all of the state's constituent offices are bound to submit conscientiously to the task of fulfilling them. Second, the definition of the term "local government" or "local authority" itself has diverse meanings among different countries depending on their own systems of government. Thus, even if there were heightened awareness of the importance of LG roles in prospective international environmental strategies, it would still be extremely difficult to fashion agreements with specific allocation of involvement and commitment where the LG resources, in terms of population, finances, geographic extent, administrative capabilities, and location, vary wildly within and among states.

But these inherent obstacles to a deeper discussion of LG responsibilities are fast being overrun by the steadily increasing complexity of public administration, the enormous demands placed upon government mechanisms by the growing population base, and the expanding diversity of regulated activities. Decentralization within government systems in order to more effectively monitor, regulate, and respond to day-to-day business has promoted increased autonomy on the part of the LG units; in some areas of governance for instance (e.g., land use planning, regulation of local businesses, sanitation, etc.), the LG's function is practically independent of the national government.

⁴ K. Otto-Zimmermann, Local Implementation of Agenda 21, 18 MARINE POLICY 112 (1994).

⁵ Ibid.

And quite often, these areas of regulation within LG jurisdiction are those which could have a great impact on national efforts to maintain and manage the environment. With the increasing autonomy and expanding jurisdiction of LGs, it is proper to consider whether it is better to address the needs of the environment through the LGs instead of the national governments.

The need for greater attention in emphasizing LG contributions in the resolution of global environmental problems is further underscored by practical considerations of how states are actually ran. Ultimately, LGs bear the greater burden of planning responsibility since they are required to provide the inputs upon which plans are based as well as a bulk of proposed actions and targets that are eventually integrated into national programs.⁶ Since locally-generated revenues eventually revert back to the local community under LG jurisdiction in the form of facilities, services, and infrastructure, LGs actually invest more resources directly into environmental management than national governments.⁷ And finally, with the seat of the LG itself being physically closer to the incidents and symptoms of environmental dysfunctions, LGs are naturally more directly affected by its effects and can be more sensitive and responsive in dealing with them.⁸

This paper focuses on the possibility of using the international law of marine environmental protection as a basis for parallel initiatives at the local level. By briefly summarizing prevailing international laws and correlating them with national and local prerogatives, it can be demonstrated how global norms can be made the basis for localized actions and policies for the marine environment, and in the process constitute the direct implementation of these international agreements.

Limitations of the Study

It is necessary, however, to keep the scope of this discussion manageable, which may be difficult if we consider that the marine environment is a highly complex ecosystem that extends far beyond any

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

geographic and legal jurisdiction. There is a real danger of delving into matters that are practically irrelevant to local governments. It must be kept in mind that the "jurisdictional reach" of LGs are necessarily less than that of the national government. They are limited individually as well in terms of resources and capabilities. The most obvious factor that delimits the scope of LG actions with respect to international norms is the geographic limitation posed by its political boundaries. which are inherently land-based and may extend seaward to different distances depending on the national legislation in place, but never further than the limits of the territorial sea. This limitation confines the range of relevant LG interaction with international norms to three areas of marine environmental protection that may be considered to have their loci within LG jurisdiction, namely, the conservation of nearshore marine species and habitats, vessel-source pollution.⁹ and land-based sources of pollution. Consideration of other aspects, such as pollution from seabed activities (e.g. oil and gas production and its related incidents), fishing in the high seas, and ocean dumping in the high seas, though they may have related impacts within the LG, will not be discussed at this time as they are generally beyond LG jurisdiction and are usually regulated at the national level.

RELEVANT ASPECTS OF INTERNATIONAL MARINE ENVIRONMENTAL PROTECTION

Conservation of Nearshore Marine Species and Habitats

The coastal areas are home to a huge proportion of marine life. Nutrients, carried from land by river systems or from the ocean bottom by current upwelling, accumulate in nearshore areas, attracting and maintaining all forms of pelagic and demersal organisms. In the tropics, mangroves, seagrass beds, and coral reefs are known to be unique and vital habitats for the multitude of species of fish and other marine life.

⁹ Vessel-source pollution is considered to be "located" within LG jurisdiction for the purposes of this paper since the pollutants from vessels concentrate in ports and their adjacent areas, and ports themselves play a major role in the efficacy of the legal control mechanisms on vessel-source pollution.

Just as plant and animal life concentrate on the coasts, so does human life. The coastal areas endure the greatest pressures from human activities, considering that urban and industrial settlements are concentrated in coastal locations.¹⁰ Among the activities that these settlements bring are shipping, tourism, recreation, fishing, port and harbor development, defense and law enforcement, aquaculture, and scientific research. These, in turn, have associated impacts such as overexploitation, pollution, waste disposal, erosion, and alteration of the coastline, among others. It is expected that these activities and impacts will multiply since, as time passes by, large-scale urbanization will continue along coastal belts, with attendant concentration of trade and industry around the major port cities; extraction of marine resources, both living and non-living, will concentrate and intensify in shallow, near-shore coastal waters; and growing international tourism and increasing domestic demand for recreation will place greater demand on seaside areas relative to inland areas.¹¹ In the long-run, the concentration of human activities, if left unmanaged, will pose a serious danger to marine biodiversity in the nearshore environment as well as the marine habitat itself.

Although concern for the marine environment has traditionally revolved around issues of pollution and water quality, the notion of "nature conservation," as it has been applied to land animals and environments, has been applied to marine resource management since the 1920's in the form of marine reserves or protected areas.¹² These protected areas only generally implied the delineation and enforcement of "exclusion zones," i.e. defined fluvial space in which certain activities are prohibited, restricted, or regulated, in the same way that terrestrial parks were intended and operated.¹³ Recently, however, marine conservation has been considered more and more as an activity integral to a broader management policy framework rather than as a separate and independent concern.¹⁴

¹⁰ Report of the Secretary General on Coastal Area Management and Development, U.N. Doc. E/5648, 6. (1975).

¹¹ Id. at 8.

¹² A. King, Marine Conservation: A New Policy Area, 17 MARINE POLICY 171 (1993).

¹³ Id. at 172.

¹⁴ Ibid.

The Ramsar Convention on Wetlands of International Importance signed in 1971 was the first global wildlife convention aimed at habitat protection.¹⁵ It contains very general provisions which allow contracting states to place designated wetlands in a list for purposes of enhancing the legal protection of those areas. However, the Ramsar Convention has been criticized as being so general and subject to flexible interpretation by the contracting states that it imposes no explicit and actual obligation of conservation.¹⁶

The World Heritage Convention, signed in 1972, allows the listing and protection of World Heritage Sites, including outstanding areas of natural heritage nominated by the state parties. In practice, the World Heritage Convention is useful for the protection of habitats, as it allows for the designation, as a World Heritage Site, of important habitats for threatened species of plants or animals of outstanding universal value.¹⁷ A World Heritage Fund provides some financial support for the identification and protection of approved sites, as well as more stringent requirements and obligations for the States Parties to undertake conservation measures.¹⁸

Another global convention that directly addresses the issue of marine biodiversity, albeit on a limited scale, is the Convention on International Trade in Endangered Species (CITES).¹⁹ CITES is a multilateral convention that regulates the trade of certain listed species of wild animals and plants which are deemed to be under threat of extinction. Various species of marine mammals such as cetaceans, seals, sea lions, walrus, marine otters, marine turtles, and dugong are under its protection.

By the time the U.N. Convention on the Law of the Sea (UNCLOS) was opened for signature, it was already recognized that states had a sovereign right to undertake conservation measures and

¹⁵ P. BIRNIE & A. BOYLE, INTERNATIONAL LAW AND THE ENVIRONMENT, 465 (1992). (for the text of the convention, see 11 I.L.M. 963).

¹⁶ Id. at 465.

¹⁷ Id. at 468.

¹⁸ Ibid.

¹⁹ 12 I.L.M. 1085 (1973).

programs within their territorial waters,²⁰ and that the state's right to exploit natural resources was accompanied by a duty to protect and preserve the environment.²¹ This sovereign right was also recognized to extend to as far as the limits of the Exclusive Economic Zone.²² All states were mandated to undertake measures to minimize pollution of the marine environment from all sources, which would include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened, or endangered species, and other forms of marine life.²³ However, it can also be gleaned from the provisions of UNCLOS that, other than a rather vague acceptance of conservation measures as a valid management prerogative, the community of states did not see the necessity of elaborating upon a more specific common international regime for conservation of living marine resources within the UNCLOS framework.

The 1979 Convention on the Conservation of Migratory Species of Wild Animals, otherwise known as the Bonn Convention, was designed as a framework for state cooperation in undertaking scientific research, restoring habitats, and preventing interference with the migration of endangered and threatened species.²⁴ It encourages countries to enter into agreements to conserve and protect species which cyclically²⁵ and predictably migrate through state boundaries; and also provides for similar agreements with respect to species which periodically cross such jurisdictional boundaries even if they do not fall within the definition of migratory species under the convention.²⁶ The species sought to be protected are listed in two annexes to the convention.

In 1992, the Convention on Biological Biodiversity,²⁷ touted as one of the definitive successful products of the UNCED Conference on Environment and Development, was opened for signature. The

²⁰ UNCLOS, art. 21(d) and 73.

²¹ UNCLOS, art. 193.

²² See UNCLOS art. 56, 61, and 62.

²³ UNCLOS, art. 194, par. 5.

²⁴ See note 15, supra at 470.

²⁵ This refers to any cycle, such as astronomical, life, or climatic.

²⁶ See note 15, supra at 471.

²⁷ 31 I.L.M. 818 .

Biodiversity Convention has the avowed objective of securing international commitment to conserve biodiversity and promoting sustainable use and equitable sharing of benefits from the utilization of the resource. It provides for States Parties to exert efforts to identify and monitor biodiversity resources, devise a system of conservation of species within and outside of protected areas, and enumerate a number of duties for purposes of conservation such as public education, impact assessment, assurance of access to resources, and technology transfer.

Though not on the same level as international conventions, being non-binding and mainly recommendatory, UNCED Agenda 21 calls for other new approaches and recommends programs of action for marine and coastal area management and development, particularly in the area of marine environmental protection and sustainable use and conservation of marine living resources under national jurisdiction.²⁸ All coastal states are encouraged to consider establishing or strengthening appropriate coordinating mechanisms for integrated management and sustainable development of coastal and marine areas and their resources at both local and national levels.²⁹ These mechanisms ought to provide for, among others, implementation of integrated coastal and marine management and sustainable development plans and programmes at appropriate levels³⁰ and conservation and restoration of altered critical habitats.³¹ Furthermore, coastal states are encouraged to undertake measures to maintain biological diversity and productivity of marine species and habitats under national jurisdiction.³² These measures may include surveys of marine biodiversity, inventories of endangered species and critical coastal and marine habitats, establishment and management of protected areas, and support of scientific research and dissemination of its results.³³

²⁸ AGENDA 21, chap. 17, par 17.1(b) and (d).

