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Analyzing Climate Change and Disaster Management Policies in the Development of the Ecotourism Industry in the Philippines

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Abstract
The Philippines is unique in terms of its geographic location. The country lies on the Pacific plate, typhoon belt, and the ring of fire. This implies high vulnerability of the country to natural disasters, thus earning its place as one of the most natural disaster vulnerable countries in the world. Apart from the frequent natural disasters in the country, the geographical location positions the Philippines as one of the most mega diverse countries in the world harboring a vast diversity of flora and fauna in its 7,107 islands. Being ecologically and mega diverse, the country is inevitably driving the development of its tourism industry showcasing its natural beauty, despite the frequent natural disasters. This study focuses on the Philippine policies in disaster risk reduction and management (DRRM), climate change, and tourism. Specifically, the study discusses how a niche of tourism, the ecological tourism, commonly called ecotourism is factored into the disaster management strategies and policies of the country and vice versa during the period from 1990 to 2015.

As early as the 1970s the Philippine government has been conscious of its vulnerability to multiple disasters. Policies have been developed since then, but it was only from the 1990s that more emphasis was placed on policy development in disaster management. This development is influenced by the increasing interest of the global community in global warming and climate change that is causing the increased intensity and frequency of disasters worldwide. Ecotourism on the other hand has been cited in a policy of the Department of Environment and Natural Resources (DENR) as early as 1992 with regards to the management of protected areas. Nevertheless, the Philippine government only published a formal definition of the term ecotourism in 1999 that set the precedent for ecotourism policies in the country.

Despite the increasing popularity of tourism in the Philippines and the increased intensity and frequency of natural disasters, there is limited reference to and involvement of tourism in disaster management and climate change policies and vice versa. One of the main reasons is the parallel development of disaster management and climate change policies and tourism policies. Nonetheless, for future policies relating to tourism, especially ecotourism in highly disaster-vulnerable areas, it is recommended to include a disaster management component. Furthermore, disaster management policies should pay attention to the value of the ecosystem as a tool for DRRM, particularly the role that ecotourism could play in such policies.

Keywords: Climate Change, Disaster Risk Reduction and Management, Policy Review, Ecotourism, Philippines

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I. Introduction

There is an increasing number of global threats that can potentially or deliberately cause significant economic and social paralysis throughout the world. One such threat is climate change, or the increase in the Earth’s geographic and oceanic temperature. The impact of this threat has been felt more in recent years as changes in weather patterns, rising sea levels, and extreme weather are beginning to become more visible. One of the risks influenced by climate change is the increasing frequency and effect of natural hazards that cause economic losses and even loss of lives. According to the United Nations Office for Disaster Risk Reduction (UNISDR), the economic and human impacts of natural disasters from 2005 to 2014 have accounted for the deaths of 700,000 people, and $1.4 trillion damages in total. These damages disrupt sustainable development and their impacts are borne by the most vulnerable sectors of society affecting livelihoods and compounding poverty.

With various organizations and governments recognizing the increasing threats from natural hazards, interest in disaster risk reduction and management (DRRM) initiatives has increased. This increased interest among various stakeholders has resulted in the emergence of Disaster Risk Management (DRM) as a solution-oriented academic concept as well as a public policy orientation. DRM is defined by UNISDR as “the systematic process of using administrative directives, organizations, and operational skill and capabilities to implement strategies, policies and improved coping capacities in order to lessen the adverse impacts of hazards and the possibility of disaster” (UNISDR, 2009). DRM as per the United Nations Development Programme (UNDP) aims to “avoid, lessen or transfer the adverse effects of hazards through activities and measures for prevention, mitigation and preparedness” (UNDP, 2015).

Among the many initiatives for DRM is the emergence of the concept of Ecosystems Disaster Risk Reduction (Eco-DRR) wherein natural ecosystems are used as buffers to natural disasters. By premise, healthy and well-managed ecosystems have been recognized to maximize the delivery of benefits from the ecosystem services. As per the Millennium Ecosystem Assessment in 2006, ecosystem services are services derived from the ecosystems, which includes to DRR (Renaud et al. 2013). The ecosystem service in general is delineated into four categories: provision, support, regulation, and cultural services. Provision is the service that describes material and even energy output from the ecosystem (food, crops, raw materials, water, medicinal, and ornamental resources). Supporting services are services/processes that enable the ecosystem to provide services. The supporting services include nutrient recycling, primary production, and soil formation. Regulating services pertain to services/processes such as carbon sequestration, climate regulation, waste decomposition, waste detoxification, water purification, air purification, pest control, and disease control. The last service is cultural service that is divided into several services including recreation, mental and physical health, tourism, aesthetic appreciation and inspiration for culture, art and design, and spiritual experience and sense of place.

