PHILIPPINE STATUTORY COMPLIANCE WITH BIODIVERSITY TREATY OBLIGATIONS ON LAND RECLAMATION PROJECTS*

*Maria Lynette Lava Arreola***

I. INTRODUCTION

As an archipelago, the Philippines has the fifth largest coastline in the world.[1] This geography, together with its tropical location, makes it one of the richest countries in terms of number of species of living organisms.[2] It has two-thirds of the earth's biodiversity and between 70% and 80% of the world's plant and animal species.[3] In fact, it is one of only 17 megadiversity countries,[4,5] with around 52,177 described species,[6] more than half of which are endemic or unique to the place.[7]

The country's large coastline, rich in natural resources, also makes it inviting for human habitation. The Manila Bay area, for example, was home

---

* *Cite as* Maria Lynette Lava Arreola, *Philippine Statutory Compliance with Biodiversity Treaty Obligations on Land Reclamation Projects,* 93 PHIL. L.J. 1218, [page cited] (2020).

** J.D., University of the Philippines College of Law (2019); B.S. Chemistry, Adamson University (2012).

[1] Oliver Smith, *Britain has more coastline than Brazil – but which country has the most seaside?*, THE TELEGRAPH, Dec. 12, 2018, *available at* https://www.telegraph.co.uk/travel/maps-and-graphics/countries-with-longest-coastlines, *citing* Central Intelligence Agency: The World Factbook, *at* https://www.cia.gov/library/publications/resources/the-world-factbook/fields/282.html.

[2] DENR–PROTECTED AREAS AND WILDLIFE BUREAU, CONSERVATION INTERNATIONAL PHILIPPINES, BIODIVERSITY CONSERVATION PROGRAM-UNIVERSITY OF THE PHILIPPINES CENTER FOR INTEGRATIVE AND DEVELOPMENT STUDIES, AND FOUNDATION FOR THE PHILIPPINE ENVIRONMENT, THE PHILIPPINE BIODIVERSITY CONSERVATION PRIORITIES: FINAL REPORT – A SECOND ITERATION OF THE NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN (2002).

[3] Convention on Biological Diversity, *Philippines – Country Profile,* CONVENTION ON BIOLOGICAL DIVERSITY WEBSITE, *available at* https://www.cbd.int/countries/profile/default.shtml?country=ph.

[4] The world's top biodiversity-rich countries. To qualify, a country should have at least 5,000 of the plants as endemic and have marine ecosystems within its borders. United Nations Environment World Conservation Monitoring Center (UNEP-WCMV), *Megadiverse Countries*, BIODIVERSITY A-Z, Nov. 20, 2014, *available at* http://www.biodiversitya-z.org/content/megadiverse-countries

[5] Some sources state that there are 18 countries.

[6] DENR, *supra* note 2.

[7] *Id.*

to 23% of the country's population in 2015.[8] This is consistent with the global trend of having a large human density near coastlines, with 40% of the world's population living within 100 kilometers of a coast.[9] This density increases at a rate of almost thrice that of inland places.[10] As a result, coasts are one of the most urbanized places on Earth.[11]

In the Philippines, urbanization of coastal areas is considered to be one of the means of boosting economic progress.[12] This is why land reclamation—the process of converting areas from bodies of water into land—is a priority project of the Duterte Administration, which planned to implement more than 80 projects from 2016 onwards.[13] The problem, however, is that heavy urbanization has adverse effects on the ecological integrity of coastal habitats.[14] This may not be consistent with the State's obligations to uphold the people's right to a balanced and healthful ecology[15] and to conserve biodiversity.

This Note examines the Philippines' compliance with its obligation to conserve biodiversity based on the 1987 Constitution and the international treaties to which it is a party. In particular, the Note focuses on compliance with respect to land reclamation activities. It first looks at what biodiversity is, its role in sustaining life, and the extreme necessity to conserve it. Then, it discusses land reclamation and its possible threats to organisms and their habitats. It considers Philippine laws that are currently in place and whether they are enough to achieve the goal of protecting ecological balance. This Note then argues that there is a need to have a law specifically on land reclamation. The proposed law would try to address the current problems

---

[8] NATIONAL ECONOMIC AND DEVELOPMENT AUTHORITY (NEDA), MANILA BAY AREA SITUATION ATLAS (2018).

[9] THE OCEAN CONFERENCE, THE OCEAN CONFERENCE FACTSHEET: PEOPLE AND OCEANS (2017), *available at* https://www.un.org/sustainabledevelopment/wp-content/uploads/2017/05/Ocean-fact-sheet-package.pdf

[10] JULIE LOCKWOOD & BROOKE MASLO, THE CONSERVATION OF COASTAL BIODIVERSITY (2014), *citing* UNITED NATIONS ENVIRONMENT PROGRAMME (UNEP), MARINE AND COASTAL ECOSYSTEMS AND HUMAN WELL-BEING: A SYNTHESIS REPORT BASED ON THE FINDINGS OF THE MILLENIUM ECOSYSTEMS ASSESSMENT (2006).

[11] *Id.*

[12] PRA, *Reclamation,* PRA WEBSITE, July 9, 2014, *available at* http://www.pea.gov.ph/programs-and-projects/reclamation

[13] Kristine Felisse Mangunay, *PRA to pursue 80 reclamation projects, claims Duterte all-out support*, INQUIRER.NET, Dec. 21, 2016, *available at* https://business.inquirer.net/221799/pra-to-pursue-80-reclamation-projects-claims-duterte-all-out-support

[14] Lockwood, *supra* note 10, *citing* Heike K. Lotze, et al., *Depletion, degradation, and recovery potential of estuaries and coastal seas*, 312 SCIENCE 1806 (2006).

[15] CONST. art II, § 16.

with land reclamation by setting standards and limitations on how the activity should be conducted.

II. BIODIVERSITY AND LAND RECLAMATION

A. Biodiversity

Biodiversity or biological diversity is the "variety of life," and refers to the variation at all levels of biological organization.[16] It is defined as "the variability among living organisms from all sources including, *inter alia* terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems."[17]

Biodiversity is comprised of three main levels:[18] genetic, organismal, and ecological. *Genetic diversity* pertains to the "variations in genetic make-up between individuals within a population and between populations."[19] *Organismal diversity* "encompasses taxonomic hierarchy, from individual organisms, to species, genera and beyond."[20] *Ecological diversity* involves differences between organism populations, their niches, and habitats.[21] It refers to *ecosystems* or the "dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit."[22]

It is the countless relationships and interactions between individual organisms, populations, and their environment that has allowed the Earth to be habitable for billions of years.[23] If undamaged, these interactions, honed by evolution, "produce[ ] a finely balanced, healthy system."[24]

---

[16] KEVIN GASTON & JOHN SPICER, BIODIVERSITY: AN INTRODUCTION (2004).

[17] Convention on Biological Diversity [hereinafter, "CBD"], art. 2, June 5, 1992, 1760 U.N.T.S. 79.

[18] Damian Carrington, *What is biodiversity and why does it matter to us?*, THE GUARDIAN.COM, Mar. 12, 2018, *available at* https://www.theguardian.com/news/2018/mar/12/what-is-biodiversity-and-why-does-it-matter-to-us

[19] Gaston & Spicer, *supra* note 16.

[20] *Id.*

[21] *Id.*

[22] CBD, art. 2.

[23] Carrington, *supra* note 18.

[24] *Id.*

The maintenance of biodiversity is important, not only for its intrinsic value in sustaining life on Earth, but also for its significant contributions to humans. These contributions range from the most essential, like food and medicine,[25] to the indirect but necessary ones like the maintenance of temperature and atmospheric conditions,[26] up to the improvement of different aspects of human life through biodiversity's social, economic, scientific, educational, cultural, recreational, and aesthetic values.[27]

1. Benefits and Importance

Biodiversity is considered as biological wealth,[28] being the source of food, medicine, and industrial products and materials. It is from the wide array of species of flowering plants, numbering more than 300,000, of which 12,500 are edible,[29] that humans obtain much of its source of nourishment. It is also from natural products where much of therapeutically effective medicines are derived.[30] Development of new drugs most often begin with studies of substances obtained from rainforest plants,[31] venom from snails and snakes,[32] or studies on bacteria and fungi.