²⁹ AGENDA 21, chap. 17, par 17.6.

³⁰ AGENDA 21, chap. 17, par. 17.6(b).

³¹ AGENDA 21, chap. 17, par. 17.6(h).

³² AGENDA 21, chap. 17, par. 17.7.

³³ AGENDA 21, chap. 17, par. 17.7.

Prevention of Vessel-source Pollution

The international legal regime for pollution from vessels has been the most rapidly and intensively developed field in environmental law. This is most probably on account of the emotional impact to the public of the scenes of massive environmental damage caused by accidental oil spills in the late 60s and early 70s which triggered worldwide government attention to the need to address vessel-source pollution. In the development of the field, it was eventually realized that operational pollution from vessels was even more frequent, thus, the law turned to stricter and more focused regulations on this aspect of maritime operations. At present, with the International Maritime Organization (IMO) at the forefront of efforts to control and prevent vessel-source pollution, the international legal regime is evolving into a highly developed and well-defined system of global and regional norms, roles, duties, and obligations.

Article 194 of the UNCLOS contains a general statement of a state's duty to take measures to prevent, reduce, and control pollution of the marine environment from any source using the best practicable means at its disposal.³⁴ Specifically, these measures include those designed to minimize as much as possible pollution from vessels and, in particular, measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, preventing intentional and unintentional discharges, and regulating the design, construction, equipment, operation and manning of vessels.³⁵ To respond to incidents which can be the source of pollution or imminent pollution, states have the duty to cooperate in jointly developing contingency plans to eliminate the effects of the pollution or prevent or minimize the damage.³⁶

Article 211 of the UNCLOS is a relatively elaborate article that lays down specific duties on the part of states to establish international rules and standards to prevent, reduce, and control marine pollution.³⁷ It provides for the enactment of such laws, rules, and regulations by the

³⁴ UNCLOS, art. 194, par. 1.

³⁵ UNCLOS, art. 194, par. 3(b).

³⁶ UNCLOS, art. 199.

³⁷ UNCLOS, art. 211, par. 1.

flag state and the port state.³⁸ Coastal states through whose waters vessels pass are also allowed this legislative jurisdiction and are further permitted to extend the same to the exclusive economic zone under certain conditions and in accordance with a specified procedure.³⁹ Different competencies for enforcement of laws, rules, and regulations pertaining to marine pollution are granted to the flag, port, and coastal state.⁴⁰

Since the initial signing of the UNCLOS at Montego Bay, the duty to cooperate in the establishment of rules and standards to prevent, reduce, and control marine pollution has been actively exercised through the IMO. The IMO itself, as well as its predecessor, the International Maritime Consultative Organization, has taken the lead in the development of global conventions to address the problems of marine pollution from vessels. The following IMO conventions stand out presently as the primary sources of global legal norms in this field:

> a. MARPOL 73/78 — The International Convention for the Prevention of Pollution from Ships (1973, as modified by the Protocol of 1978),⁴¹ is a comprehensive international convention dealing with the technical aspects of pollution from ships, except for disposal of wastes at sea by dumping and pollution arising out of the exploration and exploitation of the seabed. Five Annexes (known as Annexes I through V) contain regulations for five different forms of marine pollution, namely, oil pollution, pollution by noxious liquid substances carried in bulk, pollution by harmful substances carried in containers/packages, pollution by sewage from ships, and pollution by garbage from ships.⁴²

> b. INTERVENTION — The International Convention Relating to the Intervention on the High Seas in Cases of

³⁸ UNCLOS, art. 211, par. 2 and 3.

³⁹ UNCLOS, art. 211, par. 4-6.

⁴⁰ See UNCLOS, art. 217-220.

⁴¹ MARPOL 73/78 (1992).

⁴² Focus on IMO, January, 1996, pp. 24-28.

Oil Pollution Casualties (1969)⁴³ permits states to take measures, after due consultation with concerned interests (e.g. the flag state, shipowner, cargo owner, etc.), as may be necessary to prevent, mitigate, or eliminate danger to its coasts from oil pollution.⁴⁴

c. OPRC — The International Convention on Oil Pollution Preparedness, Response, and Co-operation (1990) provides a global framework for international cooperation against major incidents or threats of marine pollution by requiring parties to establish oil pollution response systems either individually or in co-operation with other countries. Oil pollution emergency plans are also required of ships and offshore installations, and the convention provides requirements for reporting of incidents, maintenance of inventory of oil pollution response equipment, and co-operative assistance.⁴⁵

d. LDC — The Convention on the Prevention of the Marine Pollution by Dumping of Wastes and Other Matter $(1972)^{46}$ prohibits the disposal of listed hazardous materials into the sea, requires prior special permits for the dumping of other identified materials or prior general permits for other wastes or matter. The only general exceptions are wastes derived from the exploration and exploitation of sea-bed mineral resources, and when the activity is necessary to secure the safety of human life or vessels in case of force majeure.⁴⁷

In addition, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (1989)⁴⁸ lays down rules on the movement of hazardous wastes (as

^{43 9} I.L.M. 25.

⁴⁴ Focus on IMO, January, 1996, pp. 28-29.

⁴⁵ Focus on IMO, January 1996, p. 29.

⁴⁶ 11 I.L.M. 1291.

⁴⁷ Focus on IMO, January 1996, p. 23.

⁴⁸ 28 I.L.M. 649.

listed by the convention or defined as such by national legislation). It restricts such movement through strict procedures for prior notice, informed consent, limitations on import and export of materials, and observance of certain rights for states through which the materials may be intended to pass (transit states).⁴⁹

Regional cooperation in the enforcement of international maritime law is presently being strengthened through the execution of Port State Control agreements. These agreements invariably provide for inspection procedures to force compliance with relevant maritime conventions, including those intended to address vessel-source pollution. At present, these agreements include the Paris Memorandum of Understanding on Port State Control among seventeen (17) European countries, Croatia, Japan, and the United States; the Latin-American Agreement between ten (10) Latin American countries; the Asia-Pacific Memorandum of Agreement between seventeen (17) Asian and Pacific nations; and the Carribean Port State Control Memorandum between nine (9) Carribean states.⁵⁰

And finally, Agenda 21 expressly encourages states to continue to act individually, bilaterally, regionally, and multilaterally within the framework of the IMO and other international organizations to assess the need for additional measures to address marine environmental degradation due to shipping, dumping, offshore oil and gas platforms, and ports.⁵¹

Control of Land-based Sources of Pollution

Land-based sources are estimated to contribute seventy to eighty per cent (70%-80%) of the pollution that is absorbed into the oceans. Lacking the shock-value of accidental oil spills, and being largely inconspicuous and unobtrusive, land-based sources of pollution

⁴⁹ See K. Kummer, The International Regulation of Transboundary Traffic in Hazardous Wastes: The 1989 Basel Convention, 41 INT'L & COMP. L. Q. 530 (1992).

⁵⁰ See P. Payoyo, Implementation of International Conventions through Port State Control: An Assessment 18 MARINE POLICY 379 (1994) and P. Payoyo, PORT STATE CONTROL IN THE ASIA-PACIFIC: AN INTERNATIONAL LEGAL STUDY OF PORT STATE. JURISDICTION (1993).

⁵¹ AGENDA 21, chap. 17, par. 17.30.

only recently have been highlighted as an issue more pressing than other forms of pollution, on account of its potential for far-ranging and less-manageable cumulative impacts.

The state's general obligations to prevent, reduce, or control marine pollution under Article 194 of the UNCLOS also mention that measures should be taken to minimize the release of toxic, harmful, or noxious substances, especially those which are persistent from land-based sources, from or through the atmosphere, or by dumping.⁵² Article 207 is devoted specifically to land-based sources of pollution, mandating the States Parties to enact relevant laws and regulations, seek to harmonize policies at the regional level, and endeavour to establish global rules and standards through international organizations or diplomatic conferences.⁵³

Other than the general provisions of the UNCLOS, however, there are no binding global international norms on land-based sources of pollution. The two most important international documents currently addressing this issue are still recommendatory in nature. The first, the Montreal Guidelines for the Protection of the Marine Environment from Pollution from Land-based Sources (1985)⁵⁴ attempts to lay out common elements and principles as a framework for drafting international agreements and contains recommended procedures on how to contend with land-based sources of pollution. The second document, the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (1995),⁵⁵ is designed to be a source of conceptual and practical guidance for devising and implementing sustained action to prevent, reduce, control, and/or eliminate marine degradation from land-based activities.⁵⁶ It contains very useful stepby-step guidelines for formulating policies at both the national and international level and recommends approaches that may be taken in addressing specific pollution issues.

⁵² UNCLOS, art. 194, par. 3(a).

⁵³ UNCLOS, art. 207.

⁵⁴ See UNEP. Marine Pollution from Land-based Sources, Montreal Guidelines for the Protection of the Marine Environment from Pollution from Land-based Sources. UNEP/GC/DEC 13/18/II (1985).

⁵⁵ UNEP(OCA)/LBA/IG.2/7 of 5 December 1995.

⁵⁶ Id. at. 9.

Agenda 21, from which the initiative for the latter document was drawn, recognized the absence of any global scheme to address marine pollution from land-based sources and pointed out that the contaminants which contribute to this pollution are sewage, nutrients, synthetic organic compounds, sediments, litter and plastics, metals, radionucleides, oil and hydrocarbons, and polycyclic aromatic hydrocarbons (PAHs).⁵⁷ These contaminants are of particular concern because they exhibit combined characteristics of toxicity, persistence, and bioaccumulation in the food chain.⁵⁸ presenting real, long-term, and cumulative impacts to the marine environment. Aside from direct pollution, other activities also contribute to degradation such as human settlements, land use, construction of coastal infrastructure, agriculture, forestry, urban development, tourism, industry, coastal erosion, and siltation.⁵⁹ The Rio Declaration goes on to encourage states, using the Montreal Guidelines as an initial basis, to collaborate and cooperate in developing national and international legal regimes to address land-based sources of pollution.⁶⁰ Priority actions are also recommended for the other sources of marine environmental degradation.61

THE PHILIPPINE INSTITUTIONAL FRAMEWORK

Having laid out a broad summary of the relevant international framework for marine environmental protection, we turn briefly to the Philippine municipal law setting prior to clarifying the interface between the LG level within the Philippines and the international level.

Constitutional Mandates

The 1987 Constitution of the Republic of the Philippines contains specific provisions that mandate the state to formulate and implement policies that are responsive to the needs for the protection of the marine environment. It is an express state policy to protect and

⁵⁷ AGENDA 21, chap. 17, par. 17.18.