Ecosystems can buffer climate and reduce the risks and impacts of natural disasters as part of their regulating services. Furthermore, ecosystems through their regulating services can reduce the risks and impacts of storms, droughts, and sea-level rise that are becoming more severe and frequent due to climate change. Ecosystems managed wisely reduce disaster risks, thus preventing, mitigating, and/or regulating
hazards. Ecosystems acting as natural buffers reduce people’s exposure to hazards, reducing vulnerability, and further supporting livelihoods and providing basic needs (PEDRR, 2013).

A more formal terminology for the use of ecosystems for DRR is Eco-DRR. In the works of Estrella and Saalismaa it is defined as “the sustainable management, conservation and restoration of ecosystems to reduce disaster risk, with the aim of achieving sustainable and resilient development” (Estrella and Saalismaa, 2013). Eco-DRR incorporates natural hazard risk management and climate change adaptation and shares common features with Ecosystem-based Adaptation (EbA) (UNEP, 2015).

With regard to ecosystem services, cultural services – specifically tourism services – are some of the most common yet most controversial services. According to the United Nations Environment Programme (UNEP), tourism in general has three main impact areas which are the depletion of natural resources, physical impacts of tourism development, and physical impacts from tourist activities. Over the past few decades, tourism has continued to expand and diversify around the world. According to the United Nations World Tourism Organization (UNWTO), tourism can be defined as travel for the purposes of leisure, business, or recreation. Although tourism is highly diversified, it can be characterized into categories and divided into niches such as: adventure and extreme (adventure tourism, extreme tourism, and space tourism), culture and arts (cultural tourism, heritage tourism, and music tourism), medical and dental (dental tourism, medical tourism, and wellness tourism), natural (ecotourism), and rural (agri-tourism, jungle tourism, and rural tourism) tourism.

In the 2013 global economic impact analysis of travel and tourism, the travel and tourism contribution to Gross Domestic Product (GDP) outweighed that of automotive and manufacturing in every region in the world. Overall, travel and tourism contribution equaled 9.5% of the global GDP generating over 266 million jobs, US$754 billion in investments, and US$1.3 trillion in exports. Creating significant contributions to the global economy, tourism is continuously gaining popularity. In recent studies, tourism has been linked to solutions for global problems such as poverty, environmental sustainability, health, and global partnerships.

One niche of tourism is ecological tourism, commonly called Ecotourism. It has been described in the work of Ceballos-Lascurain as the fastest growing tourism segment globally, with an annual growth of 20% to 25% (Ceballos-Lascurain, 2012). Ecotourism defined by the UNWTO is “a form of tourism in which the main motivation of tourists is the observation and appreciation of nature as well as the traditional cultures prevailing in natural areas” (UNWTO, 2002). Furthermore, UNWTO states that ecotourism should have educational features and features that minimize the negative impacts of activities on the natural and socio-cultural environment. UNWTO also notes that ecotourism should be generally organized by specialized tour operators for small groups and that ecotourism activities should support the maintenance and conservation of natural areas used as ecotourism attractions through the generation of economic benefits to host communities, organizations, and authorities with ecological conservation purposes.

In the International Handbook on Ecotourism, it is stated that the benefits of ecotourism fall into three main categories: the environment, local communities, and participating tourists (Ballantyne and Packer, 2013). In the handbook, it states that ecotourism provides environmental protection through the provision of economic incentives for conservation and the generation of funds required to implement conservation plans.
Furthermore, the handbook states that ecotourism facilitates the protection of traditional and indigenous cultures in and around the ecotourism destination and develops the visitors’ cultural and environmental awareness, appreciation, and respect. As ecotourism strives to provide employment and income for local communities, thus, in theory, it helps to alleviate poverty and aids in sustaining the well-being of local people. Ecotourism, however, does not only promise benefits. Poorly managed ecosystems can lead to increased exposure to natural hazards leading to landslides or flash floods. However, the sustainable management of the ecosystems will help improve the economic, social, and environmental conditions.

Returning to DRM, ecotourism is one of the initiatives implemented in long-term recovery efforts, long-term development plans, and reconstruction, as it can play a crucial role in human security and poverty reduction. Moreover, ecotourism if sustainably managed can provide other ecosystem services such as “regulation and provision services” enabling ecotourism to be a tool for disaster mitigation similar to Eco-DRR, but with the additional feature of job and profit generation ideal for the local economy and community in and around the ecotourism site.

Given the details on the possibilities and the use of the ecosystems, particularly ecotourism in DRRM, it is worth factoring in the involvement of the different climate change and DRRM policies in crafting the tourism policies, specifically ecotourism. Furthermore, this can be studied within the Philippine context.

The Philippines is one of the most disaster-vulnerable countries in the world as well as one of the most biologically diverse making it a good subject to explore. In being so ecologically diverse, the country is inevitably driving development of the tourism industry showcasing its natural beauty, despite disaster vulnerabilities.