Ecosystem functions, the sum total of organism-driven processes,[33] likewise rely on biodiversity, with the former being dependent on the richness of species,[34] their organization, abilities, and distribution.[35] However, the value of this is not only significant to plants and animals. Humans also rely heavily on the myriad interactions of various organisms, from the biggest trees to the smallest microbes, in maintaining conditions suitable for life. It is through these interactions that important elements, like carbon, nitrogen, hydrogen, and oxygen are cycled through the atmosphere, waters, and soils, modifying physical and chemical conditions, and creating an environment that sustains life.[36]

---

[25] CECIE STARR & RALPH TAGGART, DIVERSITY OF LIFE (11th ed., 2006).
[26] Gaston & Spicer, *supra* note 16.
[27] CBD, pmbl.
[28] Starr & Taggart, *supra* note 25.
[29] Gaston & Spicer, *supra* note 16, *citing* RAPOPORT & DRAUSAL (2001).
[30] *Id.*
[31] MICHAEL J. JEFFRIES, BIODIVERSITY AND CONSERVATION (1997).
[32] Gaston & Spicer, *supra* note 16.
[33] Jeffries, *supra* note 31.
[34] Gaston & Spicer, *supra* note 16.
[35] Jeffries, *supra* note 31.
[36] Gaston & Spicer, *supra* note 16.

2. Threats

The level of diversity of organisms and the number and kinds of species have significantly changed throughout Earth's history. Studies have shown a pattern of species expansion, extinction, and recovery since the early Paleozoic era more than 540 million years ago.[37] There have already been five major mass extinctions,[38] likely caused by asteroid collisions, volcanic eruptions, sea level falls,[39] and the atmospheric and temperature changes that followed. In those instances, biodiversity dropped then slowly recovered.

The problem right now, however, is that the sixth mass extinction is believed to be under way,[40] but at a much faster rate,[41] ranging from eight to 100 times higher.[42] This is primarily attributed to human activities. The proximate causes are exploitation, or the direct use of species;[43] habitat destruction, fragmentation, and degradation through transformation of landscapes;[44] deliberate extermination of species and introduction of new ones, causing genetic dilution;[45] and pollution. These factors can cause even greater problems when *ecosystem cascades*, or the ripple effect of human activities, results.[46] This happens when the extinction of one species leads to the extinction of others[47] because of their interrelatedness.

The factors underlying the harmful activities above include resource pressures brought by human population growth and globalization;[48] cultural problems like differences in attitude and inequality of ownership and property rights;[49] institutional weaknesses and lack of knowledge;[50] and even economic failures.

---

[37] Starr & Taggart, *supra* note 25.

[38] *Id.*

[39] *Mass Extinctions*, NATIONAL GEOGRAPHIC, *available at* https://www.nationalgeographic.com/science/prehistoric-world/mass-extinction

[40] *Id.*

[41] *Id.*

[42] Vaughn, Adam, *Humans creating sixth great extinction of animal species, say scientists*, THE GUARDIAN.COM, June 19, 2015, *available at* https://www.theguardian.com/environment/2015/jun/19/humans-creating-sixth-great-extinction-of-animal-species-say-scientists.

[43] Jeffries, *supra* note 31.

[44] Gaston & Spicer, *supra* note 16.

[45] Jeffries, *supra* note 31.

[46] *Id.*

[47] Gaston & Spicer, *supra* note 16.

[48] Jeffries, *supra* note 31.

[49] *Id.*

[50] *Id.*

B. Land Reclamation

Land reclamation is the process of improving lands to make them suitable for more intensive use.[51] The term generally refers to a wide range of processes, which include irrigation or the construction of structures to bring water to arid lands, the removal of excess salts from salty or alkali lands, drainage or removal of waters from swampy lands to make them more suitable for crop production, and the rehabilitation or revegetation of abandoned mine sites.[52]

In the Philippines, reclamation is specifically defined as "the deliberate process of converting foreshore land, submerged areas or bodies of water into land by filling or other means using dredge fill and other suitable materials for specific purpose."[53] This is a type of reclamation done on coasts to increase land area. The most famous example of this is the land filling done by Singapore on its swampy borders,[54] which enabled its area to expand by around 25% of its original size.[55] This Note refers exclusively to this dredge-and-fill type of reclamation.

The kinds of land that may be reclaimed in the Philippines are foreshore, submerged lands, and bodies of water.[56] *Foreshore land* is a string of land margining a body of water.[57] It is the part of the seashore between the high-water and low-water marks,[58] or simply the area covered by water during high tide and exposed during low tide. *Submerged land* is the part which is permanently under water regardless of the ebb and flow of the tide.[59]

---

[51] *Land Reclamation*, ENCYCLOPAEDIA BRITANNICA (2019).

[52] *Id.*

[53] Joint Order No. 01-2015 (2015). Exec. Order No. 146 Rules & Regs., § 3.7.

[54] Syamsidik, *Singapore Coastal Reclamation: History and Problems,* ACADEMIC SEMINAR OF INDONESIAN STUDENTS ASSOCIATION (PPI) (2003).

[55] Samanth Subramanian, *How Singapore is Creating More Land for Itself,* THE NEW YORK TIMES MAGAZINE, Apr. 20, 2017, *available at* https://www.nytimes.com/2017/04/20/magazine/how-singapore-is-creating-more-land-for-itself.html

[56] Joint Order No. 01-2015 (2015).

[57] FISHERIES CODE, § 4.46. It further defines *foreshore land* as the part of a seashore between the low-water line usually at the seaward margin of a low tide terrace and the upper limit of wave wash at high tide usually marked by a beach scarp or berm.

[58] *Foreshore Land,* MERRIAM-WEBSTER DICTIONARY, *available at* https://www.merriam-webster.com/dictionary/foreshore

[59] SEVERO MADRONA, JR., A TREATISE ON RECLAMATION IN THE PHILIPPINES (2015).

Ownership of reclaimed lands is with the State as part of the public domain.[60] This is based on the Regalian doctrine which holds that the State owns all lands, waters, and natural resources.[61] Being part of the public domain, these lands are inalienable, unless they are classified as alienable lands open to disposition and further declared to be no longer needed for public use.[62]

C. Land Reclamation and the Risks to Biodiversity

Land reclamation is one of those human activities that endanger biodiversity and put shoreline ecosystems at risk.[63] The threats to species diversity may be directly caused by the reclamation activity itself, or the effects of the urbanization which follows. One direct effect is the destruction of habitats. Certainly, when foreshore land, submerged land, or bodies of water are converted to land, its original nature is destroyed. This does not involve a simple change in topography; this also means that the living environment supporting many organisms in the area is lost, resulting to the loss of the species themselves.[64]

It is not only the actual destruction of habitats that endangers coastal organisms; even habitat fragmentation and degradation are considered risks. Development of coastal areas entails the dumping of soil to a formerly submerged site. This could cause habitats to be divided into patches, which would make the entry of invasive species and pollutants easier,[65] thereby intensifying their negative effects on the species originally present. Filling a coastal area with soil could also cause changes in its acidity, salinity, and temperature. Given that the survival of microorganisms, plants, and aquatic animals are based on a particular range of environmental conditions, significant changes in these conditions could be catastrophic to the organisms.

---

[60] Chavez v. PEA, G.R. No. 133250, 403 SCRA 1, July 9, 2002.

[61] *Id.*

[62] OSWALDO AGCAOILI, PROPERTY REGISTRATION DECREE AND RELATED LAWS (LAND TITLES AND DEEDS) (2018).

[63] Su Yin Chee et al., *Land Reclamation and Artificial Islands: Walking the tightrope between development and conservation*, 12 GLOB. ECOLOGY & CONSERVATION 80 (2017).

[64] Starr & Taggart, *supra* note 25.

[65] Gaston & Spicer, *supra* note 16.

One concrete example of how habitat loss or degradation threatens organisms, thereby disrupting ecological balance, is the risk of mangrove extinction. Mangroves are unique tropical and subtropical plant species found in estuarine and nearshore marine regions.[66] They grow between land and sea,[67] and are important in stabilizing coastlines and providing protection from storm surges.[68] More importantly, mangrove forests are home to numerous species. Terrestrial birds, insects, and reptiles can be found in the upper canopies of the forests, while large communities of mollusks, crustaceans, and oysters are supported by their subtidal zones.[69] A large number of fish species are also sustained by mangroves that serve as reproductive or juvenile nursing grounds.[70]

Apart from the protection they provide to human communities by preventing coastal erosion and by acting as barriers against tidal and ocean influences,[71] mangrove forests are important to humans because they enhance fish, shrimp, and prawn catch.[72] The presence of mangroves is estimated to contribute, directly and indirectly, to almost 80% of global fish catch.[73] They also serve as natural filter for pollutants by consuming high amounts of nitrogen and phosphorus from polluted waters.[74]

Unfortunately, mangrove forests are not properly managed and are usually cleared for aquaculture, urban infrastructure, and coastal development.[75] In Singapore, for instance, mangrove forest cover was greatly reduced from 63% in 1953 to only 6.5% in 1993 due to coastal developments and urban expansion.[76] This resulted in the loss of at least four mangrove plant species in the country.[77] While in Manila Bay, mangrove forests covered

---

[66] Beth A. Polidoro et al., *Global patterns of mangrove extinction risk: implications for ecosystem services and biodiversity loss*, *in* COASTAL CONSERVATION 16-36 (Brooke Maslo & Julie Lockwood eds., 2014).