⁵⁸ AGENDA 21, chap. 17, par. 17.18.

⁵⁹ AGENDA 21, chap. 17, par. 17.19.

⁶⁰ AGENDA 21, chap. 17, par. 17.25.

⁶¹ AGENDA 21, chap. 17, par. 17.29.

advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature.⁶² The state is mandated to protect the nation's marine wealth in its archipelagic waters, territorial sea, and exclusive economic zone.⁶³ Likewise, communal marine and fishing resources, both inland and offshore, are required to be protected, developed, and conserved for the preferential use and benefit of subsistence fishermen in local communities.⁶⁴ The exploration, development, and utilization of all natural resources are emphasized to be under the full control and supervision of the state,⁶⁵ while the use of property is expressly mentioned to bear a social function that justifies state intervention for the common good.⁶⁶

These provisions give a stronger constitutional imprimatur to environmental conservation and protection efforts undertaken by the state. In a recent case,⁶⁷ the Supreme Court declared that when the right to a healthful and balanced ecology is considered with the state policy of protecting and promoting the right to health of the people and instilling health consciousness among them,⁶⁸ it implies a correlative duty on the part of the state to ensure the judicious management and conservation of the country's forest resources. This logic certainly also applies to marine resources.

Particular attention is paid by the Constitution to parks and reserves. Marine areas declared to be national parks fall under a section which provides that it shall be conserved and cannot be increased or diminished except by law.⁶⁹ This provision highlights the importance of conservation in the hierarchy of state priorities. The lesser susceptibility of laws to change, as compared with executive policies, lends greater stability to the existence and preservation of national park areas.

⁶² CONST., art. II, sec. 16.

⁶³ CONST., art. XII, sec. 2, par. 2.

⁶⁴ CONST., art. XIII, sec. 7.

⁶⁵ CONST., art. XII, sec. 2.

⁶⁶ CONST., art. XII, sec. 6.

⁶⁷ Oposa vs. Factoran, G.R. No. 101083, July 30, 1993, 224 SCRA 792 (1993).

⁶⁸ CONST., art. II, sec. 15.

⁶⁹ CONST., art. XII, sec. 4.

The National Administrative Structure and Mandates

Executive Departments are established to perform the functions of government and operate through a system of fourteen (14) Administrative Regions and one (1) Autonomous Region. Of the nineteen (19) departments existing,⁷⁰ two have mandates for marine environmental protection. Five (5) other independent or subordinate agencies exercise directly relevant functions. These agencies may be considered as having the lead roles in any program for marine environmental protection.

The Department of Environment and Natural Resources

The Department of Environment and Natural Resources (DENR) is lodged with the primary responsibility for the conservation, management, development, and proper use of the Philippines' environment and natural resources.⁷¹ It exercises its functions through several line bureaus, three (3) of which are mandated with functions that are directly related to marine environmental protection:

a. The Environmental Management Bureau (EMB), which is tasked with advisory and technical functions with respect to environmental management, conservation, and pollution control;⁷²

b. The Protected Areas and Wildlife Bureau (PAWB), which manages national parks, wildlife sanctuaries, and game reserves;⁷³ and

c. The Pollution Adjudication Board (PAB), which adjudicates pollution cases.⁷⁴

⁷⁰-Executive Order No. 292 [1987]; ADMINISTRATIVE CODE OF 1987.

⁷¹ Exec. Order No. 192 (1987), sec. 4. Exec. Order No. 292, Title XIV, chap. 1, sec. 1,2 (1987).

⁷² Exec. Order No. 192 (1987), sec. 16.

⁷³ Exec. Order No. 192 (1987), sec. 18.

⁷⁴ Exec. Order No. 192 (1987), sec. 13.

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Though the DENR's efforts historically concentrated on the management of the country's remaining forestry resources, in recent years, more attention has been devoted to the marine environment. The DENR retains the primary jurisdiction to implement marine environmental laws, in general, as well as those which pertain specifically to marine areas. The Philippine Environmental Policy⁷⁵ recognizes the role of each generation as trustee and guardian of the environment for succeeding generations.⁷⁶ the right of the people to a healthy environment and the duty of each individual to contribute to the conservation and preservation of the Philippine environment,⁷⁷ and the preparation of Environmental Impact Assessments by all agencies and instrumentalities of government, as well as private entities.⁷⁸ The Philippine Environment Code⁷⁹ requires the DENR to establish a system of rational exploitation of fisheries and aquatic resources, which include conservation of species and habitats.⁸⁰ Through the EMB, the DENR promulgates rules and regulations governing marine pollution under the Marine Pollution Decree of 1976.81

The DENR is also the lead agency in the implementation of perhaps the most important piece of legislation for environmental conservation and protection in the Philippines, the National Integrated Protected Areas System (NIPAS) Act.⁸² This law provides for the classification and administration of designated protected areas to maintain essential ecological processes and life-support systems, to preserve genetic diversity, to ensure sustainable use of resources found therein, and to maintain their natural conditions to the greatest extent possible.⁸³ These protected areas encompass outstanding remarkable areas and biologically important public lands that are habitats of rare and endangered species of plants and animals, bio-geographic zones,

⁷⁵ Pres. Decree No. 1151 (1977).

⁷⁶ Pres. Decree No. 1151 (1977), sec. 2.

⁷⁷ Pres. Decree No. 1151 (1977), sec. 3.

⁷⁸ Pres. Decree No. 1151 (1977), sec. 4-5.

⁷⁹ Pres. Decree No. 1152 (1977).

⁸⁰ Pres. Decree No. 1152 (1977), sec. 26-27.

⁸¹ Pres. Decree No. 979([1976), sec. 5.

⁸² Rep. Act No. 7586 (1992).

⁸³ Rep. Act 7586 (1992), sec. 3.

and related ecosystems, whether terrestrial, wetland, or marine.⁸⁴ The NIPAS Act is expressly intended as an implementation of the Biodiversity Convention.

The DENR also implements The Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990.⁸⁵ This Act prohibits the importation, exportation, manufacture, processing, distribution, and transit of hazardous and dangerous substances within Philippine territory. It is considered to be an implementation of the Basel Convention.

Finally, in 1993, the DENR established an ongoing Coastal Environment Program (CEP) which is intended to promote the protection and management of coastal ecosystems through the use of environment-friendly coastal technologies; expand livelihood opportunities and assure equal access to coastal resources; and upgrade the management capabilities of the DENR for coastal environments.⁸⁶ Under the CEP, there are twelve (12) regional pilot sites which are experimenting with the CEP strategies of community organizing, community involvement, mobilization of resources from private as well as public sectors, and use of contingent approaches in identifying issues, problems, and solutions.⁸⁷

The Department of Agriculture

The Department of Agriculture (DA) is mandated to promote agricultural development, under which fisheries production and resources are presently classified. Through one of its line bureaus, the Bureau of Fisheries and Aquatic Resources (BFAR), the DA exercises the function of planning, management, development, and utilization of the country's fishery and aquatic resources. DA-BFAR is responsible mainly for the issuance of fishing licenses for commercial fishing boats, defined as those with a displacement of more than three (3) gross tons. However, the BFAR is at most a recommendatory body within the Department, and works through the office of the Secretary of

⁸⁴ Rep. Act No. 7586 (1992), sec. 2.

⁸⁵ Rep. Act No. 6969 (1990).

⁸⁶ DENR Adm. O. No. 19 (1993).

⁸⁷ DENR Brochure on The Coastal Environment Program (1994).

Agriculture. Its primary responsibility is the implementation of Pres. Decree No. 704 (1975), otherwise known as the Fisheries Decree of 1975. Under Sec. 31 and 32 of Pres. Decree No. 704, the Secretary of Agriculture may establish fish refuges and sanctuaries, or reserve fishery areas for exclusive use of the government. This power has been exercised several times for the benefit of coastal municipalities.⁸⁸ It is also mandated to implement Pres. Decree No. 1219 (1977) that provides for the conservation of coral resources.

As part of the Medium-Term Fisheries Management and Development Plan (MTFMDP) for 1993-1998, the DA-BFAR has identified the need to implement conservation programs in inland bodies of water, mangroves, and coral reefs; establish artificial reefs to regenerate damaged coral reefs and provide additional fish habitats; replant mangrove areas; establish fish sanctuaries, closed seasons, and closed areas.⁸⁹

The Philippine Navy and Philippine Coast Guard

The Philippine Navy (PN) is responsible for naval defense, which includes the function of enforcement, within and outside of the Philippine territorial sea, of all laws and regulations pertaining to navigation, safety of life at sea, and fishing.⁹⁰ The Philippine Coast Guard (PCG) is a major subordinate unit of the PN, tasked primarily with functions pertaining to safety of life at sea,⁹¹ particularly vessel navigation and compliance with ship safety standards. However, the PCG is also directly vested with environmental protection functions by various laws. Aside from being deputized by the DA-BFAR for purposes enforcement.⁹² particularly of law observance of DA-BFAR administrative issuances, the PCG is also responsible for enforcing Pres. Decree 979 (1976) or the Marine Pollution Decree of 1976 which lays down a broad mechanism for control of all forms of marine

⁸⁸ See DA-BFAR. Fisheries Administrative Orders: A Compilation. The Legal Division, DA-BFAR, Quezon City, undated.

⁸⁹ DA-BFAR. Medium-Term Fisheries Management and Development Program. DA-BFAR, Quezon City, unpublished, pp. 9-10.

⁹⁰ Exec. Order No. 292 (1987), Title VIII, subtitle II, chap. 8, sec. 52-53.

⁹¹ Exec. Order No. 292 (1987), Title VIII, subtitle II, chap. 8, sec. 54.

⁹² Pres. Decree No. 704 (1975), sec. 40.

pollution whether inland or offshore. The Marine Pollution Decree of 1976 provides stricter standards than the London Dumping Convention in that all forms of discharge or dumping into the sea are prohibited except in cases of emergency and *force majeure*. The PCG is also the designated lead agency for oil pollution preparedness and response.⁹³

The Philippine National Police

The Philippine National Police (PNP) absorbed the police functions of the PCG under the former's organizational charter.⁹⁴ Police functions over all Philippine territorial waters and rivers are exercised through the PNP Maritime Police Unit.⁹⁵ The PNP is under the jurisdiction of the Department of the Interior and Local Government (DILG).