This study aims to identify the different policies created by the government that relate to climate change, disaster, and tourism, specifically ecotourism, and identify whether the vulnerability of the country to disasters has been factored into the crafting of ecotourism policies. This study specifically looks at the different policies of the aforementioned themes mandated between 1990 to 2015. Furthermore, it mainly utilizes information from primary data that are the policies and laws from the national government. Desk review and frequency text analysis are conducted to identify the references to disaster management in various tourism policies and laws.

II. Climate Change and Disaster Risk Reduction and Management Policies in the Philippines

The development of DRRM and climate change policies emerged as early as 1970 when the Philippines was hit by typhoon Joan. In that year, the National Disaster Control (NDC) was established. NDC was mandated to track the aftermath of disasters. However, in 1972 its functions were transferred to the Office of Civil Defense (OCD) and NDC was abolished. In the same year, Presidential Decree No. 1566 was mandated. The decree aimed at strengthening the Philippine Disaster Control and it also mandated the creation of the NDC Council that served as a focal organization for DRRM during that period. NDCC was headed by the Secretary of National Defense. Together with the creation of the NDCC, the regional, provincial, and local coordinating councils were also established. However, after the policy in 1978, the evolution of DRRM and Climate Change policies became stagnant, only regaining attention during the 1990s.
In this section, the different rules, regulations, and policies in disaster management and climate change between 1990 to 2015 will be discussed.

Long after 1978 came the development and mandate of the Republic Act (R.A.) No. 7160 in 1991 or the Local Government Code (LGC) of 1991. The LGC enabled the Local Government Units (LGUs) to access 5% of their estimated revenue from regular sources for the occurrence of disasters and calamities provided that the office of the president/ the president declared the LGU to be in a state of calamity.

In 1992, the earth Summit or the United Nations Conference on Environment and Development (UNCED) was held in Rio de Janeiro where Agenda 21 was created. The Agenda is a non-binding action plan of the United Nations towards sustainable development. Agenda 21 recognizes that sustainable development is primarily the responsibility of governments that requires the creation of national strategies, plans, and policies. In the Philippines, as a response to Agenda 21 the Philippine Agenda 21 (PA21) was created. This consists of the principles of unity, the action agenda, and the implementation strategies towards a sustainable development. The PA21 has a vision of providing the Filipino people with a better quality of life through the development of a just, moral, creative, spiritual, economically vibrant, caring, and diverse yet cohesive society. The action plan focuses on strategies responding to social issues such as poverty reduction, social equity, empowerment and governance, peace and solidarity, and ecological integrity.

In 1996, R.A. No. 7160 or the LGC of 1991 was amended to enable LGUs to better utilize government funds. The LGC of 1991 was enacted into law via R.A. No. 8185 and was amended such that 5% of the estimated revenue from regular sources would be set aside as annual lump sum appropriations for relief, rehabilitation, reconstruction, and other works or services in connection with disaster and calamities that may occur during the budget year. The funds, however, are limited to the use of the LGU within its municipality/city affected by a disaster or calamity as determined and declared by the LGU. The amendment also includes a restriction on the utilization of funds in fire related disasters and calamities for relief operations.

In 1999, R.A. No. 8749 or the Philippine Clean Air Act was mandated. The law includes the creation of the Air Quality Improvement Framework that monitors and set standards for greenhouse gas emissions which increased the global temperature. The policy was created and implemented by the DENR together with the LGUs, NGOs, POs, and academia. The Integrated Air Quality Improvement framework aims to monitor and set standards for greenhouse gas emissions that increase the global temperature.

In early 2000, there were several policies and programs that were developed in the Philippines relating to DRRM and Climate Change. In 2004, Executive Order No. 320, S.2004 was mandated. It is an adaptation of the United Nations Framework Convention on Climate Change (UNFCCC) Clean Development Mechanism whereby projects are implemented to prevent or absorb GHG emissions. Executive Order (E.O.) No. 320 designates the Department of Environment and Natural Resources (DENR) as the national authority for the Clean Development Mechanism.

In 2005, the NDC council created a Four Point Action Plan focusing on the prevention and mitigation of disasters. The first action plan is the upgrading of the forecasting capability of cautionary agencies, particularly the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)
and the Philippine Institute of Volcanology and Seismology (PHIVOLCS). The second action plan is intensifying public information and education campaigns on disaster preparedness. The third action plan is enhancing capacity building of local chief executives and disaster coordinating councils. The fourth and final action plan is strengthening mechanisms for government and private sector partnerships.