[67] United Nations University Institute of Water, Environment and Health, *Mangroves,* UNU-INWEH WEBSITE, *available at* https://inweh.unu.edu/mangroves

[68] *Id.*

[69] Polidoro et al., *supra* note 66.

[70] *Id.*

[71] *Id.*

[72] NAVJOT SODHI & BARRY BROOK, SOUTHEAST ASIAN BIODIVERSITY IN CRISIS 7-8 (2006).

[73] Polidoro, et al., *supra* note 66.

[74] *Id.*

[75] United Nations University Institute of Water, Environment and Health, *supra* note 67.

[76] Sodhi, *supra* note 72.

[77] *Id.*

54,000 hectares at the start of the 20th century,[78] which then decreased to 2,000 hectares in 1990,[79] and to around 700 hectares in 2017.[80] This makes mangroves one of the critical coastal habitats in the Manila Bay Area.[81]

The unique location of mangroves makes it more susceptible to disturbances than other forests.[82] As a result, environmental changes not amounting to deforestation may still adversely affect the population of these plants. Their specificity to a particular location and sensitivity to the salinity of the water make them especially vulnerable. These factors are also the reason why their population cannot be regained simply by replanting them.

The loss and fragmentation of mangrove forests are the most evident and direct ways by which land reclamation affects biodiversity in the Philippines. Their loss as habitat can cause a significant reduction in population of various life forms especially marine organisms and waterbirds that use these forests as breeding and spawning sites.[8384] This is particularly relevant to threatened and near threatened species of migratory birds that stop over the Philippines since a quarter of them are sensitive to habitat quality and habitat loss.[85] Moreover, losing mangroves alters nutrient and sediment transport within the area and weakens the capture and storage of carbon,[86] which in turn contributes to global warming.[87] Considering how important these plant species are to other organisms, there should be an idea of how far-reaching the loss of one plant type is, which itself may be caused by a single human activity.

---

[78] PARTNERSHIPS IN ENVIRONMENTAL MANAGEMENT FOR THE SEAS OF EAST ASIA (PEMSEA), MANILA BAY COASTAL STRATEGY (2001).

[79] *Id.*

[80] ARNE E. JENSEN, INTERNATIONALLY IMPORTANT WATERBIRD SITES IN MANILA BAY, PHILIPPINES (2018).

[81] NEDA, *supra* note 8.

[82] Polidoro et al., *supra* note 66.

[83] NEDA, *supra* note 8.

[84] Jensen, *supra* note 80.

[85] *Id.*

[86] NEDA, *supra* note 8.

[87] United States Geological Survey, *What is Carbon Sequestration?,* USGS WEBSITE, *available at* https://www.usgs.gov/faqs/what-carbon-sequestration.

III. THE 1987 CONSTITUTION AND INTERNATIONAL TREATIES ON BIODIVERSITY

The Philippine Supreme Court has held that the right to a balanced and healthful ecology belongs to a category of rights assumed to exist from the inception of humankind.[88] Being concerned with self-preservation and self-perpetuation, the advancement of these rights predate all governments and institutions.[89] Regardless of its basic character, the recognition of this right is even expressly made in the 1987 Philippine Constitution, which declares that "[t]he State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature."[90]

Consistent with this Constitutional mandate, the Philippines has signed and ratified international treaties and conventions promoting the conservation of biodiversity. One of those is the *Convention on Biological Diversity* ("CBD"),[91] which recognizes the intrinsic value of biodiversity, as well as its benefit to humans, and requires parties to develop national programs for its conservation and sustainable use. It binds contracting parties to promote the protection of ecosystems and natural habitats[92] and promote environmentally sound and sustainable development in areas adjacent to protected areas.[93]

Another is the *Convention on Migratory Species of Wild Animals* ("CMS"),[94] or the *Bonn Convention*, dedicated to the conservation of migratory species, their habitats, and migration routes.[95] It provides a constantly updated list[96] of endangered migratory species (Appendix I) and migratory species with unfavorable conservation status (Appendix II). For Appendix I species, the CMS obliges parties to endeavor to provide immediate protection[97] by

---

[88] Oposa v. Factoran, G.R. No. 101083, 224 SCRA 792, July 30, 1993.

[89] *Id.*

[90] CONST. art. II, § 16.

[91] Convention on Biological Diversity [hereinafter "CBD"], June 5, 1992, 1760 U.N.T.S. 69. Entered into force on Dec. 29, 1993; the Philippines has been a party since Jan. 6, 1994.

[92] CBD, art. 8(d).

[93] Art. 8(e).

[94] Convention on the Conservation of Migratory Species of Wild Animals [hereinafter "CMS"], Nov. 6, 1979, 1651 U.N.T.S. 333. Entered into force on Nov. 1, 1983; the Philippines has been a party since Feb. 1994.

[95] *Id.*

[96] Amended by the Conference of the Parties in 1985, 1988, 1991, 1994, 1997, 1999, 2002, 2005, 2008, 2011, 2014, 2017 and 2020.

[97] CMS, art. II-3(b).

conserving and restoring their habitats;[98] preventing, removing or minimizing obstacles to their migration;[99] and reducing and controlling other factors that might endanger them.[100] For Appendix II species, the CMS requires parties to endeavor to conclude agreements for their conservation and management.[101]

The Philippines is also a party[102] to the *Convention on Wetlands of International Importance especially as Waterfowl Habitat*[103] or the *Ramsar Convention*, where parties commit to the conservation and wise use of wetlands[104] through local and national actions as well as international cooperation.[105] This treaty recognizes the fundamental ecological functions of wetlands as habitats,[106] especially to waterfowl,[107] and requires contracting parties to designate suitable wetlands within its territory for inclusion in a List of Wetlands of International Importance[108] and to promote the conservation of wetlands and waterfowl by establishing nature reserves on wetlands, whether in the List or not.[109]

Moreover, the Philippines has ratified[110] the *Establishment Agreement of the ASEAN Centre for Biodiversity* ("ACB").[111] It established the ACB as an intergovernmental organization that facilitates cooperation and coordination

---

[98] CMS, art. III-4(a).

[99] Art. III-4(b).

[100] Art. III-4(c).

[101] Art. II-3(c).

[102] Entered into force on Nov. 8, 1994.

[103] Convention on Wetlands of International Importance Especially as Waterfowl Habitat [hereinafter, "Ramsar Convention"], Feb. 2, 1971, 996 U.N.T.S. 245.

[104] Defined in Article 1 of the Convention as "areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres." This is a broad definition, which includes all lakes and rivers, underground aquifers, swamps and marshes, wet grassland, peatlands, oases, estuaries, deltas and tidal flats, mangroves and other coastal areas, coral reefs, and all human-made sites such as fish ponds, rice paddies, reservoirs and salt pans." *See* RAMSAR CONVENTION SECRETARIAT, AN INTRODUCTION TO THE RAMSAR CONVENTION ON WETLANDS (7th ed., 2016).

[105] *Id.*

[106] Ramsar Convention, pmbl.

[107] This refers to birds ecologically dependent on wetlands. Ramsar Convention, art. 1-2.

[108] Art. 2-1.

[109] Art. 4-1.

[110] The Philippines has ratified the ACB on Sept. 4, 2006.

[111] Establishment Agreement of the ASEAN Centre for Biodiversity [hereinafter, "ACB"], Aug. 8, 2006, *available at* http://www2.ecolex.org/server2neu.php/libcat/docs/TRE/Full/En/TRE-147629.pdf. This entered into force on July 23, 2009.

among states, with national governments, and regional and international organizations on the conservation and sustainable use of biological diversity.[112]

It is recognized that a major dilemma of international environmental law is its seemingly ineffectiveness because of the absence of an enforcement mechanism.[113] There is difficulty in holding a country liable in case of non-compliance, a fact which in itself is difficult to prove given the choice of words by those agreements.