The Maritime Industry Authority

The Maritime Industry Authority (MARINA) was created under Pres. Decree No. 474 [1974] and is presently an attached agency of the Department of Transportation and Communications.⁹⁶ It exercises executive and quasi-judicial functions⁹⁷ and is responsible for developing the shipping and shipbuilding sector and promoting safety of life at sea. Its efforts are primarily in the nature of policy reviews and formulation; regulation of domestic shipping routes, zones, rates; maintenance of the shipping registry; and development of standards of training and education.⁹⁸

The MARINA is also tasked with the enforcement of the IMO conventions on vessel standards, particularly the following:

⁹³ Pres. Decree No. 602 (1974) which established the National Oil Pollution Operations Center in the PCG.

⁹⁴ Rep. Act No. 6975 (1990), sec. 24.

⁹⁵ Rep. Act No. 6975 (1990), sec. 35(b)(1).

⁹⁶ Exec. Order No. 292, (1987) Titlè XV, chap. 6, sec. 23.

⁹⁷ Exec. Order No. 125 (1987).

⁹⁸ L. Pia, *The Commercial Navigation Problems in the Philippines*, PHILIPPINE PORTS, SHIPPING, AND NAVIGATION UNDER THE NEW INTERNATIONAL LAW OF THE SEA: A ROUNDTABLE DISCUSSION 31 (R. Vea and I. M. Fernandez, ed., 1995).

a. International Convention for Safety of Life at Sea (SOLAS 1960, 1964 as amended in 1981, 1983), which has set out minimum standards for safe construction of ships and safety equipment;

b. Convention for the Prevention of Oil Pollution on Ships (MARPOL 7399), which contains requirements for storing, treating, and discharging potential pollutants;

c. International Convention on Loadlines (LOADLINES 1966), which lays down special ship construction standards for watertightness, and prevents ships from overloading; and

d. International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers (SCTW 1978), which deals with certification and qualification requirements for seafarers.

The Philippines is not yet a party to equally important conventions such as the Convention on International Regulations for Preventing Collisions at Sea (COLREGS 1972), or to Protocols updating previous conventions. This does not prevent the Philippines, however, from enacting rules or legislations that adopt the same standards set forth in these conventions. Other IMO conventions, recommendations, resolutions and codes dealing with such matters as search and rescue, communications, safety in container operations, handling of different types of cargo, and safety of ships, are likewise within the authority of the MARINA to implement.

The Philippine Ports Authority

The Philippine Ports Authority (PPA) was created under Pres. Decree No. 857 (1975) to implement policies relating to the planning, development, financing, operation, and management of Philippine ports or port districts. It exercises regulatory powers over the country's more

⁹⁹ The Philippines has not yet ratified the 1978 Protocol.

than 900 public and private ports. Although the power to regulate ports necessarily includes specification and enforcement of environmental standards within these facilities, the PPA has issued few regulations which refer specifically to protection or preservation of the marine environment, and has yet to regulate and provide for adequate reception facilities and personnel for vessel wastes and discharges.¹⁰⁰

The Local Government Infrastructure

The country is divided into Local Government Units (LGUs) comprising seventy-six (76) provinces, sixty (60) cities, 1,538 municipalities, and 41,293 barangays.¹⁰¹ Each type of LGU is constituted when certain minimum standards in population, area, and income are met, as follows:

LGU	Population	Income (p.a.)	Area (km2)
Province	250,000	P 20,000,000 ¹⁰²	2,000
Highly Urbanized City	200,000	P 50,000,000	100
Component City	150,000	P 20,000,000	100
Municipality	25,000	P 2,500,000	50
Barangay	2,000 - 5,000	•••	

Each LGU exercises a broad range of powers and functions as prescribed under the Local Government Code,¹⁰³ including specific provisions relevant to each area of marine environmental protection under international law mentioned in Part II of this paper.

Provinces

The province is a principal level of governance, second only to the national government. The purpose of the division of the country into thirteen (13) Administrative Regions and one (1) Autonomous Region is primarily for structural efficiency within national government

¹⁰⁰ D.R. Simon, The Role of the Philippine Ports Authority and the UN Convention on the Law of the Sea in PHILIPPINE PORTS, SHIPPING, AND NAVIGATION, Note 97 supra at 17.

¹⁰¹ Roughly corresponds to villages.

¹⁰² 1.00 Philippine Peso = 0.05 Canadian Dollar.

¹⁰³ Rep. Act No. 7160 (1991) [hereafter referred to as "LGC"].

agencies only; thus, the Regional Offices are merely extensions of the Department for certain provincial groupings and have no distinct powers of policy-setting and implementation. These prerogatives reside in the Provincial Government within the spheres prescribed by the Local Government Code.

a. Executive Powers

Executive powers are exercised by the elected Provincial Governor. He is empowered to issue licenses and permits for business and other activities within the province and suspend or revoke the same for any violation of the conditions upon which said licenses or permits had been issued, pursuant to existing law or ordinance.¹⁰⁴ A general power to adopt adequate measures to safeguard and conserve land, mineral, marine, forest, and other resources of the province, to be exercised in coordination with the mayors of component cities and municipalities, is also provided.¹⁰⁵ He is also mandated to coordinate the implementation of technical services by national offices for the province and its component cities and municipalities, including public works and infrastructure programs.¹⁰⁶ The Provincial Governor may therefore play the vital role of an overall coordinator of functions, services, and projects that will be necessary for any province-wide marine environmental program.

b. Legislative Powers

Legislative powers are exercised by the provincial legislative council, called the *sangguniang panlalawigan*. The *sanggunian* has a general power to approve ordinances which protect the environment and impose appropriate penalties for acts which endanger the environment, such as dynamite fishing and other forms of destructive fishing; illegal logging and smuggling of logs; smuggling of natural resources products and of endangered species of flora and fauna; slash and burn farming; and such other activities which result in pollution, acceleration of eutrophication of rivers and lakes or of ecological

¹⁰⁴ LOCAL GOVT. CODE, sec. 465, par. b (3) (iv).

¹⁰⁵ LOCAL GOVT. CODE, sec. 465, par. b (3) (v).

¹⁰⁶ LOCAL GOVT. CODE, sec. 465, par. b (4)(ii).

imbalance.¹⁰⁷ Additionally, it may adopt measures and safeguards against pollution and for the preservation of the natural ecosystem in the province.¹⁰⁸ These two very broadly worded mandates can actually be made the basis of practically any form of provincial environmental They are also reinforced by the power to prescribe legislation. reasonable limits and restraints on the use of property within the jurisdiction of the province,¹⁰⁹ and to review the comprehensive land use plans and zoning ordinances of component cities and municipalities and adopt a comprehensive provincial land use plan, subject to existing laws.¹¹⁰ The latter two powers give some assurance that, within its own jurisdiction, a policy consistency from the provincial, city or municipal, barangay, and even down to the individual level can be achieved by regulating the use of property within the province in such a way as to ensure that any marine environmental protection program is not hindered directly or indirectly.

c. Incidental Powers

Finally, the province is also authorized to exercise such other powers and discharge other functions and responsibilities as may be necessary, appropriate, or incidental for the efficient and effective provision of basic services and facilities.¹¹¹ Included in the definition of basic services and facilities are agricultural extension and on-site research services and facilities¹¹² and the enforcement of forestry laws with respect to community-based forestry projects, pollution control laws, the small-scale mining law, and other laws on the protection of the environment, and mini-hydro electric projects for local purposes.¹¹³ These provisions are important because fisheries, the major ocean use activity in Philippine coasts, currently falls under the agricultural sector. Lands of the public domain in the coastal zone, including resources therein, usually come within the ambit of forestry laws (e.g. mangroves are classified as forest land); together with pollution control,

¹⁰⁷ LOCAL GOVT. CODE, sec. 468, par. a (1)(vi).

¹⁰⁸ LOCAL GOVT. CODE, sec. 468, par. a (4)(i).

¹⁰⁹ LOCAL GOVT. CODE, sec. 468, par. a (2)(vi).

¹¹⁰ LOCAL GOVT. CODE, sec. 468, par. a (2)(vii).

¹¹¹ LOCAL GOVT. CODE, sec. 17, par. a.

¹¹² LOCAL GOVT. CODE, sec. 17, par. b (3)(i).

¹¹³ LOCAL GOVT. CODE, sec. 17, par. b (3)(iii).

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small-scale mining, and environmental protection, the control of these resources and activities are necessary components of any marine environmental protection plan.

Municipalities

Majority of environmental management mandates are concentrated at the municipal level. While provincial powers are broadly worded, they are also largely general and coordinative in nature when considered together with the express authorities given to municipalities.

a. Executive Powers

Executive powers within the municipalities, which comprise the province, are exercised by the Municipal Mayor. Like the Provincial Governor, the Mayor has the general power to adopt adequate measures to safeguard and conserve land, mineral, marine, forest, and other resources of the municipality.¹¹⁴ He also has the power to coordinate the implementation of technical services rendered by national and provincial offices.¹¹⁵

b. Legislative Powers

Legislative powers are exercised by the municipal legislative council called the *sangguniang bayan*. The environmental legislative power of the *sangguniang bayan* mirrors that of the province exactly, in that it can also approve ordinances which protect the environment and impose appropriate penalties for acts which endanger the environment and such other activities which result in pollution, acceleration of eutrophication of rivers and lakes or of ecological imbalance.¹¹⁶ The municipality may also provide for the establishment, maintenance, protection, and conservation of communal forests and watersheds, tree parks, greenbelts, mangroves, and other similar forest development projects.¹¹⁷ The only limitation to these equally broad powers is that

¹¹⁴ LOCAL GOVT. CODE, sec. 444, par. b (3)(vii).

¹¹⁵ LOCAL GOVT. CODE, sec. 444, par. b (4)(ii).

¹¹⁶ LOCAL GOVT. CODE, sec. 447, par. a (1)(vi).

¹¹⁷ LOCAL GOVT. CODE, sec. 447, par. a (5)(i).

any municipal ordinance must be consistent with and must operate within the bounds of relevant ordinances of the province.¹¹⁸

It is also at the municipal level that the Local Government Code places the greatest responsibility for environmental management, as evidenced by the number of express powers that are relevant and useful for this purpose.

First, municipal ordinances may be used as protective norms addressing the conservation of certain species found within municipal waters.¹¹⁹ Municipalities have the exclusive power to grant the exclusive privilege of constructing fish corrals or fish pens, or the taking or catching of *bangus* fry, prawn fry, or *kawag-kawag* or fry of any species of fish within municipal waters.¹²⁰

Municipalities are also granted extensive powers to regulate the operation of business and industry within its jurisdiction. They are allowed to regulate any business, occupation, or practice of profession or calling which does not require government examination within the municipality, as well as provide for the conditions under which business or professional licenses may be issued or revoked.¹²¹ They may grant tax exemptions, incentives or reliefs to entities engaged in community growth-inducing industries,¹²² as well as regulate the establishment, operation, and maintenance of cafes, restaurants, beerhouses, hotels, motels, inns, pension houses, lodging houses, and other similar establishments, including tourist guides and transports.¹²³

Public, as well as private, infrastructures are also under municipal jurisdiction. This includes the regulation of the use of

¹¹⁸ LOCAL GOVT. CODE, sec. 56-59.