The Philippines signed the UNFCCC on June 12, 1992 and was ratified on August 2, 1994. The country also signed the Kyoto Protocol on April 15, 1998 and was ratified on November 22, 2003. Being ratified to both, the country has realized the urgency in addressing issues on climate change, including the mitigation of impact and adaptations to effects leading to the creation of administrative order no. 171 in 2007. The administrative order creates the Presidential Task Force on Climate Change (PTFCC) that is comprised of the secretaries of DENR, Department of Energy (DOE), Department of Science and Technology (DOST), Department of Agriculture (DA), Department of Interior and Local Government (DILG), and two representatives from the private sector/ civil society.

In 2009, R.A. No. 9729 or the Climate Change Act of 2009 was mandated. This policy establishes the creation of the Climate Change Commission, a national government agency attached to the office of the president. The commission is the sole policy-making body of the government that is tasked to coordinate, monitor, and evaluate the programs and action plans of the government relating to climate change. The Philippine president serves as the chairperson of the commission, and three commissioners are appointed by the president, one of which will serve as a vice-chairperson. The Climate Change commission has an advisory board that is composed of 23 different secretaries from various local government agencies.

In 2009, the Strategic Action Plan for Disaster Risk Reduction (SNAP) 2009–2019 was developed. The SNAP pursues the strategic goals of the Hyogo Framework for Action (HFA) that is the first plan to explain and describe the work details required from all the different sectors and actors to reduce disaster losses. The SNAP also emulates the four-point action plan of the NDC Council. The NDC Council is based on two guiding principles. In the first principle, DRRM is directly linked to poverty alleviation and sustainable development. The second principle entails the participation of various stakeholders in order to mainstream DRRM into the relevant sectors in society.

In 2010, R.A. No. 10121 or the Philippine Disaster Risk Reduction and Management Act of 2010 was mandated. The policy aims to strengthen the country’s disaster risk reduction and management system, providing for the national DRRM framework and institutionalization of the national DRRM plan. In R.A. No. 10121, NDCC was reformed and changed to the National Disaster Risk Reduction and Management Council (NDRRMC) that is composed of 36 national council members. The R.A. called for the creation of the National Disaster Risk Reduction and Management Plan (NDRRMP) 2011–2028. The NDRRMP covers four thematic areas: disaster prevention and mitigation, disaster preparedness, disaster response, and disaster rehabilitation and recovery.

In 2012 R.A. No. 10174 or the People’s Survival Fund was passed into law amending the Climate Change Act of 2009 with the incorporation of the climate finance feature focusing on climate change adaptation. The People’s Survival Fund is a special fund from the national treasury that is used for financing adaptation programs and projects based on the National Strategic Framework.
In 2014, E.O. No. 174.s2014 was mandated with the establishment of the Philippine Greenhouse Gas Inventory, Management, and Reporting System (PGHGIMRS) aiming to institutionalize the greenhouse gases inventory management and reporting system in different government agencies. The rationale behind the creation of the PPGHGIMRS is for the country to be able to transition towards a climate-resilient pathway for sustainable development. The system is mainly responsible for providing guidance and direction in the accounting and reporting of greenhouse gas emissions.

The Philippine government developed a combination of 13 rules, regulations, and policies regarding climate change and DRRM from 1990 to 2015. The policies have greater focus on the establishment of government agencies to handle and manage climate change and disaster management issues from the national to the local level. Furthermore, the policies also focus on the provision and allocation of calamity funds for municipalities and cities as well as climate financing. In terms of coordinating disaster management in the country, the NDRRMC has been designated where the Department of National Defense (DND) serves as the secretariat and the executive arm. In the event of a disaster (before, during, and after) there are different governmental agencies that support the NDRRMC. DOST leads the efforts in the mitigation of disasters. DILG leads the efforts in disaster preparedness. The Department of Social Welfare and Development (DSWD) leads in disaster response and the National Economic and Development Authority (NEDA) leads in disaster rehabilitation and recovery. Apart from the national agencies, there are also regional and local DRRMCs.

Policies regarding disaster management and climate change are also mainly inspired and adopted from international treaties such as Agenda 21, the UNFCCC, and the Hyogo Framework for Action but are driven by the national governments’ increasing concern about disaster management and climate change issues in the country.

III. Tourism Policies in the Philippines

In the Philippines there are more than 160 rules, regulations, and policies concerning tourism listed in the portal of the Department of Tourism (DOT). However, there are very few specific ecotourism policies, rules, and regulations. This section focuses on the identification and discussion of the different rules, regulations, and policies in tourism, specifically ecotourism.

The first reference to ecotourism in Philippine law was in R.A. No. 7586 or the National Integrated Protected Areas System (NIPAS) Act of 1992. In the NIPAS Act, protected areas are defined as “identified portions of land and water set aside by reason of their unique physical and biological significance, managed to enhance biological diversity and protected against destructive human exploitation” (NIPAS Act, 1991).