The Philippines, however, has the incorporation clause in the 1987 Constitution, which states that the Philippines "adopts generally accepted principles of international law as part of the law of the land."[114] This means that international law principles are effective in our jurisdiction even without an enabling legislation.[115] In addition, in case of conflict between a treaty obligation and local legislation, the State is "bound to make in its legislations such modifications as may be necessary to ensure the fulfillment of the obligations undertaken."[116]

Moreover, by examining the acts and statements of the Philippines in relation to those treaties, it is evident that it has all the intention of complying with those obligations. *First* is the enactment of laws. The Philippines already has a number of laws and administrative issuances consistent with the guidelines set by the treaties. The country is considered as having a "relatively adequate environmental regulatory framework."[117] *Second* is that, based on the statement of policies of biodiversity-related laws, it is stated that they were enacted in pursuance of these commitments. The amended Philippine Fisheries Code of 1998,[118] for example, states that:

> The Philippines shall pursue its commitment to international conventions and cooperate with other states and international bodies, in order to conserve and manage threatened, aquatic

---

[112] ACB, art. 2.

[113] Andrew Watson Samaan, *Enforcement of International Environmental Treaties: An Analysis*, 5 FORDHAM ENVT'L L. REV. 261, 261-283 (2011).

[114] CONST. art. II, § 2.

[115] Herminio Harry L. Roque, *Application of International Environmental Law to the Philippines*, 6 THE PHILJA JUD. J. 315, 315-32 (2004).

[116] *Id. citing* Tañada v. Angara, G.R. No. 118295, 272 SCRA 18, May 2, 1997.

[117] Antonio A. Oposa, *A Socio-Cultural Approach to Environmental Law Compliance: A Philippine Scenario*, COURT SYSTEMS J. 160 (1999).

[118] Rep. Act No. 8550 (1998), as amended by Rep. Act No. 10654 (2014).

> species, straddling and highly migratory fish stocks and other living marine resources.[119]

Furthermore, the Philippines has taken an active role in the establishment of the ASEAN Centre for Biodiversity. Apart from being the first member state to ratify the Establishment Agreement in 2006, the Philippines is also the host country of the Centre,[120] which has its headquarters in Los Baños, Laguna, and has consistently taken part in the programs and workshops of the ACB.

IV. PHILIPPINE LEGISLATION ON BIODIVERSITY IN COMPLIANCE WITH TREATY OBLIGATIONS

Compliance with international agreements is affected by two factors: the *intent* of the state to comply, and its *capacity* to comply.[121] In the case of the Philippines, intent is indeed evident by a number of laws for the protection of biodiversity. Examples of these are the following:

1. *Expanded National Integrated Protected Areas System Act of 2018* (Rep. Act No. 11038), amending the *National Integrated Protected Areas System (NIPAS) Act of 1992* (Rep. Act No. 7586). This established the NIPAS, composed of ecologically rich and unique areas and biologically important public lands that are habitats of rare and threatened species of plants and animals, biogeographic zones and related ecosystems, and designated them as "protected areas";[122]

2. *Wildlife Resources Conservation and Protection Act of 2001* (Rep. Act No. 9147), aimed at conserving and protecting wildlife species and their habitats to promote ecological balance and enhance biological diversity;[123]

---

[119] Rep. Act No. 8550 (1998), § 2(c).

[120] Agreement on the Establishment of the ASEAN Centre for Biodiversity, Sept. 12, 2005.

[121] Edith Brown Weiss, *Conclusions: Understanding Compliance with Soft Law*, *in* COMMITMENT AND COMPLIANCE: THE ROLE OF NON-BINDING NORMS IN THE INTERNATIONAL LEGAL SYSTEM 535-553 (2000).

[122] Rep. Act No. 11038 (2018).

[123] Rep. Act No. 9147 (2001).

3. *The Philippine Fisheries Code of 1998* (Rep. Act No. 8550), as amended by Rep. Act No. 10654, one of the objectives of which is the conservation, protection and sustained management of the country's fishery and aquatic resources;[124] and

4. *Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990* (Rep. Act No. 6969), which regulates, restricts or prohibits the importation, manufacture, processing, sale, distribution, use and disposal of chemical substances and mixtures that present unreasonable risk and/or injury to health or the environment.[125]

The establishment of the NIPAS is in compliance with Article 8(a) of the CBD, which obliges parties to "establish a system of protected areas where special measures need to be taken to conserve biological diversity." The designation of protected areas is also in conformity with the Philippines' CMS commitment to conserve and restore habitats of endangered migratory species ("Appendix I Species") under Article III.4. The NIPAS' prohibition within protected areas on poaching, killing,[126] hunting, taking, collecting, or possessing of any wildlife or its by-product[127] is in compliance with CMS prohibition under Article III.5 on the taking of animals belonging to the endangered migratory species. The NIPAS also has a provision on Environmental Impact Assessment ("EIA")[128] when a proposed project is likely to have significant adverse effects on biological diversity which may be considered as compliant with the EIA requirement of the CBD.[129]

The Wildlife Conservation and Protection Act (Rep. Act No. 9147) is in fulfillment of the CBD obligation to develop or maintain necessary legislation for the protection of threatened species and populations.[130] It prohibits the collection and possession of wildlife,[131] which is consistent with the CMS provision on prohibiting the taking of animals belonging to endangered migratory species.[132] The law prevents the introduction of exotic species in the country without obtaining the proper clearance and prohibits their introduction into protected areas and critical habitats.[133] These are in

---

[124] FISHERIES CODE, § 2.
[125] Rep. Act No. 6969 (1990), § 2.
[126] Rep. Act No. 7586 (1992), as amended by Rep. Act No. 11038 (2018), § 20(a).
[127] § 20(b).
[128] § 12.
[129] CBD, art. 14-1(a).
[130] Art. 8(k).
[131] Rep. Act No. 9147 (2001), §§ 7-8.
[132] CMS, art. III-5.
[133] Rep. Act No. 9147 (2001), § 13.

accordance with the CBD stipulation on preventing the introduction of, controlling, and eradicating alien species which threaten ecosystems, habitats or species, [134] and the CMS' requirement of strictly controlling the introduction of exotic species.[135] Moreover, Rep. Act No. 9147 makes it unlawful to kill and destroy wildlife species;[136] dump waste, occupy, or conduct mineral exploration and extraction in critical habitats;[137] and destroy active nests, nest trees, hosts plants, and the like.[138] This is the statute's way of complying with the CBD provision on promoting the protection of ecosystems and natural habitats, and the maintenance of viable population species in natural surroundings.[139]

It can be observed that the Philippines has specific laws that aim to protect various species and their habitats, in compliance with treaty obligations. However, there are certain areas or activities, like land reclamation, that are not sufficiently regulated. This is because these projects are often large-scale and controlled by government agencies, placing them beyond the reach of laws targeting very specific acts and locations. As a result, the activity's possible violations of statutory provisions are often overlooked, even if the impacts may be wide-ranging.

V. THE NEED FOR LEGISLATION ON LAND RECLAMATION

A survey of the sites where land reclamation was undertaken in the past, as well as those of proposed projects, shows that they are on locations considered to be conservation priority areas by the Philippine Biodiversity Conservation Priority-setting Program ("PBCPP"). [140] Manila Bay, for example, where large-scale dump and fill projects were done in the past and where much of the planned reclamation will be located,[141] has been classified as an area of very high biological importance, an area of extremely high critical priority level for terrestrial biodiversity, a very high conservation priority area for birds, and a conservation priority area for reef fishes.[142] When the area meant to be protected is the same area being deliberately altered, there must

---

[134] CBD, art. 8(h).
[135] CMS, art. III-4(c).
[136] Rep. Act No. 9147 (2001), § 27(a).
[137] § 27(c).
[138] § 27(g).
[139] CBD, art. 8(d).
[140] DENR, *supra* note 2.
[141] PRA, *supra* note 12.
[142] DENR, *supra* note 2.

indeed be something wrong. An examination of the current procedures and requirements in executing the project is therefore necessary.