¹¹⁹ Municipal waters are defined under sec. 131(r) to include waters between two lines drawn perpendicularly to the general coastline from points where the boundary lines of municipality or city touch the sea at low tide and a third line parallel with the general coastline and 15 km. from it. There is no similar provision for any other level of local government.

¹²⁰ LOCAL GOVT. CODE, sec. 447, par. a (2)(xi).

¹²¹ LOCAL GOVT. CODE, sec. 447, par. a (3)(ii).

¹²² LOCAL GOVT. CODE, sec. 447, par. a (2)(xii).

¹²³ LOCAL GOVT. CODE, sec. 447, par. a (4)(iv).

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streets, avenues, alleys, sidewalks, bridges, parks and other public places and the approval of their construction, improvement, and maintenance;¹²⁴ authorization for the establishment and operation of ferries, wharves, and other structures, and marine and seashore or offshore activities intended to accelerate productivity;¹²⁵ provision for the establishment and operation of an efficient waterworks system and implementation of measures to protect the purity and quantity of the water supply of the municipality;¹²⁶ regulation of the drilling and excavation of the ground for the laying of water, gas, sewer, and other pipes and the construction and maintenance of public drains, sewers, cesspools, tunnels and similar structures;¹²⁷ and the power to require that buildings and premises thereof and any land within the municipality be kept and maintained in a sanitary condition.¹²⁸

The LG jurisdiction over matters of local sanitation are also very useful to an environmental program since garbage and waste are among the most common sources of pollution. The municipality can directly regulate the disposal of clinical and other wastes from hospitals, clinics, and other similar establishments¹²⁹ and provide for an efficient and effective system of solid waste and garbage collection and disposal, including the power to prohibit littering and the placing or throwing of garbage, refuse, and other filth and wastes.¹³⁰

A relevant power of the municipality is its authority to adopt a comprehensive land use plan for the municipality.¹³¹ Through land classification schemes extended outwards to the adjacent ocean spaces to the limit of municipal waters, combined with the power to grant exclusive fishery privileges, these powers may be used to create special use areas for such purposes as setting aside municipal fishery concession areas, fish sanctuaries, and tourist zones within nearshore waters.

- ¹²⁴ LOCAL GOVT. CODE, sec. 447, par. a (5)(v).
- ¹²⁵ LOCAL GOVT. CODE, sec. 447, par. a (5)(iii).
- ¹²⁶ LOCAL GOVT. CODE, sec. 447, par. a (5)(vii).
- ¹²⁷ LOCAL GOVT. CODE, sec. 447, par. a (5)(viii).
- ¹²⁸ LOCAL GOVT. CODE, sec. 447, par. a (4)(ii).
- ¹²⁹ LOCAL GOVT. CODE, sec. 447, par. a (4)(iii).
- ¹³⁰ LOCAL GOVT. CODE, sec. 447, par. a (5)(xiii).
- ¹³¹ LOCAL GOVT. CODE, sec. 447, par. a (2)(vii).

Finally, the power to declare, prevent, or abate any nuisance is reiterated in the present law.¹³² The power to abate nuisances was probably the earliest legal justification available for government action against pollution, obstruction of waterways, and other acts detrimental to the common welfare of the community. Included in the definition of a nuisance is any act, omission, establishment, business, condition of property, or anything else which injures_or endangers the health or safety of others, or annoys or offends the senses, or obstructs or interferes with the free passage of any body of water, or hinders or impairs the use of property.¹³³ Public nuisances, i.e. those that affect the neighborhood or any considerable number of persons, even if the effects are unequal, may be prosecuted under the penal code or any local ordinance, or by civil action, or abated without judicial proceedings.¹³⁴ This broad definition can cover many obtrusive and common forms of pollution. Despite the great developments in environmental law since the original Civil Code was passed, the nuisance doctrine remains relevant in many cases as an irrefutable argument in favor of state action against human abuse of the environment or resources.

c. Incidental Powers

Similar to the province, the municipality is endowed with such incidental powers, functions, and responsibilities as may be necessary to provide efficient and effective provisions of basic services and facilities. In this instance, the basic services and facilities are deemed to expressly include the implementation of community-based forestry projects which include integrated social forestry programs and similar projects, the management and control of communal forest with an area not exceeding fifty (50) square kilometers, and the establishment of tree parks, greenbelts, and similar forest development projects;¹³⁵ a solid waste disposal system or environmental management system, and services or facilities related to general hygiene and sanitation,¹³⁶ and

¹³² LOCAL GOVT. CODE, sec. 447, par. a (4)(i).

¹³³ CIVIL CODE, art. 694.

¹³⁴ CIVIL CODE, art. 699.

¹³⁵ LOCAL GOVT. CODE, sec. 17, par. b (2)(ii).

¹³⁶ LOCAL GOVT. CODE, sec. 17, par. b (2)(vi).

tourism facilities and other tourist attractions, including the acquisition of equipment, regulation and supervision of business concessions, and security services for such facilities.¹³⁷

Cities

Cities, whether highly urbanized and independent with their own charters or component cities that are still under the jurisdiction of the province, are granted the combined powers of both the province and municipality.¹³⁸ From a management standpoint, cities have a much wider latitude than both provinces and municipalities in terms of capability to formulate and implement a marine environmental protection program considering that it essentially wields the power of a province within an area of a municipality. The "compactness" of both the management powers and the area to be managed provide a better room for more efficient and responsive management planning and strategy than would probably be encountered in the case of a split-level, province/municipalities scenario.

Barangays

Barangays are the basic unit of governance. On account of their small size, roughly corresponding to small villages, barangay functions are primarily executive in nature, in the service of municipal authorities. This is not to say, however, that barangays are of equally limited importance to any possible environmental protection regime. On the contrary, they are a vital component since they can serve as the operational units of any strategy or plan that may be formulated at the municipal or city level.

a. Executive Powers

Executive powers are exercised by the *Punong Barangay*. Within the barangay, he is authorized to enforce all laws and ordinances which are applicable within the barangay,¹³⁹ specially laws

¹³⁷ LOCAL GOVT. CODE, sec. 17, par. b (2)(xi).

¹³⁸ LOCAL GOVT. CODE, sec. 455 and 457, in virtually identical sub-paragraphs.

¹³⁹ LOCAL GOVT. CODE, sec. 389, par. b (1).

and regulations relating to pollution control and protection of the environment.¹⁴⁰

b. Legislative Powers

Limited legislative powers are exercised by the sangguniang barangay, effective only within the barangay and subject to conformity or consistency with municipal ordinances. The sanggunian may submit to the municipal or city council such suggestions or recommendations as it may see fit for the improvement of the barangay or for the welfare of its inhabitants;¹⁴¹ provide for the organization of community brigades, barangay tanod (guardians), or community service units as may be necessary;¹⁴² and organize regular lectures, programs, or fora on community problems such as sanitation, nutrition, literacy, and drug abuse, and convene assemblies to encourage citizen participation in government.¹⁴³

c. Incidental Powers

The barangay also exercises incidental powers, functions and responsibilities, but the only provision relevant to marine environmental protection is that in relation to services and facilities for general hygiene and sanitation, beautification, and solid waste management.¹⁴⁴

ANALYSIS AND RECOMMENDATIONS

Basis for Promoting LG Initiatives in Marine Environmental Protection

Concentration of significant activities in LG jurisdiction that may threaten the marine environment

¹⁴⁰ LOCAL GOVT. CODE, sec. 389, par. b (9).

¹⁴¹ LOCAL GOVT. CODE, sec. 391, par. a (5).

¹⁴² LOCAL GOVT. CODE, sec. 391, par. a (16).

¹⁴³ LOCAL GOVT. CODE, sec. 391, par. a (17).

¹⁴⁴ LOCAL GOVT. CODE, sec. 17, par. b (1)(iii).

In calling for integrated management and sustainable development of coastal areas and the marine environment under national jurisdiction, Agenda 21 recognized the imperative to concentrate efforts within a relatively confined space that, more often than not, falls squarely within the jurisdiction of local government entities. An overview of the current causes of marine environmental degradation shows that the greater weight of deleterious activities are those that concentrate in the coasts. This can be the subject of direct regulation and control by local governments, especially in the case of the Philippines.

Coastal areas serve as centers of gravity for human and industrial settlements and as sites for a wide range of activities such as agriculture, forestry, fisheries and aquaculture, manufacturing and extractive industries, waste disposal, ports and marine transportation, land transportation infrastructure, water control and supply management, shore protection works, tourism, and recreation.¹⁴⁵

The patterns of Philippine coastal use correspond with observed global trends in coastal resource utilization and their concomitant direct impacts. Within the coastal belt are several major sources of land-generated pollution, all of which expressly fall within the regulatory influence of the LGU.

The first of these is the generation of municipal sewage. Municipal sewage and effluents account for the most widespread pollutants in the marine environment.¹⁴⁶ It can run the whole gamut from household wastewater to heavy metal discharges from industrial plants. Household wastewater, consisting of such mundane discharges as dishwater and septic fluids, represents a chronic source of pollution with potential impacts that increase and accumulate over time proportionately with municipal population growth, and dominates the total amount of municipal discharges.¹⁴⁷ Industries tend to concentrate

 ¹⁴⁵ U. Barg and U.N. Wijkstrom, Environmental Management Options for Coastal Fisheries and Aquaculture: Role of Local Authorities, 18 MARINE POLICY 127 (1994).
¹⁴⁶B.C. Wood-Thomas, Land-based Marine Pollution and Coastal Zone Management:

Role of State and Local Government in the USA, 18 MARINE POLICY 165 (1994).

¹⁴⁷ P.S. Towfighi, Integrated Planning and Management of Coastal Areas, 18 MARINE POLICY 107 (1994).

along major rivers which discharge wastes directly into the coasts, since water tends to be useful in the industrial production process, or the use of the waterways is the cheapest means of transportation of raw materials and finished products.¹⁴⁸ In the Philippines, not even the cities have a complete sewerage system as rivers and streams emptying into the sea become convenient sewage and garbage dumps; and industrial plants discharge their effluents directly into rivers.¹⁴⁹

Combined with municipal wastewater discharges are agricultural runoff of chemical fertilizers and pesticides. The Philippines is still a predominantly agricultural country and the introduction of high-yield varieties of rice requiring massive amounts of chemical fertilizers and pesticides have contaminated lakes, rivers, streams, and coastal waters. It was found that the toxic chemicals in many pesticides and fertilizers are "extremely persistent" and concentrate rather than break down. Specialists on agricultural policy noted that the pesticides most toxic to humans are also the most popularly used.¹⁵⁰

Another source of pollution are tourist resorts and coastal settlements. The Philippines, with its extensive coastline and majority of coastal municipalities, does not deviate far from the worldwide trend of expanding commercial activities in tourist and resort areas of developing countries.¹⁵¹ Whereas in developed countries, recreational coastal settlements are commonly perceived to have only just begun exerting pressure on coastal resources,¹⁵² in the Philippines, the pressure exerted by the existence of coastal settlements is much, much greater and in place far longer as they are common, not only for recreational, but also for residential purposes. There are some 10,000 coastal barangays that contain fifty-five per cent (55%) of the

¹⁴⁸ Id. at 107.