The NIPAS act provides for the establishment of buffer zones and other multiple use zones including ecotourism sites in protected areas. In the zoning of protected areas, it has been recognized that tourism contributes to the ecosystem protection, development, and management. As stated in the NIPAS Act, tourism activities, particularly ecotourism activities, are permitted in “recreational zones” that are stipulated to provide benefits to residents and enable visitors to appreciate the beauty of nature (NIPAS Act, 1991). The NIPAS Act has also initiated the restructuring of the DENR creating a Protected Areas and Wildlife Bureau.
Research Note

(PAWB) tasked with formulating policies and guidelines for the establishment and management of an Integrated Protected Areas System.

In 1999, E.O. No. 111, the first policy in the Philippines to focus on ecotourism, was mandated. The E.O. establishes the guidelines for ecotourism development in the Philippines and states that the development and promotion of ecotourism in the country are viable and sustainable activities that will promote the protection of the environment while contributing to economic development. The E.O. has a joint memorandum circular designating that DOT and DENR work together in the development of the ecotourism industry in the Philippines. Furthermore, E.O. No. 111 has enabled the creation of the National Ecotourism Development Council (NEDC) with the National Ecotourism Steering Committee (NESC) and the Regional Ecotourism Committees (REC) aiming to effectively implement programs and activities. The NEDC serves as the policy-making body for ecotourism and is composed of the secretaries from various government agencies such as DOT, DENR, DILG, Department of Trade and Industry (DTI), Department of Finance (DOF), NEDA, and representatives from the private sector and non-government organizations while the NEDC is chaired by the DOT and is co-chaired by DENR.

In 1999, the rules and regulations governing the accreditation of ecological guides or eco-guides, eco-tours, eco-lodges, and eco-tour facilities were issued. In order to obtain accreditation, the DOT has certain requirements that include a valid mayor’s permit and/or business license from the local government unit, a valid DTI business name certificate (for single proprietorship), Securities and Exchange Commission (SEC) registration certificate, and articles of incorporation and their by-laws (for corporation/partnership), articles of cooperation and their by-laws (for cooperatives), and a notarized list of the names of all officials and employees with office designation and quality. The DOT, however, may also require supplementary documents such as a working permit in the case of foreign employees. There are corresponding fees that must be paid in the accreditation process (see Table 1). In an eco-lodge, eco-tour operator, and eco-tour facility accreditation, an initial payment of 1,000php (≈20usd) is required and upon approval of the accreditation, an additional fee of 2,000php (≈40usd) will be paid. Furthermore, an additional cost of 100php (≈2usd) will be incurred for the sticker as proof of accreditation that can be displayed in the business offices. In the case of eco-guide accreditation, 500php (≈10usd) shall be paid initially and upon approval, a fee of 1,000php (≈20usd) will be paid. For issuance of an eco-guide identification card, an additional fee of 50php (≈1usd) will be incurred.

Table 1. Fees for Ecotourism Accreditation.
Note: The entire amount is in Philippine Pesos (50 peso ≈ 1 US dollar)

[Source: Department of Tourism, 1999]
There are several benefits of accreditations according to the DOT including the following: endorsement of embassies and travel trade organization/s for utilization of the establishment’s facilities and services; eligibility for participation in travel fairs; priority given to DOT training programs; endorsement of international airports for the issuance of an access pass to qualified personnel (for 2-year accredited tour operators and accommodation establishments only); endorsement of the Commissions on Elections (COMELEC) for exemption from liquor ban during election-related events (for accommodation establishments and restaurants only); free online/print advertising in national dailies; and promotion of events on the DOT Facebook and other social media sites.

In the rules and regulations governing the accreditation of eco-guides, eco-tours, eco-lodges, and eco-tour facilities, the general advantage of accreditation is the protection and management of the environment, culture, indigenous knowledge, and practices. Specific advantages of accredited eco-tour facilities and eco-tour operators in the community and the environment are identified in the rules and regulations of accreditations. An accredited eco-tour facility would provide certain benefits to the community and the environment. Community benefits include employment opportunities for residents, the representative of the local community is formally asked about how the operation affects the community, and locally produced souvenirs and products will be made available. Environmental protection and conservation can also be achieved when an ecotour facility is accredited. The rubbish and garbage from visitors will be removed; physical, financial, or in-kind assistance for the rehabilitation of areas subject to negative visitor impacts will be provided; physical, financial, or in-kind assistance of facilities that reduce visitor impact will be provided; monitoring environmental impacts will be done; and research on visitor impacts will be conducted.