A. The Philippine Reclamation Authority

The Philippine Reclamation Authority ("PRA") was created to regulate reclamation and effectively administer and implement projects on reclaimed land. It was originally known as the Public Estates Authority ("PEA"), created through Presidential Decree No. 1084 (1977). The purposes of the PEA are the following:

> 1. [R]eclaim land, including foreshore and submerged areas, by dredging, filling or other means, to acquire reclaimed land;
>
> 2. [D]evelop, improve, acquire, administer, deal in, subdivide, dispose, lease and sell any and all kinds of lands, buildings, estates, and other forms of real property, owned, managed, controlled and/or operated by the Government; and
>
> 3. [P]rovide for, operate or administer such services as may be necessary for the efficient, economical and beneficial utilization of the above properties.[143]

In 1979, Executive Order (EO) No. 525 designated the PEA as the agency "primarily responsible for integrating, directing, and coordinating all reclamation projects for and on behalf of the National Government."[144] In 2004, the PEA was transformed into the PRA while its powers and functions were limited to those relating to reclamation activities.[145]

Through various EO, changes have been made in the recommending and approving authority when it comes to reclamation projects. Based on EO No. 525 (1979), projects were approved by the President, upon recommendation of the PEA. Then EO No. 543 (2006) delegated the President's power to approve to the PRA.[146] This delegated power was transferred in 2013 to the National Economic and Development Authority ("NEDA") through EO No. 146, with the PRA retaining its power to process, evaluate and recommend proposed projects.[147] Then in February 2019, through EO No. 74, the President's delegated power to approve was brought

---

[143] Pres. Dec. No. 1084 (1977), § 4.
[144] Exec. Order No. 525 (1979), § 1.
[145] Exec. Order No. 380 (2004).
[146] Exec. Order No. 543 (2006), § 1.
[147] Exec. Order No. 146 (2013), § 1.

back to the PRA.[148] However, this time, the PRA was placed under the control and supervision of the Office of the President.[149]

B. Procedure and Requirements for the Approval of Reclamation Projects

Reclamation projects may be undertaken by the National Government or Local Government Units (LGUs). Projects by the National Government may be initiated by the PRA or National Government Agencies ("NGA") or Government-Owned or -Controlled Corporations (GOCCs) whose charter authorizes them to reclaim. These GOCCs are the Philippine Ports Authority (PPA), Laguna Lake Development Authority (LLDA), Bases Conversion and Development Authority (BCDA), Subic Bay Metropolitan Authority (SBMA), Philippine Veterans Investment Development Corporation (PHIVIDEC), Department of Public Works and Highways (DPWH), and National Power Corporation (NPC).[150] They may also be initiated by a private sector or private entity through the PRA, LGUs, GOCCs, or NGAs authorized to reclaim, or by qualified Filipino individuals.[151]

The Implementing Rules and Regulations ("IRR") of EO No. 74 (2019) lays down the procedures and requirements for the approval of land reclamation activities. The requirements for the processing of applications to reclaim include, as pre-qualification requirements:[152]

1. Letter of Intent from the Applicant;

2. Provincial / City Council Resolutions expressing no objection to the proposed reclamation project; and

3. Other legal and financial documents depending on the entity initiating the project,

---

[148] Exec. Order No. 74 (2019), § 2.
[149] *Id.*
[150] Exec. Order No. 146 (2015) Rules & Regs., § 2.
[151] *Id.*
[152] Exec. Order No. 74 (2019) Rules & Regs., § 4.1.

For the mandatory requirements,[153] the following are:

1. Feasibility Study (F/S) of the proposed project;

2. Area Clearance, a DENR-issued document declaring that the area covered is suitable for reclamation;[154]

3. Environmental Impact Assessment ("EIS") or equivalent studies and the Environmental Compliance Certificate ("ECC"), which is a document issued by the Environmental Management Bureau ("EMB") of the DENR certifying that based on the representations of the proponent, the proposed project will not cause significant negative environmental impact, and that all the requirements of the Philippine EIS have been complied with;[155]

4. Hydrodynamic modeling, simulating water currents and circulation and sediment transport to predict and evaluate the impact of reclamation on the environment;[156] and

5. Detailed engineering design[.]

The F/S, EIS, and hydrodynamic modelling are necessary only if the area to be reclaimed is five hectares or more.

Proposals, together with the pre-qualification requirements above, are submitted to the PRA, which shall evaluate and verify them.[157] The pre-qualified applicant is then required to enter into a Memorandum of Understanding ("MOU") with the PRA to detail the mandatory requirements,[158] that shall be reviewed and evaluated by the PRA, with advisory opinions from the DOF, DENR, and NEDA.[159] After that, the application is submitted to the PRA Governing Board for approval.[160] If approved, competitive bidding is then held.[161] Next is the execution of contractual arrangements between the PRA, the initiating party, and the

---

[153] § 4.2.
[154] § 3.2.
[155] Exec. Order No. 74 (2019), Rules & Regs., § 3.4-3.5.
[156] § 3.7.
[157] § 5.1.
[158] § 5.2.
[159] § 5.3.
[160] § 5.4.
[161] § 6.

winning proponent, if there is one.[162] Then pre-construction documents shall be submitted to the PRA for review and evaluation.[163] These shall be the bases for issuance of the Notice to Proceed ("NTP").[164] All approved projects are subjected to the regulatory power and monitoring functions of the PRA.[165]

In addition, if the project is initiated by the National Government, the Local Government Code ("LGC")[166] specifies the duty of NGAs to conduct consultations with local government units, non-governmental organizations, and other sectors concerned when a project may have adverse effects on ecological balance.[167] This is a mandatory requirement, together with the approval of the *sanggunian* concerned, before a project may be implemented by government authorities.[168]

C. Problems

1. Checks and Balances

Based on the laws and executive orders regarding the powers of the PRA, it can be observed that the decision to approve land reclamation projects is left almost entirely, if not entirely, to the Executive Branch. There seems to be no limitation as to the power to reclaim. Added to that is the fact that under Rep. Act No. 8975,[169] which prohibits lower courts from issuing injunctions on infrastructure projects, it is more difficult to question decisions approving land reclamation. This lessens the opportunity of the Judiciary to check on the acts of the Executive.

However, considering that the activity involves property of public dominion, and significantly large areas at that, it cannot anymore be left entirely to the decision of a government agency, or the Executive Branch, to the prejudice of the people and other organisms.

---

[162] § 7.
[163] § 8.
[164] § 8.
[165] § 9.
[166] Rep. Act No. 7160 (1991).
[167] LOCAL GOV'T CODE, § 26
[168] § 27.
[169] Rep. Act No. 8975 (2000). An act to endure the expeditious infrastructure projects by prohibiting lower courts from issuing temporary restraining orders preliminary injunctions or preliminary mandatory injunctions.

2. Procedure and Requirements

Unfortunately, at present, the requirements for the application and implementation of land reclamation projects are not enough to determine and take into account the possible harmful effects on the ecosystems dependent on the bodies of water being reclaimed. There are no specific standards and bases of approval and rejection. The lack of standard does not only give the approving authority very wide discretion, but also makes it difficult to determine whether this discretion is being abused, to the detriment of ecological balance.

The EIA, while in compliance with the CBD provision on requiring EIA of proposed projects that are likely to have significant adverse effects on biological diversity,[170] is in reality merely considered as a bureaucratic requirement[171] and not a standard that must be met, "with a view of avoiding or minimizing adverse effects."[172] Also, the issuance of the ECC is simply based on the review of the application and the representations of the proponents[173] and not on an independent study conducted by the EMB of the DENR. Moreover, the imposition of additional requirements by the IRR of EO No. 76, although a step in the right direction, may not be sufficient in estimating the damage to living organisms. For example, hydrodynamic modeling was added to evaluate the effects of reclamation on the physical environment like water currents and sediment transport, but no requirement was added to gauge the project's biological effects.

Furthermore, the LGC, under Sections 26 and 27, simply requires consultation with concerned sectors and prior approval of the *sanggunian* concerned before any project potentially harmful to the environment may be implemented. There are three problems with that. *First*, consultation is not made a prerequisite of project approval, but only of implementation. *Second*, the LGU concerned, from whom approval is sought, is bound to benefit financially from the project, possibly resulting in a conflict of interest. *Third*, those requirements, by themselves, are not sufficient to evaluate the commensurability of the project with the potential environmental damage.

---

[170] CBD, art. 14-1 (a).

[171] W.A. Ross, *Environmental Impact Assessment in the Philippines: Progress, problems, and directions for the future*, 14 ENVT'L IMPACT ASSESSMENT REV. 217-232 (1994).

[172] CBD, art. 14-1(a).

[173] Exec. Order No. 76 Rules & Regs., § 3.4.

3. Extent of Damage

Ultimately, the biggest problem about persistent reclamation projects is the extent of their damage to biodiversity. All the efforts of various government agencies and different organizations in the conservation of particular species and habitats will be all for naught should even a *single* improperly implemented large-scale reclamation project push through.

Current laws are targeted at protecting specific set of organisms, like the *Fisheries Code* for fisheries and aquatic resources, and the *Wildlife Resources Conservation and Protection Act* for wildlife species; or particular habitats like the *National Caves and Cave Resources Management and Protection Act*[174] for caves and the *National Integrated Protected Areas System* for ecologically rich and biologically important areas. These are good by themselves. However, without a law effectively regulating an activity harmful to multiple organisms and multiple habitats at the same time, then small-scale protection would be negated.