¹⁴⁹ J. Batongbacal, The Coastal Environment and the Small-scale Fisherfolk: Advocacy for Community-based Coastal Zone Management, 66 PHIL. L. J. 171 (1991).

¹⁵⁰ G. PORTER, AND D. GANAPIN, JR. RESOURCES, POPULATION, AND THE PHILIPPINES' FUTURE: A CASE STUDY 21 (1988).

¹⁵¹ See note 146, supra at 108.

¹⁵² *Ibid*.

population.¹⁵³ Aside from generating wastes that enter the marine environment directly as sewage and garbage, such settlements cause physical alteration of the nearshore areas as they grow and occupy more and more space.

Other engines of physical alteration of the nearshore environment abound within the coastal areas. The quarrying of beaches and river banks for readily-accessible components for construction such as magnetite sand, chromite, or gravel, is a relatively common problem that leads to faster rates of erosion and siltation.¹⁵⁴ Unsustainable upland agricultural practices and inadequate watershed management contribute a large share to the rate of siltation in Philippine waters, estimated at sixty million tons (60,000,000) per year.¹⁵⁵ Much of the country's other mineral resources also lie in or near the coastal zone; and increasing mining production also magnifies the amount of mine tailings dumped into the rivers, bays, and coastal waters.¹⁵⁶ The destruction of much of the country's coral reefs which nurture the reef fisheries and protect the coasts from storm waves and beach erosion, as well as seagrass beds that provide habitats for fish, is already far advanced and attributable to heavy siltation from deforestation, construction sites, dredging, filling, and mining.¹⁵⁷ The depletion of mangrove resources from their conversion into fishponds is nearly complete, with only 149,000 hectares remaining as of 1988, out of the original estimate of 450,000 in 1918.¹⁵⁸

Any approach to marine environmental protection as part of an integrated coastal area management policy will require an institutional structure that corresponds to the geographic areas within which the management is needed.¹⁵⁹ Since the major threats to the marine

¹⁵³THE WORLD BANK, PHILIPPINES: ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT STUDY, 33 (1989).

¹⁵⁴ See note 148, supra at 169.

¹⁵⁵ Ibid.

¹⁵⁶ See note 149, supra at 21.

¹⁵⁷ Id. at 42.

¹⁵⁸ See note 152, supra at 34.

¹⁵⁹ A. Dahl, Land-based Pollution and Integrated Coastal Management, 17 MARINE POLICY 567 (1993).

environment abound within the jurisdiction of the LGU, then the LGU is the appropriate level at which those threats should be addressed.

Recognition of the current limitations of international law

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The doctrine of state sovereignty, a fundamental concept in international law, also acts as a constraint when it comes to the imposition of common standards necessary to achieve the goals of an international environmental agreement. Since environmental problems do not recognize political boundaries, territorial sovereignty unduly restricts any mechanism which may be necessary to address environmental issues to only within state lines, despite the fact that the issue may have transboundary impacts and require transboundary solutions. The issue of land-based sources of pollution is a case in point: land-based activities are inherently and completely within the jurisdictional competence of states. States are traditionally reluctant to give up any measure of regulatory independence when dealing with activities completely within their borders as these activities may play different and significant roles in their socio-economic structures. It comes as no surprise, then, that the existing global international documents on land-based sources of pollution take the form of recommendatory guidelines, as the land-based activities that generate the pollution are likely to be heavy and extensive industries upon which the states' economies depend on for stability. It is thus much more difficult to formulate and impose international rules and standards to regulate them than with other sources of pollution (e.g. vessel-source pollution) which to a greater extent occur in international areas. These difficulties, however, may be avoided if the rules and standards imposed at the local level are brought nearer, if not equivalent, to the desired international standard.

Greater likelihood of appropriateness and responsiveness of local policy actions

International law expects that once treaties have been signed, states shall immediately comply with their duties and obligations under it. This assumes a "top-down" management approach to government in which the local organs follow the lead of the national leadership and thus treaty obligations are immediately implementable within the national boundaries. However, it is now accepted that as far as the environment is concerned, actions cannot be taken without prior local assessment, investigation, and determination of appropriate responses to issues; that close monitoring of impacts is essential to ensure the responsiveness of the policy or program to the management needs; and continuous adjustment and modification of program actions may be necessary to account for foreseen and unforeseen effects of the policy or program. The ability to directly monitor the effects of environmental policies and take immediate responsive action is less likely to exist with the national government than with the LG. Local environmental problems cannot normally be solved by national authorities in an efficient way since they are too far from the scene where the effects are felt.¹⁶⁰ Problem-solving is largely a local concern¹⁶¹ from the standpoint of policy efficiency and appropriateness of solutions.

In the implementation of policies, including those contained in international environmental conventions, coordination should be sought at the level where the issues to be resolved manifest themselves, or the so-called optimal policy level i.e., the level at which management strategies are both effective and efficient.¹⁶² As explained previously, the issues in marine environmental protection manifest themselves at the local levels within the LG jurisdictions. Thus, to a large extent the optimal policy level is more likely to be at the LG level than the national government.

Like coastal zone management strategies, the planning and administration of marine environmental protection programs must require the participation of the LG in all stages of the integrated management process to assist in rational planning and implementation activities, develop locally appropriate and responsive environment policies, and implement and enforce such policies at the local level.¹⁶³ Effective management of the marine areas will require flexible, site-

¹⁶⁰ B.H. Fenger, Solving Environmental Health Problems at Local Level, 18 MARINE POLICY 116 (1994).

¹⁶¹ Ibid.

¹⁶² H.M.A. JANSEN, ET. AL. SOME CONSIDERATIONS OF THE ECONOMIC IMPORTANCE OF THE PRO-ACTIVE INTEGRATED COASTAL ZONE MANAGEMENT 5 (1993).

¹⁶³ M. Potier, Cost Effectiveness in Coastal Zone Management: OECD Experience, 18 MARINE POLICY 124 (1994).

specific, and source-specific decision-making, which will involve local environmental and economic conditions as well as considerations of effectiveness and acceptability within the local community.¹⁶⁴ LGs therefore have a very important function of filling in and shaping detailed rules flowing from national or international strategies to fit with the particular local situation.¹⁶⁵

The Interface Between International Environmental Law and **Philippine Municipal Law**

Concept of a Local Agenda 21

To a certain degree, Agenda 21 recognized the need for more localized elaboration of the general environmental principles and objectives it set out for the international community. Chapter 28 is devoted to the initiatives of local authorities in support of Agenda 21 and considers the participation and cooperation of the LGs a determining factor in fulfilling its objectives. The LGs are recognized to construct, operate, and maintain economic, social, and environmental infrastructure. oversee planning processes, establish local environmental policies and regulations, and assist in implementing national and subnational environmental policies. They are also seen as the level of governance closest to the people, who play a vital role in educating, mobilizing, and responding to the public in order to promote sustainable development.¹⁶⁶ Local authorities are supposed to have formulated a "Local Agenda 21" for their communities since 1996 after a process of consultation and dialogue with its citizens,¹⁶⁷ presumably consistent with the national policies that resulted from the country's adoption of Agenda 21.

The Lisbon Declaration

In 1993, the Advisory Committee on the Protection of the Sea (ACOPS) and the Camara Municipal de Lisboa spearheaded a

¹⁶⁴ *Ibid*.

¹⁶⁵ U. Barg and U.N. Wijkstrom, Environmental Management Options for Coastal Fisheries and Aquaculture: Role of Local Authorities, note 144 supra at 132. ¹⁶⁶ AGENDA 21, Chap. 28, par. 28.1.

¹⁶⁷ AGENDA 21, Chap. 28, par. 28.2(a) and 28.3.

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conference on the implementation of the Marine Chapter of Agenda 21 of UNCED by local authorities. In a resolution entitled "The Lisbon Declaration," the participants, composed of representatives of various local governments from all over the world, considered the goals set by the Rio Declaration against the fact that majority of the world's populations are situated on the coasts and their settlements generate household, agricultural, industrial, and commercial pollutants. They concluded that these land-based sources of marine pollution were within their jurisdiction and competence thus implying a vital role for local authorities in marine environmental protection under Agenda $21.^{168}$

The Lisbon Declaration made numerous recommendations, though non-binding as law; and even if it cannot even be considered as soft-law, since it was not the product of state-to-state negotiations, it is, nevertheless, a rational and logical statement of the perceived roles that LGs may play in the observance of international environmental law. It generally encouraged local authorities to undertake scientific, technical, and administrative measures for the purposes of advocacy of national support for Integrated Coastal Zone Management; capacity-building, resource- and issue-identification, inventory, and impact-assessment; enforcement of international standards for port and shipping operations; development of pollution-damage limitation and abatement strategies at the local level; and development of cost-effective and progressive environmental improvement strategies.¹⁶⁹ It also called for the taking of legal measures and assurance of adequate financial support for encouraging national governments to adhere to international environmental agreements and standards; encouraging the delegation of sufficient legislative and executive powers and financial and administrative resources necessary for control, prevention, reduction, and elimination of marine pollution; the full use of existing powers and functions for purposes of managing the marine environment; and the establishment of appropriate planning and

¹⁶⁸ Lisbon Declaration on Implementation by Local Authorities of the Marine Chapter of UNCED's Agenda 21, 18 MARINE POLICY 94 (1994).

¹⁶⁹ Id. at 95.

coordinating mechanisms.¹⁷⁰ It also encouraged inter-municipal cooperation and assistance in this endeavor.¹⁷¹

The Lisbon Declaration is a valuable document in setting out a general program of action for LGs to ensure an active role in the formulation, refinement, and implementation of environmental policies. As will be shown shortly, it is quite applicable to the Philippine setting and can set the stage for a significant role for LGs in marine environmental protection.