Eco-tour facility and eco-tour operator accreditation provide the same benefits to the environment. An accredited eco-tour operator would also provide benefits to the community and the environment. At least 50% of the staff will be hired locally within five years of operation. Residents will occupy key management positions in the operation. Regular monitoring will be undertaken on the impacts of ecotourism on the host community. Tangible support or partnerships will be extended to the local community. Discount access will be offered to the community such as school or other special interest groups. One or more residents will get access to free training for better employment, work experience for one or more local students, and more opportunities for women and marginalized groups. A staff from the DOT will attend community meetings, workshops, seminar or consultations, participate in local events, join local advocacy groups or civic organizations, and may also express support for community endeavors through letters or endorsements. For the community, a local network of suppliers will be developed that will stimulate the demand for local products expanding and creating local community enterprises.

In 2002, the National Ecotourism Strategy (NES) or E.O. No. 111 called for the formulation of the NES that is founded on a vision to advocate, foster, coordinate, monitor, and mobilize support for ecotourism. The NES also aims to identify key ecotourism destinations to be developed. Identifying the key ecotourism destinations requires a two-level evaluation. In the first level of evaluation a scoring system is used based on relative weights assessing ecotourism products based on natural and/or cultural features (35%), availability of ecotourism product/s (35%), and level of social/ political support (30%). The second level of
evaluation is priority-setting based on market demand and forecasted benefits to the community and visitors. Specifically, accessibility of the site from major international and domestic gateways and tourism flows (10%), current market demand from international and domestic visitors, including the potential appeal to these markets (30%), availability of visitor facilities and services (25%), local benefits accruing to the community through livelihood and employment opportunities (30%), and peace, order, security, and safety (5%). The selected sites are divided into four clusters representing four main groupings of regions that share a common major gateway.

In 2009, R.A. 9593 was mandated; it is the National Tourism Act of 2009. The RA mandates the DOT as the primary planning, programming, coordinating, implementing, and regulatory government agency in the development and promotion of the domestic and international tourism industry in coordination with attached agencies and other government instrumentalities. The R.A. also supports the establishment of Tourism Enterprise Zones (TEZ) that are to be the centers of tourism development in the Philippines. The Tourism Infrastructure and Enterprise Zone Authority (TIEZA) is mandated to designate, regulate, and supervise the TEZs established under the R.A., as well as develop, manage, and supervise tourism infrastructure projects in the country.

In 2011, the National Tourism Development Plan 2011–2016 was created. The tourism plan aimed to develop a highly competitive and environmentally and socially responsible tourism that delivers more widely distributed income and employment opportunities. The vision of the tourism plan is to become a must-do experience and more fun destination in Asia. The plan includes three strategic directions which are: to develop and market competitive tourist products and destinations, improve market access, connectivity, and destination infrastructure, and improve tourism institutional governance and human resources.

In 2013 Administrative Order No. 2013–19 or the guidelines on ecotourism planning and management in protected areas were developed. The order applies to ecotourism planning and management in protected areas under NIPAS. In the Philippines, there are several protected areas developing ecotourism business and activities. In the A.O., the process of conducting ecotourism activities in protected areas is explained. There are four phases in such process: site assessment, ecotourism planning, implementation, and monitoring and evaluation.

In 2013, the Gender Responsive Toolkit on Ecotourism Planning and Management was created. The toolkit is a result of the collaboration of the Philippine Commission on Women and the Protected Areas and Wildlife Bureau (PAWB) of the DENR. There are five guidelines: the first guideline is to determine the participation of women and men in the proposed project. The second guideline is to identify existing gender issues as well as possible related concerns that may arise (gender analysis). The third guideline is to design strategies that can address the identified gender issues relevant to a proposed/existing project. The fourth guideline is the data collection and demographics of women; women employment, incidence of violence against women (collect to help identify socio economic gaps). The fifth guideline is the establishment of enabling mechanisms and support systems to ensure that gender responsiveness is mainstreamed in local development planning.

In 2013 a new National Ecotourism Strategy and Action Plan for 2013–2022 was released. The goal of
the action plan is to have an environmentally and socially responsible ecotourism development that safeguards the integrity and diversity of its natural resources, provides education and enjoyment to visitors, and delivers larger and more widely distributed income and employment opportunities to the local communities and their constituents, especially the women, youth, indigenous people, and other vulnerable groups. The goal of the new NES will be achieved through its eight strategies. The first strategy is to develop and market diversified and competitive ecotourism products. The second strategy is to create a conducive environment for ecotourism investments. The third strategy is to maximize economic benefits for the host communities. The fourth strategy is to promote and develop a culture of ecotourism. The fifth strategy is to strengthen institutional capacity. The sixth strategy is to develop and strengthen partnerships. The seventh strategy is to establish mechanisms for sustainable financing. The eighth strategy is to monitor outcomes and impacts.