If followed strictly, current laws may be considered sufficient even when reclamation projects are concerned. A thorough reading of laws would reveal that they were enacted to prevent activities with heavily adverse effects to the environment. Experience, however, proves otherwise. Parts of past Manila Bay reclamation projects, as discussed earlier, had been done in protected areas; and future projects include a Ramsar conservation site.[175] This means that the protection currently afforded by the NIPAS and related laws is not sufficient to prevent activities from being conducted in critical areas.

VI. PROPOSED LEGISLATION, WITH STATUTORY REQUIREMENTS AND LIMITATIONS

In order to address the problems with land reclamation, it is proposed that a law that specifically addresses this be passed. Legislation could be the best way to establish rules that cannot easily be changed by a new sitting president. This is one way to provide a check on the acts of the Executive, which currently controls almost everything in relation to reclamation

---

[174] Rep. Act No. 9072 (2001).

[175] Jonathan Mayuga, *Group slams land-reclamation projects under Duterte admin,* BUSINESS MIRROR, May 15, 2018, *available at* https://businessmirror.com.ph/2018/05/15/group-slams-land-reclamation-projects-under-duterte-admin

activities. It would then make a more effective tool in protecting biodiversity, and consequently, the rights of the people.

The proposed legislation needs to set limitations on who may reclaim, areas that may be reclaimed, the purpose of reclamation, and the requisites that must be met before a project may proceed. Through this, the possible harmful effect on ecosystems will have to be determined and taken into account. This will also consider the extent of damage caused by the activity. By clearly specifying that certain areas are off-limits when it comes to reclamation projects, then the protection of important areas by the NIPAS and other laws would not become worthless. Instead of continuously disregarding existing conservation laws, this proposal intends to acknowledge and help enforce them. As a result, the conduct of reclamation activities would be more in keeping with the country's international treaty obligations.

A. Public purpose requirement commensurate with the irreversible harmful effects on biodiversity

Past reclamation projects conducted by the Philippine Reclamation Authority include the Central Business Park I-A where the SM Mall of Asia and the Metropolitan Park owned by the Metrobank Group of Companies are located; Central Business Park I – B&C, where the Philippine Amusement and Gaming Corporation's (PAGCOR) Entertainment City is located; Central Business Park II, which contains a mall and provincial transport terminal; and Asia World, a residential complex owned by the Tan Yu family.[176] As can be observed, almost all of the reclaimed areas were used for private businesses that are not indispensable nor required to be put in a particular location. When this is considered together with the fact that harmful effects on biodiversity are irreversible, doubts are then cast on the Philippines' commitment to fulfill its CBD obligations of integrating considerations of conservation of biological resources into national-decision making,[177] and of conserving biological diversity for the benefit of present and future generations.[178]

This Note proposes that since the effects of reclamation are the complete loss of habitat and change in organisms' environmental conditions—effects that are irreversible—then the activity may only be undertaken if it is for a public purpose and there is no other viable alternative.

---

[176] PRA, *Reclamation*, PRA WEBSITE, available *at* http://www.pea.gov.ph/programs-and-projects/reclamation

[177] CBD, art. 10(a).

[178] CBD, pmbl.

The Constitution declares that sovereignty resides in the people and all government authority emanates from them.[179] This principle should be read in conjunction with provisions on State ownership of natural resources.[180] It means that the people are the real owners of natural resources,[181] not the government. Public officials, who are exercising powers delegated by the sovereign people,[182] should then make sure that their decisions would be for the benefit of Filipinos.

The deprivation of natural resources would only be justified if the people themselves would benefit in the end. An activity which would result in the loss of a significant area of foreshore or submerged land, threatening the richness of species found therein, should only be acceptable if this would meet a compelling need of the people. There has to be a higher standard which must be satisfied before a project is approved. Such standard is the public need for the project, which may be best fulfilled through reclamation.

Under this standard, businesses like malls and entertainment centers would be disqualified. This is not to say that such businesses will not benefit the people. The Constitution itself recognizes the indispensable role of the private sector,[183] which is why the State is mandated to encourage private enterprises to broaden the base of their ownership.[184] However, when the adverse effects on biodiversity is considered, effects that are not only harmful to other species but also to the livelihood, health, and survival of humans, it becomes apparent that businesses must take a back seat. Added to that is the fact that it is so much harder to salvage endangered species and restore or replace degrading habitats than to search for alternative business locations. Excluding businesses from the allowed purposes of reclamation would not exactly be harmful to private enterprises. They are not being prevented from conducting their business, for they may still do so in other areas or through other means.

---

[179] CONST. art. II, § 1.

[180] Merlin M. Magallona, *The Inherent Right of the People to Natural Resources in National Law and International Law*, *in* THE PHILIPPINE CONSTITUTION AND INTERNATIONAL LAW 98-107 (2013).

[181] *Id.*

[182] HECTOR S. DE LEON & HECTOR M. DE LEON, JR., THE LAW ON PUBLIC OFFICERS AND ELECTION LAW 2 (2014).

[183] CONST. art. II, §20.

[184] Art XII, §1.

1. The Hong Kong Model

The Philippines may consider as an example Hong Kong's *Protection of the Harbour Ordinance*.[185] This Ordinance aims to protect and preserve Hong Kong's harbour by establishing a *presumption against reclamation*. This is based on the consideration that the harbor is a special public asset and a natural heritage of the people of Hong Kong.[186] This presumption has been interpreted by Hong Kong's Court of Final Appeal ("CFA") in the case *Town Planning Board v. Society for the Protection of the Harbour Limited*.[187]

According to the Hong Kong CFA, the legislative intent, as stated in the law itself, is to protect and preserve the harbour.[188] This is in recognition of the harbour as a "special public asset and natural heritage" of the Hong Kong people,[189] being a central part of their identity.[190] Through the Ordinance, the legislature has then accorded the harbour its "unique legal status."[191] This status, and the need to protect and preserve it, led to the statutory presumption against reclamation, an activity which would result in the harbour's permanent destruction and irreversible loss.[192]

The CFA discussed that, contrary to the Petitioner's interpretation, the presumption is not merely a compulsory material consideration of the decision-maker, who in the end would be the one to determine whether a substantial reason exists in favor of reclamation.[193] Considering the "strong and vigorous statutory principle of protection and preservation," such interpretation must be rejected.[194] The court added:

> On this approach [the Petitioner's], the presumption against reclamation is relegated to no more than a planning consideration required by statute to be taken into account. And the strong public need to prevent permanent destruction and irreversible loss of the harbour is demoted to the same level as any other town planning need. Such an approach is clearly inconsistent with the statutory

---

185 Cap. 531 (Hong Kong), June 30, 1997.
186 § 3(1), as amended.
187 FACV No. 14/2003 (Hong Kong), Jan. 9, 2004.
188 *Id.* at ¶ 30.
189 *Id.* at ¶ 31.
190 *Id.* at ¶ 33.
191 *Id.* at ¶ 35.
192 *Id.* at ¶ 37.
193 *Id.* at ¶ 23.
194 *Id.* at ¶ 43.

> principle of protection and preservation and the legislative intent behind it.[195]

The statutory presumption against reclamation, as explained by the CFA, is not an imposition of an absolute bar against any reclamation.[196] Being a presumption, it may be rebutted. In determining what is sufficient to rebut the presumption, the reclamation must pass the "*overriding public need test*":[197]

> The statute envisages that irreversible loss to the extent of the reclamation would only be justified where there is a much stronger public need to override the statutory principle of protection and preservation.[198]

The court went on to explain the terms as follows:

1. *Public needs* – community needs, including economic, environmental and social needs;[199]

2. *Overriding need* – compelling and present need;[200] goes beyond something "nice to have," desirable, preferable or beneficial;[201]

3. *Compelling* – has the requisite force to prevail over the strong public need for protection and preservation;

4. *Present* – it would arise within a definite and reasonable time frame.

In applying the *overriding public need test*, the decision-making body must consider "cogent and convincing materials" to enable it to decide.[202] Furthermore, the CFA said that the existence of a *reasonable alternative* to reclamation negates the overriding need for it.[203]

---

[195] *Id.*
[196] *Id.* at ¶ 37.
[197] *Id.* at ¶ 44.
[198] *Id.*
[199] *Id.* at ¶ 45.
[200] *Id.* at ¶ 46.
[201] *Id.* at ¶ 47.
[202] *Id.* at ¶ 51.
[203] *Id.* at ¶ 48.