International Frameworks and Guidelines and Local Application

A number of international conventions, rather than laying down strict tasks for each State Party, define frameworks with which states are encouraged to address the issue or problem subject of the agreement. Examples of these kinds of conventions are the Montreal Guidelines and the GPOA-LBA. The principles and processes recommended by these non-binding agreements usually have a scientific and practical basis, and are thus just as useful to LGs which may wish to use them as guides for formulating their own environmental programs. Since environmental issues do not recognize either the limits of governments nor the levels at which they operate, and responsive policy options, principles, and programs adopted into international agreements tend to be scientifically and factually based. LGs may be able to use the same frameworks as the basis for their own local action plans without much difficulty. The GPOA-LBA can be just as helpful to LGs seeking to address land-based pollution problems, subject to modification in terms of scale and resources. As planning tools, international environmental agreements can be very useful for LGs since from the inception of the policy, they provide standards and guidance consistent with the broader international framework, obviating the need for national oversight to keep local programs in line. It is also possible to encourage the local application of international norms and standards even if the national government has not yet officially acceded to the particular treaty or convention which sets it out; LG initiatives can be a tool for harmonizing environmental

¹⁷⁰ Id. at 96.

¹⁷¹ Id. at 97.

standards across borders without need for directions from the national government to implement them. The challenge is in adapting the guidelines and standards negotiated at the state-to-state level into forms that are relevant and useful to the LGUs considering their structure, resources, mandates, and extent of jurisdiction.

Defining Roles

Between the LG and the national government, roles in formulating and implementing a marine environmental protection regime can be first based on a differentiation of local and national perspectives. The LG is more concerned about economic well-being, infrastructure needs, and visible quality of life; as part of the local community it is in a better position to know the needs of the people and is much more reliable in terms of information and understanding about the area under its jurisdiction.¹⁷² The national government, on the other hand, deals with issues of overriding importance and has a strong sectoral orientation, for which it has specialized agencies; thus it is mainly concerned with the need to give guidance to lower levels of government and seeks a uniformity of approaches to achieve national goals.¹⁷³ LGs can bring a more detailed understanding of real problems, needs, and constraints, a better base of data and information, and a more locally-attuned choice of possible solutions. On the other hand, the national government can legitimize interests and validate local concerns against national programs or policies.¹⁷⁴

A marine environmental protection regime can be built on the basis of "framework management," wherein the national government determines the framework for the tasks of subordinated authority but does not subsequently interfere in its actions, even if there are disagreements.¹⁷⁵ Framework management is particularly acceptable for Philippine local environmental legislation, considering the rather broad and nebulous mandate granted to LGs under the Local Government Code and the characterization of the rights and correlative duties to preserve a "balanced ecology" as constitutionally-protected and

 ¹⁷² Workshop on Integrated Coastal Management. U.N. Doc. UNESCO/IOC 8 (1994).
¹⁷³ Ibid.

¹⁷⁴ Ibid.

¹⁷⁵ See note 159, supra at 117.

actionable rights. These can legally justify broad, comprehensive, or innovative measures that have not yet even been enacted in any prior legislation. The national government, through the DENR with other relevant agencies, can lay the foundations for a comprehensive marine environmental protection strategy which sets minimum technical standards that the LGs can build on. This general framework can be based on a determination of specific program areas to be addressed, using current international and national laws as the parameters for creating local policies and programs.

The LGs and the national government need to take mutually supportive roles in the building of local marine environmental protection regimes. The national government can initiate training and orientation of LG personnel in the technical and information requirements to be accomplished in order to begin with the new policy: of importance here would be the dissemination of information regarding the current state of the international law with respect to the concerns that have been identified as being within the LG jurisdiction. While the LGs carry out the initial resource inventory and assessment, the national government can provide technical support for the analysis and integration of the data at each higher level to ensure coordination and standardization of the information base. Thereafter, the national government can provide assistance to the LGs in drafting policies that are coordinated or consistent with those of other LGs of equal or higher levels. Once the appropriate local ordinances or other issuances are enacted, the national government can then give its imprimatur to local norms and regulations and enforce them as if they were national in source. The national government may also provide administrative and financial support to the LGs in their efforts to build linkages with other local governments or organizations on the domestic and international levels, in order to promote the free flow of information and exchange of experiences that can be helpful in maintaining and improving the management framework.

Priority Areas of Local Intervention

On account of the express mandates of the LGs, priority can be given to certain policy areas that can make concrete contributions to marine environmental protection, even at its incipient stages. Pending the formulation of more comprehensive and fully integrated measures, the LGs can take incremental actions on the basis of local manifestations of broader marine environmental problems.

The first is on the issue of public awareness. LGs can engage in a general campaign to sensitize their constituencies to issues of pollution by connecting the problem of recurring environmental problems such as red tides, incidents of fishkill, or low fish catch, to the discharge of pollutants into the coasts. The recurrence of these incidents may be used as a "triggering effect" to draw popular attention to the degradation of the marine environment. Since coastal areas are populated by communities which are to a great extent dependent on fish for their food supply, emphasis needs to be laid on maintaining a healthy marine environment in order to ensure continued availability of fish. This will provide the necessary opening to further educate the population about the need to engage in practices that assist in the conservation and protection of the marine environment. National government agencies should provide the LGs with a pool of experts and officials to attend public seminars and gatherings to increase public understanding of the relationships between pollution of the marine environment and the problems they face in the coasts.

Second, coastal pollution from land-based sources must be made the focal point of LG initiatives for marine environmental protection since municipal wastewater is the major source of this type of pollution and much of it is derived from household discharges.¹⁷⁶ Household pollution is largely an issue of common sanitation; therefore, the LG regulatory powers on this subject can be used to encourage the minimization of wastes, even while it attempts to ensure efficient and adequate sewage and garbage disposal facilities and tries to build a capability for sewage treatment.

Industrial effluents are ordinarily coursed through the same streams and rivers that household sewage flow into, but the nature of the pollutants may be more toxic than the household variety since they can be composed of heavy metals and highly toxic chemical by-products of production processes. The LG must likewise prioritize the

¹⁷⁶ See note 146, supra.

formulation of measures to address industrial pollution which is well within their responsibilities as regulators of business and industry within their jurisdiction. Enforcement procedures and remedies should be adopted by the LG with respect to existing environmental standards, while the *barangay*, whose officers are authorized to enforce environmental laws, should be given training and orientation on how to avail of these procedures.

The third area in which local interventions are called for at the early stages of policy formulation is the issue of marine debris and oil pollution. Since the Philippines is an archipelago, its inhabitants use the sea almost as naturally as they would any road; passenger ferries and smaller boats are almost always using the ocean for transportation of goods or people. Fish is a prime food source and small-scale artisanal fisheries provide daily sustenance to coastal inhabitants. At the same time, the Philippines is in the middle of major international commercial seaborne trade routes, with ships from all nations and of all kinds passing through its waters at several points dispersed throughout the archipelago.

The use of the sea for daily transportation and fishing has created a chronic and enormous problem of marine debris, which has not been the subject of close studies. Each day, small outrigger fishing boats manned by subsistence fishermen generate unknown amounts of trash, while the commercial cargo and passenger ferries that crisscross the waters between the islands also discharge unregulated amounts of refuse. Marine debris, whether afloat or ashore, is a common sight in nearly all popular beaches and tourist resorts. LGs, having jurisdiction over sanitation and pollution issues in coastal communities that are the most common users of the nearshore areas, can engage in efforts to inculcate awareness in the user population of the need to minimize the careless disposal of wastes. Likewise, those which have relatively busy port and harbor facilities can engage in similar campaigns to enhance shipcrew awareness and encourage non-disposal of wastes into the sea. LGs should familiarize themselves with IMO standards and as much as possible insist on the ships' compliance with those standards; they may also fill the regulatory void currently left by the PPA. The MARPOL Convention and its annexes can provide useful guidance on what forms of vessel-pollution to watch for and point out what vessel-owners and

managers are, or are not, properly doing in their ships. Port and harbor clean-ups and beach cleaning activities may also be regularly implemented through organized barangay brigades, while fishers should be given continuous reminders that preservation of the quality of the water is also essential for the continued productivity of the traditional fishing grounds. The national government must engage in a nationwide study to assess the real impact of marine debris on the Philippine coastal environment.

The occurrence of oil spills is also a very real possibility within the crowded waterways of the country. Presently, only the PCG undertakes the task of oil spill contingency planning and response for the whole archipelago. But it is obvious that such a monumental task cannot be effectively carried out by just one agency; the number of possible spill areas on account of the local commercial traffic is daunting. Coastal LGs, especially those adjacent to major inter-island and international sealanes, should seriously consider the formulation of local oil spill response plans, using IMO standards for guidance. It may be possible, with the use of available local technologies, to enable the local communities, with their enormous numbers of small and medium sized boats, and coastal-based settlements, to undertake some rudimentary but relatively effective form of oil spill response capability.¹⁷⁷

Finally, cities and municipalities can engage in area protection for known habitats of fish and other marine species within the municipal waters. This can be done even while the NIPAS is not yet in place as the implementation of the NIPAS can still take some time on account of the need for congressional approval of the NIPAS sites. Small protected enclaves can be set up within municipal waters through the power to grant fishery privileges which includes the power to

¹⁷⁷ Some organizations have produced simple papers for oil companies that can also be of use to LGUs in this regard. See, for example, papers of the International Petroleum Industry Environmental Conservation Association, entitled Management of Oil Spill Response - A Petroleum Industry Guide, Criteria for Judging the Effectiveness of Marine Oil Response Capabilities, and Mapping of Sensitive Areas for Oil Spill Response — An Important Tool in Contingency Planning, IPIECA, London, undated. The IMO likewise publishes manuals with respect to the conventions it is tasked with implementing.

impose conditions for its exercise; the power to classify lands; the power to provide for conservation and protection of communal forests, watersheds, mangroves, and similar areas; or through the assistance of the DA by the designation of fish sanctuaries and reserves.178

Coastal zones are the receiving end of land and water-based pollution.179 It may be noted that, based on the above priorities, the LGs priorities naturally revolve mainly around the issue of coastal pollution as the main threat to the marine environment within their jurisdiction, which also happens to be the most susceptible to LG control. This highlights the role that LGs can play in the global effort to protect the marine environment by filling in a niche that so far has not been completely brought under the influence of international environmental law, i.e. land-based sources of pollution.

Recommended Actions

The following courses of action are recommended to initiate the construction of local marine environmental protection regimes in the Philippines.