In 2015, a new National Tourism Development Plan was developed for 2016–2022. The vision and guiding principle of the tourism development plan is to develop a globally competitive, environmentally sustainable, and socially responsible tourism industry that promotes inclusive growth through employment generation and equitable distribution of income thereby contributing to building a foundation for a high-trust society. In 2015, the Tourism Guidebook for LGUs was also published. The guidebook is the result of the collaboration of DOT and the Japan International Cooperation Agency. It provides concepts, methods, step-by-step processes, and worksheets that will aid the LGUs in formulating their local tourism development plans (TDPs) with examples and supplemental readings on various tourism concepts and tourism planning.

Eleven rules, regulations, and policies have been presented and discussed. There are three pertaining to tourism in general, one pertaining to protected areas alone, one pertaining to ecotourism and protected areas, and the remaining policies that focus on ecotourism. Reviewing the different tourism policies in the country, ecotourism is the only tourism niche to have its own strategic and action plans. Conspicuously, however, ecotourism is rarely mentioned or discussed in the general national tourism strategy and action plans.

Despite the number of ecotourism destinations in the country, the guidelines in developing ecotourism destinations are mainly focused on protected areas and specific sites stated within the NIPAS Act. The principal agency in-charge of tourism is the DOT which is also in-charge of tourism accreditation. The national agencies involved in this development in the protected areas are the DOT and DENR. Again, conspicuously, despite the emphasis on the ecotourism niche among other tourism niches, there is no national ecotourism department nor an arm of the DOT that focuses on ecotourism. Moreover, there is no specific list of accredited ecododges, eco tour operators, facilities, or eco-guides posted by the DOT. However, the DOT has published a general list of accredited tourism enterprises and tourism frontlines on their website (http://www.tourism.gov.ph/) consisting mainly of hotels that have been accredited.

Recent developments in ecotourism have materialized. Guidebooks have been published to guide LGUs on developing ecotourism businesses. Also, recent studies and guides on gender sensitivity have been produced for ecotourism developers.

IV. Incorporation of Climate Change and DRRM Policies in Tourism Policies in the Philippines
Identification of the different policies, rules, and regulations in disaster management, climate change, and tourism in the previous two sections provided awareness on matters at the policy level in the individual subjects. In this section, how and whether disaster management has been incorporated in ecotourism development are discussed.

In order to easily visualize the different rules, regulations, and policies in DRRM, climate change, and tourism, a visual timeline has been created (see Fig. 1). The left side of the figure shows the DRRM and climate change policies and the right side shows the tourism policies.

When discussing the incorporation of climate change and DRRM in tourism policies it is better to first understand the position of ecotourism in the general tourism policies and the involvement of tourism in the DRRM and climate change policies.

Figure 1. Rules, regulations, and policies in DRRM, climate change, and tourism in the Philippines. [Source: Compiled by the author]

Ecotourism in Tourism Rules, Regulations, and Policies

Ecotourism has its own strategy and action plan; however, it is still a subset of tourism. In locating ecotourism in the general tourism rules, regulations, and policies, it has been cited in the Tourism Act of 2009, NTDP 2011–2016, and NTDP 2016–2022.

In R.A. 9593 or the Tourism Act of 2009, ecotourism has been cited as one of its objectives. The objective states that the nation should develop responsible tourism as a strategy for environmentally sound and community participatory tourism programs, enlisting the participation of local communities, including indigenous people, in conserving bio - physical and cultural diversity, promoting environmental understanding and education, providing assistance in the determination of ecotourism sites, and ensuring full enjoyment of the benefits of tourism by the communities concerned. The R.A. also cites the jurisdiction overlap between the NIPAS and the National Ecotourism Policy stating that the DOT together with the
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DENR shall identify areas covered by the NIPAS with ecotourism potential and cultural heritage value, and prepare policies, plans, and programs for their development, preservation, operation, or conversion into tourism enterprise zones. The R.A. also states that 5% of travel tax collections shall be held in reserve for the development of ecotourism sites in areas with strong tourism potential.

The National Tourism Development Plan 2011–2016 cites ecotourism multiple times. Furthermore, it states that the National Ecotourism strategy was reviewed prior to creating the plan in which it has been noted that DENR and DOT are collaborating on the development of ecotourism destinations in protected areas. In the plan, ecotourism is identified as part of nature-based tourism. The plan states the design and implementation of product development programs targeting ecotourism in 50 key natural heritage sites.

Although cited in all the general tourism policies, there is no elaboration of the role of ecotourism and its contribution to general tourism development. Nevertheless, the existence of specific ecotourism policies indicates the value in developing the ecotourism sector.

**Disaster Management in Tourism Rules, Regulations, and Policies**

In being vulnerable to frequent natural hazards and the continuous pursuit of its tourism industry, the country recognizes disasters as a threat to tourism development. However, the inclusion of disaster management in tourism rules, regulations, and policies has been limited. Among the tourism rules, regulations, and policies, disaster management has been cited in two, NES 2002 and the NTDP.