2. As Applied to the Philippines

The proposed legislation may make an example out of Hong Kong by establishing a presumption against reclamation. Having the presumption is more consistent with the goal of protection and preservation compared to the current setup where reclamation is allowed for any purpose, and even in protected areas. Similar to the interpretation of the *Protection of the Harbour Ordinance*, the Philippines may also specify that only an *overriding public need* may be able to rebut the presumption against reclamation. This is in consideration of the irreversible damage brought by the activity on important biological areas.

The reason for protection, however, would be different. While Hong Kong wants to preserve its harbours because it is a central part of its identity, the Philippines must preserve its shores because of their importance in biodiversity, which in turn is necessary in maintaining the health of the people as well as their source of food and other natural resources. If Hong Kong can protect its harbours because of their unique status in history, then there is even more reason for the Philippines to protect its shores considering that the Filipinos are not the only ones that benefit from the preservation of biodiversity. Being a megadiverse country, the Philippines contributes to two-thirds of the earth's biodiversity.[204] This means that the harm done on the country's biodiversity affects the entire planet. This makes the protection and preservation of shores and the organisms they support not only a need, but an obligation to the world.

Furthermore, in approving reclamation projects, it is important that there is *no other reasonable alternative* to reclamation and to reclaiming land in a particular area in order for it to satisfy the overriding public need requirement. This would make sure that the activity is undertaken only if absolutely necessary. This would also encourage creativity in maximizing the country's land area and resources and in promoting positive development in underdeveloped regions.

Given the number of reclamation projects to be undertaken, it is apparent that the government, at present, is highly dependent on reclamation without making an effort on improving existing land areas. The problem is that this cannot be done forever. It would be absurd to pursue a program that cannot be relied on in the long run. Instead of focusing on projects that are not only temporary, but also harmful to the environment, the focus can be shifted to developing other existing areas in the provinces. Having the option

---

[204] *See supra* note 3.

to reclaim so readily available prevents the government and businesses from considering other means of achieving the same goal. The result is the failure to consider reclamation as not being the best option.

A study conducted on the Cordova Reclamation Project ("CRP") in Cebu[205] found that the cost of the reclamation project, which included environmental costs due to losses of on-site fisheries, reef gleaning, and recreational benefits, as well as the environmental damage to be caused, "yield[ed] negative net present values, even for the most optimistic projections of benefit flows"[206] when compared with the projected economic benefits. This shows that reclamation not only damages the environment, but also has significant economic costs that may be inimical even to the project's original goal of making profit. It becomes apparent then that there is a need to obligate initiating parties to a project or business to examine as many possible options. This may be achieved by limiting the purpose of reclamation to a public one, imposing an overriding need standard, and requiring proof of the absence of reasonable alternatives.

B. Limiting the area that may be reclaimed

Past reclamation projects, including the 200-hectare Central Business Park I – A, 210-hectare Central Business Park I – B&C, 43-hectare Central Business Park II, and 173-hectare Asia World,[207] all involved reclamation of areas formerly part of Manila Bay, and within either Pasay or Parañaque City.[208] Planned projects include the 635-hectare Las Piñas – Parañaque Coastal Bay Project, the 400-hectare Mactan North Reclamation and Development Project in Cebu, a 100-hectare project in Bacolod City, Negros Occidental, and a 50-hectare tourism estate in Coron, Palawan.[209]

It is noticeable that almost all of the projects enumerated above involve hundreds of hectares. This means that hundreds of hectares of natural habitats will have to be sacrificed for a project. This runs counter to the goal of preserving biodiversity by avoiding or minimizing adverse impacts.[210] It is suggested that the proposed legislation set a limit on the area that may be

---

[205] Lourdes Montenegro, Annie Diola & Elizabeth Remedio, *The Environmental Costs of Coastal Reclamation in Metro Cebu, Philippines*, ECONOMY AND ENVIRONMENT PROGRAM FOR SOUTHEAST ASIA RESEARCH REPORTS, No. 2005-RR5 (2005).

[206] *Id.* at 1.

[207] PRA, *supra* note 12.

[208] *Id.*

[209] *Id.*

[210] CBD, art. 10(a).

reclaimed. The limit may depend on the purpose of reclamation, but not exceed a specified area.

Regarding this limitation, the Philippines may again consider the example of Hong Kong, which specifies in the Technical Circular of the *Protection of the Harbour Ordinance* that the proposed reclamation extent must be *minimum*. Paragraph 8.1.14 of the Technical Circular states that:

> If it can be established that there is no reasonable alternative to reclamation in meeting the overriding public need, the next step is to ensure that reclamation must be *restricted to only the amount strictly necessary* to meet the overriding public need.[211]

In order to make this effective, it is further proposed that the maximum area be based on the site and not on a particular project. This means that regardless of the number of reclamation projects to be undertaken on a certain shore, the total area should still not exceed the maximum limit. This would prevent the circumvention of the law by creating multiple small-area projects. This would also help protect critical areas, like Manila Bay, from being constantly subjected to dredging and filling.

C. Limiting and specifying the exclusive agencies that are authorized to undertake reclamation projects

In *Chavez v. National Housing Authority*,[212] the Supreme Court upheld the authority of the National Housing Authority ("NHA") to reclaim land, despite not being expressly granted by its charter. A lengthy discussion was dedicated to explaining how the power is *implied*, being "vital or incidental to effectively, logically, and successfully implement an urban land reform and housing program."[213] However in reality, reclamation is not essential for housing programs that may successfully be carried out in a variety of places without needing lands along shores. The Court's decision in this case is a dangerous one, which could open the floodgates to other NGAs or GOCCs claiming to have authority to reclaim, implicit to its functions.

The grant of an implied authority to reclaim is contrary to the goal of minimizing the conduct of the activity. Together with specifying limitations

---

[211] Housing Planning, and Lands Bureau (Hong Kong) Technical Circular No. 1/04; Environment, Transport and Works Bureau Technical Circular No. 1/04, at ¶ 8.1.14, Aug. 19, 2004. (Emphasis supplied.)

[212] Chavez v NHA, G.R. No. 164527, 530 SCRA 235, Aug. 15, 2007.

[213] *Id.*

on when reclamation may be done and the extent that it may be carried out, it is also essential to limit the bodies which may initiate the conduct of the project. EO No. 146 lists the agencies mandated to reclaim but used the phrase "such as but not limited to,"[214] indicating that the list is not exclusive. EO No. 74 and its IRR, which superseded EO No. 146, did not specify any particular agency. The IRR instead used the term "NGAs and GOCCs mandated under existing laws to reclaim."[215]

This Note proposes to make the list exclusive; strip some agencies of the authority to reclaim if the activity is not indispensable in the performance of their functions, which may be achieved through other reasonable means; and prohibit private entities and individuals, as a general rule, from initiating a project, unless it would be an answer to a public need.

Limiting the agencies authorized to reclaim is consistent with the first proposed requirement of the project having a public purpose, i.e. the satisfaction of an overriding public need. It is suggested that the proposed legislation make an initial determination of which agencies may carry out its purpose without having to rely on reclamation, which agencies are dedicated purely to businesses, and which agencies may need to reclaim land to serve the people. Through this, there would be no need to determine whether the power is implied in the conduct of an agency's functions, thereby avoiding the possibility of the activity being abused.

D. Employing more participatory approaches in stakeholder consultation

Consultation and Public Participation ("CPP") has been considered as one of the methods of Environmental Assessment ("EA") since the 1970s.[216] It is employed because of the recognition that the public has a role in decision-making and that projects are better implemented when there is public involvement.[217] In the Philippines, the LGC includes provisions on consultation and prior approval when an NGA or GOCC would be implementing a project in a LGU which may have an adverse effect on ecological balance. Sections 2(c), 26, and 27 of the LGC state:

---

[214] Exec. Order No. 146 (2013), §1(c).

[215] Exec. Order No. 74 (2019) Rules & Regs., § 2.3.

[216] Ron Bisset, *Methods of Consultation and Public Participation*, *in* ENVIRONMENTAL ASSESSMENT IN DEVELOPING AND TRANSITIONAL COUNTRIES 149-160 (2000).