Review of current international environmental agreements and their possible use for dealing with local environmental problems

Environmental problems are bound to have already manifested themselves at the local level yet have not been properly addressed by either the local community or the LG due to a lack of awareness that these problems extend far beyond their borders and that there are existing and proposed mechanisms and procedures for dealing with them. As already explained, some framework conventions may be useful guides for LGUs to formulate their own programs or policies to respond to the pressing problems of conservation of marine biodiversity

¹⁷⁸ See, for example, B. Abrenaga, et. al., LEGAL CHALLENGES FOR LOCAL MANAGEMENT OF MARINE RESOURCES: A PHILIPPINE CASE STUDY 52 (1996); A. White, *Two Community-based Marine Reserves: Lessons for Coastal Management*, COASTAL AREA MANAGEMENT IN SOUTHEAST ASIA: POLICIES, MANAGEMENT STRATEGIES AND CASE STUDIES 85 (C. Thia-Eng and D. Pauly, ed. 1989).

¹⁷⁹ THE WORLD BANK, THE NOORDWIJK GUIDELINES FOR INTEGRATED COASTAL ZONE MANAGEMENT 4 (1993).

and habitats, vessel-source pollution, and land-based sources of pollution. The possibility of using and adapting international frameworks for formulating local policies also leads to the possibility of compliance with international environmental agreements without dependence on national government initiatives. The most useful example of this is the General Program of Action for the Protection of the Marine Environment from Land-based Activities which, with few modifications, can be the basis for a local anti-pollution program.

In addition, international agreements may also provide clarificatory principles and additional norms to more clearly define a comprehensive local environmental policy. For example, the duty not to transfer one's pollution to other jurisdictions or not to transform one form of pollution to another are useful guides for action in any local pollution-legislation, but which have not been clearly expressed in the national law. In this manner, international environmental agreements can provide supplemental policy guidance to local environmental policymaking.

Adaptation of international norms, soft law, and guidelines into basic environmental standards and procedures for local governments

International agreements, however, are naturally premised on a global environmental setting, and it is necessary for the general principles, norms, and guidelines to be extracted and rephrased in such a manner as to be relevant to the local setting. This serves as a process of both disseminating information on international environmental agreements and contextualizing these agreements within the local setting. By so doing, the general principles and norms advocated by the agreements can become widely and universally accepted, eventually finding their way into local values and then into the culture and behavior of communities.

Another necessary aspect of adaptation is the creation of qualitative, rather than quantitative, standards that may be needed to give initial impetus to the environmental impact inventory and assessment phase required prior to the formulation of a marine environmental protection program. Philippine LGs especially, may lack the necessary scientific resources or financial capacities to procure and maintain those resources, and thus, highly technical or high technologydependent standards may prove to be useless for the LG. However, in the case of pollution, more often than not, there are usually external manifestations of their presence that can be sensed on a subjective level. Qualitative (and largely subjective) environmental standards can be used to initiate a process of prioritization; they can serve as indicators of the need for more intensive monitoring and evaluation, and can help in a more rational and effective allocation of limited resources.

Initiation of institutional capacity-building for local governments

Provinces, cities, and municipalities have the option of appointing Environment and Natural Resource Officers.¹⁸⁰ These ENR Officers are LGU personnel, distinct from the Regional, Provincial, and Community Environment and Natural Resources Officers of the DENR. These ENR officers should be given training and orientation in current national and international environmental laws as well as the technical aspects of environmental management. A major component of this training should be up-to-date modules on integrated coastal zone management including marine environmental protection, considering the majority of coastal LGs in the country. The DENR and DILG should embark on creating a training curriculum for ENR Officers to enable them to take the role of lead coordinator of environmental management efforts undertaken by the national and the local government.

Initiation of local resource inventory and assessment through participatory rural appraisal

In the meantime, the process of local resource inventory and assessment as recommended in the Lisbon Declaration can be initiated by means of a directive from the DILG. Such a directive should integrate grassroots participation into the process by directing the use of participatory rural appraisal (PRA) methods. PRA permits a rapid and efficient process of determining the problems of the communities – the constraints, opportunities, and challenges relating to the use of

¹⁸⁰ LOCAL GOVT. CODE, sec. 484.

coastal resources – and can suggest projects and programs for research or development. PRA will also obviate the need for unrealistic technical and technological methods, while producing a reliable and comprehensive information base for local policy-making and national planning and coordination.¹⁸¹

Formulation of a process of providing expert assistance to LGs upon request

Inevitably, however, there will be a need for scientific and technical experts who will have to respond to highly technical requirements of LG marine policies that will likely be needed at certain points in the course of implementation. For example, the delineation of protected areas require some degree of scientific validation since the use of an area by marine species simply cannot be based on observation of the surface of the water; precise sampling and analysis may become necessary where a dispute arises out of subjective perceptions of the level of contamination of an area. Regular monitoring of compliance with technical standards may also need specialists with high qualifications. The DENR will have to develop and maintain a pool of mobile specialists who can provide expert technical assistance to all the LGs who may need it. The LGs cannot be expected to fund the education and employment of technical personnel for their local programs who may not be needed every day and are not absolutely essential to the day-to-day administration of the LG; these personnel may be of greater benefit if employed and equipped directly by the DENR.

An alternative option would be to create linkages between academic institutions and LGs such that students in the applied sciences related to marine environment can make these tasks both learning and productive experiences. Senior students in need of practicum exercises can receive academic credit for properly carrying out the necessary scientific analysis, subject to review by experts and professionals. The LGs can benefit from relatively low-cost scientific appraisals, while students can gain vital practical experience. Clinical

¹⁸¹ See C. LAMUG & Z. CATALAN, PARTICIPATORY RURAL APPRAISAL OF A COASTAL COMMUNITY: THE PROCESS IN NATIPUAN, BATANGAS, PHILIPPINES (1995).

laboratories may be put up by academic institutions with support from LG funding to supply the LGs scientific and other technical needs while at the same time assisting in the development of a future experts.

Initiation of a study of how to effectively address erosion and siltation issues

A separate initiative is needed to address the issue of erosion and siltation because these incidents are usually of transboundary nature and will require a higher level of policy consideration. Even provinces alone may not be capable of effective measures against siltation, considering that the sources of sediments may be vast agricultural fields or distant watersheds that feed into the river systems. However, they do have an impact locally on sensitive coral, mangrove, and seagrass ecosystems. These issues are likely to be better addressed at a regional level. Thus, it is necessary to formulate an institutional mechanism for responding to a local impact in one municipality whose source could be in another municipality in another province or region of the country entirely.

Assistance to LGUs in building international linkages, seeking additional international funding, and/or soliciting transfer of technology

In keeping with Chapter 28 of Agenda 21 and the recommendations of the Lisbon Declaration, several international organizations are promoting closer cooperation and linkages between local authorities as a means for ensuring implementation of Agenda 21.¹⁸² The national government should provide assistance to LGs in their search for information, resources, and personnel that can aid in the formulation of their local marine environment policies. Listings of international organizations and contact persons concerned with the different aspects of the marine environment can be distributed to LGs; opportunities for projects and funding should be compiled and made

¹⁸² For example, the Advisory Committee on the Protection of the Sea (ACOPS) initiated the Lisbon Conference; the International Council for Local Environmental Initiatives (ICLEI) based in Toronto, Canada is promoting the exchange of local government experiences, policies, programs, and techniques to encourage the creation of local Agenda 21 policies.

known; and the transfer of appropriate technologies to LGs, such as sewage treatment plants and pollution-monitoring equipment, should be facilitated at the national level. These efforts can provide the initial impetus for totally autonomous LG marine environmental initiatives.

Initial focus of attention on efforts to control land-based sources of pollution

As local environmental policy initiatives are encouraged, attention should be concentrated on the problems of land-based sources of pollution since these are acknowledged to be the greatest sources of marine pollution but have received the weakest response in international law-making. Emphasis on land-based sources of pollution is not only responsive to the local threat to the marine environment, but also allows the Philippines to be at the forefront of implementing the recommendations of the GPOA-LBA.

Production of an ordinance-making manual for marine environmental protection

A local marine environmental protection policy will necessarily take the form of a comprehensive ordinance in order for it to attain a degree of institutional stability and have legal effect. But simply issuing a model ordinance runs the risk of being totally incompatible with local needs and cannot possibly anticipate the many possible responses and solutions that may be imagined based on the different circumstances of each LG.¹⁸³ Each LG is in a distinct environment, and therefore a high degree of flexibility must be allowed the LGs in creating their own policies and programs in response to the situation. A manual that emphasizes the ordinance-making process by giving the LGU a step-by-step guide to creating its own marine environmental protection policy, instead of merely prescribing an ordinance, is a better way of ensuring some degree of uniformity in design and consistency in scope while maintaining the needed flexibility and responsiveness to local conditions. Such a manual will also promote the use of internationally accepted principles and norms in local policy, thus

¹⁸³ B. ABRENAGA, *et al.*, LEGAL CHALLENGES FOR LOCAL MANAGEMENT OF MARINE RESOURCES: A PHILIPPINE CASE STUDY 71 (1996).

ensuring that adoption by the LGU will still be in consonance with the international obligations of the Philippines. It will also indicate the responsible national agencies from whom technical advise and support can be solicited for each of the major policy areas.

Initial implementation in major port cities and municipalities

Finally, the formulation of marine environmental protection policies should be promoted first in the major port cities where the impacts are greatest and most visible. This will allow for a "learning stage" where various means and methods of pollution-control and resource-management can be experimented with. On account of their relatively higher level and pace of industrial development, port cities are likely to attract the most negative impacts from resource-loss and habitat-degradation, vessel-source and land-based pollution. The combination of provincial and municipal environmental mandates in the cities also allows them the greatest flexibility in the formulation, implementation, modification, and fine-tuning of policies and programs, thus facilitating their assessment for replication in other LGUs. The cities are the best pilot areas for trying out these local marine environmental protection policies.

CONCLUSION

The expansion of national governance in both area and scope also created a practical need to ensure its effectiveness and responsiveness to local needs and issues by means of developing decentralized systems of governance. Local governments, or local authorities as they are sometimes called, were developed initially as mere agents and implementors of national policies and decisions. At present, however, they are becoming primary moving forces in the management of society, especially since the increasing complexity of interactions and government regulations require more and more decentralization of governance. Today, operating with varying degrees of relative autonomy from national agencies but still within prescribed national parameters, these local governments have necessarily become front line actors, giving substance to national mandates and exerting major efforts in attaining national objectives.

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Local governments provide a prime institutional mechanism for the successful implementation of marine environmental protection; by taking international standards as guidance, whether or not they are considered as binding by the community of states, local programs and policies can still assist in the achievement of globally-beneficial goals and objectives. The Philippines, with its system of local government, can serve as a very good probing ground for translating international standards and recommendations into well-grounded local programs. Not only will it provide an opportunity to test the applicability and relevance of international environmental agreements to local settings, it will, at the same time, enhance the local environmental management capabilities. And, it will also help international environmental law transcend traditional political barriers and eventually contribute to making it universal among states, communities, and individuals.