[217] *Id.*

> Section 2. *Declaration of Policy.*
>
> * * *
>
> (c) It is likewise the policy of the State to require all national agencies and offices to *conduct periodic consultations* with appropriate local government units, nongovernmental and people's organizations, and other concerned sectors of the community before any project or program is implemented in their respective jurisdictions.
>
> Section 26. *Duty of National Government Agencies in the Maintenance of Ecological Balance.*—It shall be the duty of every national agency or government-owned or controlled corporation authorizing or involved in the planning and implementation of any project or program that may cause pollution, climatic change, depletion of non-renewable resources, loss of crop land, rangeland, or forest cover, and extinction of animal or plant species, *to consult with the local government units, nongovernmental organizations, and other sectors concerned and explain the goals and objectives of the project or program, its impact upon the people and the community in terms of environmental or ecological balance, and the measures that will be undertaken to prevent or minimize the adverse effects thereof.*
>
> Section 27. *Prior Consultations Required.*—No project or program shall be implemented by government authorities unless the consultations mentioned in Sections 2 (c) and 26 hereof are complied with, and *prior approval of the sanggunian concerned is obtained*: Provided, That occupants in areas where such projects are to be implemented shall not be evicted unless appropriate relocation sites have been provided, in accordance with the provisions of the Constitution

These two requisites of prior consultation and prior approval, as discussed by the Supreme Court in *Province of Rizal v. Executive Secretary*,[218] are compulsory, such that the absence of either makes the project illegal.

It has to be noted that based on the provisions, sectors concerned are *consulted* and *informed* of the details of the project, its impacts, and the measures that will be undertaken to minimize adverse effects; while from the *sanggunian* concerned, *prior approval* is required. The problem with the first requisite is that based on the provision, it appears to be more like *information dissemination*, where there is a one-way flow of information[219] than actual consultation.

---

[218] G.R. No. 129546, 530 SCRA 235, Dec. 13, 2005.

[219] Bisset, *supra* note 216.

However, even if there is actual *consultation*, where the stakeholders are given the opportunity to comment on the project,[220] their inputs are not required to be taken into account. [221] Furthermore, consultation is made only a prerequisite of implementation, and not of project approval. This implies that the public has little say in case the project itself would not be beneficial to them or would be adverse to their interests.

It is proposed that the involvement of stakeholders be more participatory than that required by the LGC. Although consultation and prior approval, by themselves, do not determine the appropriateness of a project vis-à-vis its effects on the environment, they may still serve aid in determining public need, its urgency, the presence of alternatives, and other possible effects based on the experiences of the people.

It is also recommended that consultation be made a prerequisite to project approval. This would ensure that the initiating party actually obtained inputs from the stakeholders, and in the process, encourage and help develop other reasonable alternatives. In having a more participatory approach to consultation, a more holistic view of the project would be obtained, which would be beneficial in assessing the suitability of reclamation. The exploration of different alternatives would also be facilitated. This is important because it opens the possibility of not employing reclamation at all, something which may be more difficult to achieve if the stakeholders are informed only after the project has been approved and is about to be implemented.

E. Prohibiting reclamation of areas within reservation sites or wetlands of international importance

Wetlands of international importance, also known as Ramsar Sites, are areas with bodies of water[222] which were selected on account of their international significance in terms of ecology, botany, zoology, limnology, or hydrology.[223] The conservation of these areas is governed by the Ramsar Convention, to which the Philippines is a party. Included in the obligations of contracting parties are the formulation and implementation of plans that promote the conservation of Ramsar Sites,[224] establish nature reserves on

---

[220] *Id.*

[221] *Id.*

[222] Ramsar Convention Secretariat, *supra* note 104.

[223] Ramsar Convention, art. 2(2).

[224] Art. 3(1).

wetlands,[225] and endeavor to increase waterfowl populations on the sites.[226] Parties are also required to compensate for any loss of wetland resources and create additional nature reserves for waterfowls in cases where urgent national interest deletes or restricts the boundaries of a Ramsar Site.[227]

The Philippines, as part of a major migratory bird route,[228] currently has seven sites included in the Ramsar List.[229] One of these is the Las Piñas-Parañaque Critical Habitat and Ecotourism Area ("LPPCHEA"),[230] which hosts more than 2,000 waterbirds with seven threatened species.[231] This area is included in the proposed New Manila Reclamation Project,[232] thereby violating the country's Ramsar obligations to conserve the site. Furthermore, such inclusion in the reclamation project does not provide for a manner of compensating for the loss, besides the threat not being caused by urgent national interest as required by the Convention.

This Note proposes that further problems on the conservation of species, especially on critical areas and Ramsar Sites, would be prevented if reclamation activity would be prohibited in said areas. These sites were scientifically determined to be significant to a wide range of organisms, particularly the vulnerable, endangered, and critically endangered species. This means that threats, or worse, the loss of these areas can bring considerable danger to ecological balance and biological diversity. Allowing for their destruction or degradation could lead to ecological cascades or secondary extinctions of other organisms, which may extend to those of other areas of the world.

Thus, the best way to save these areas would be to prohibit highly destructive activities, like reclamation. This would also protect them from further threats brought by increased human presence, should reclamation push through. This prohibition is not only consistent with the proposed goal of minimizing the conduct of reclamation activities unless for a compelling

---

[225] Art. 4(1).

[226] Art. 4(4).

[227] Art. 4(2).

[228] East Asia-Australasia Flyway (EAAF). Jensen, *supra* note 80.

[229] The Ramsar Convention Secretariat, *Philippines,* RAMSAR, *available at* https://www.ramsar.org/wetland/philippines

[230] The Ramsar Convention Secretariat, *Philippines names urban coastal wetland*, RAMSAR, Mar. 15, 2013, *available at* https://www.ramsar.org/news/philippines-names-urban-coastal-wetland

[231] Jensen, *supra* note 80.

[232] CITY GOV'T OF MANILA, NEW MANILA RECLAMATION PROJECT: EIS SUMMARY FOR THE PUBLIC (2018).

public purpose, but also a way to force compliance with the Philippines' international treaty obligations.

VII. SUMMARY, CONCLUSION AND RECOMMENDATION

Biodiversity, or the variability among living organisms, is essential in sustaining life. It is through the interactions of various species, populations, and their environments that balance is maintained, making the Earth habitable. It is important not only for all other organisms but also for humans, who depend on this diversity for food and medicine, as well as its social, cultural, economic, and recreational values, among others. Protecting biodiversity, then, is imperative, especially at present where human activities are threatening to cause mass extinction of species.

Fortunately, the international community has already recognized the importance of conserving biodiversity. A number of international treaties and conventions regarding it are currently in force, such as the Convention on Biological Diversity, the Ramsar Convention, and the Convention on Migratory Species of Wild Animals.

The Philippines, apart from recognizing in its Constitution the people's right to a balanced and healthful ecology, is also a party to the treaties mentioned above. In compliance with these agreements, the country has passed a number of laws for the protection of biodiversity. Some of these are the Expanded National Integrated Protected Areas System Act, the Wildlife Resources Conservation and Protection Act, and the Philippine Fisheries Code.

The problem, however, is that these species of habitat-specific laws have proven to be ineffective in regulating large-scale activities like land reclamation, or the conversion of foreshore land, submerged areas, or bodies of water into land by filling. This is alarming considering that reclamation involves the destruction of hundreds of hectares of habitats, sometimes even in critical areas like Manila Bay. What makes it even more disturbing is the fact that the Philippines is a megadiversity, contributing to two-thirds of the Earth's biodiversity. This means that the disruption of ecological balance in the country has far-reaching global effects.

An examination of the laws and executive issuances related to land reclamation, as well as the completed projects themselves, reveals that much may still be improved: *first*, the absence of checks and balances; *second*, the

insufficiency of procedures and requirements in screening proposals; and *third*, the lack of consideration of the extent of environmental damage.

In order to address the problems, it is proposed that a specific law on land reclamation be created. This proposed law would set standards and limitations on how the activity should be conducted. Through legislation, the standards and limitations would be more or less permanent, not easily subject to change, and not entirely under the control of the Executive branch. This makes it a more effective tool in protecting biodiversity, and consequently, the rights of the people.

The recommended requirements and limitations are the following:

1. A public purpose requirement commensurate with the irreversible harmful effects on biodiversity;

2. A limitation on the area that may be reclaimed;

3. A limitation and specification of the agencies that are exclusively authorized to undertake reclamation projects;

4. The employment of more participatory approaches in stakeholder consultation; and

5. The prohibition of the reclamation of areas within reservation sites or wetlands of international importance.

Through the proposed requirements and limitations, the possible harmful effects on the environment and the extent of damage on biodiversity would be determined and considered in planning a project. This would supplement the Philippines' existing conservation and protection laws, thereby enhancing the country's compliance with its international treaty obligations.

To further develop the idea of this research, additional standards may be examined. It is also recommended that this study be extended to the effects on biodiversity of the quarrying that accompanies reclamation, and the possible legal remedies, if necessary.

- o0o -