In the NES 2002, disaster is cited several times. In terms of disaster management, the NES states that the NDCC spearheads rescue operations. Meanwhile, it is stated that the support programs including disaster/emergency management should be strengthened to enable the ecotourism destinations to be more attractive and competitive in the market. Another citation of disaster management is found in the program component of the NES. A desired outcome for education and advocacy is strengthening different programs including programs in disaster/emergency. In the NTDP 2011–2016, disaster has been cited, albeit only once. It states the recognition of disasters in the tourism sector as a threat to development.

In the National Tourism Development Plan, it should be noted that the nation recognizes disaster as a threat to tourism development. In the National Ecotourism Strategy, disaster has been cited as it being considered in the development of strategy programs and emergency management.

**Tourism in Disaster Management and Climate Change Policies**

The LGC of 1991 cited tourism twice in its Chapter 2 Section 17, basic services, and facilities. In the general powers and attributes of local government units, it states that municipalities should provide basic services such as “tourism facilities and other tourism attractions including the acquisition of equipment, regulation and supervision of business concessions, and security services for such facilities” while the province should provide “tourism development and promotion programs.” This means that there would be support from the LGUs in terms of tourism development.

In the Strategic National Action Plan (SNAP) tourism is cited three times. The first citation of tourism is in the discussion of the national government expenditure for DRR. An example of such expenditure in DRR is the DOT acquiring services from the Crisis Management Institute to provide training. In the priority
programs and projects under safety and well-being, enhancement tourism is cited, in particular, to conduct DRR capability building programs for key response and coordinating agencies of NDCC as well as for sector agencies including tourism. The SNAP also mentioned the integration of current DRR practices with emphasis on several sectors such as the tourism sector. In R.A. No. 10121, tourism is cited in Section 5 stating that the secretary of DOT is a part/ a member of the NDRRMC.

Despite the number of disaster and climate change policies, it is surprising that further involvement of tourism in disaster management and climate change councils is barely cited. Although DOT is indicated as a member of the NDRRMC its task was not specified. It is, however, recognized in SNAP that in the tourism sector there is a need to exert more effort to integrate DRR practices.

V. Conclusion and Recommendations

The Philippine Development Plan (PDP) of 2017–2022 focuses on the vision of “building a future where every Filipino enjoys a matatag, maginhawa, at panatag na buhay”. In English it is building a future where every Filipino enjoys a stable, comfortable, and peaceful life. In the plan, tourism is cited three times. The first citation of tourism is on the promotion of Philippine culture and values, and one of the strategies is to establish historic and cultural complexes nationwide as hubs for cultural education, entertainment, and tourism. The second citation is the expansion of economic opportunities in industry and service through “trabaho at negosyo” (work and business) to increase foreign direct investments. One strategy is to strengthen value and supply linkage through the implementation of the medium-term National Tourism Development Plan. The third citation is under the expansion and development of sustainable resource-based industries including forestry, fishery, marine, and genetic resources. Ecotourism and cultural sites should be promoted and developed.

The government is giving attention to the tourism industry even though there are dedicated ecotourism policies, such as the General tourism policy that is R.A. No. 9593, National Tourism Development Plan 2011–2–16, and 2016–2022 that have no dedicated chapter or elaboration of the role or contribution of ecotourism in tourism development. It has been identified that one of the threats to tourism development in the country is disasters; however, there is very little linkage on disaster and tourism policies. There is no mention of ecotourism in disaster management policies even though the secretary of the DOT is a member of the NDRRMC. Disaster and emergency management is being developed as part of the tourism sector management. Disaster management policies on the other hand do not include and mention ecotourism. The aspects of ecotourism do not include the promotion and utilization of ecotourism as a strategy for disaster risk reduction and management; one reason for this is the late establishment of the NDRRMC.

At the national level, the government has been investing in protected areas and supporting its ecotourism developments. Furthermore, guidelines in ecotourism planning in protected areas have been issued. These developments have been brought about by many government departments and the treasury that considers protected areas to be a drain on the economy. If the protected areas are used for DRR, the cost of maintaining protected areas will appear more justifiable. According to IUCN, in virtually all cases, DRR from protected areas will be additional to other multiple benefits that protected areas bring to communities, such as from tourism, jobs, and other ecosystem services. The government is already investing in the establishment and
management of state protected areas for biodiversity conservation, recreation, and tourism. Additional incorporation within DRR strategies means that such state investment produces a wider range of benefits, which address the needs of more government departments, and is thus a more efficient use of tax revenue.

In a much broader sense, there are several ways to promote disaster risk reduction and resiliency through ecotourism. The members of the National Disaster Risk Reduction and Management Council (NDRRMC) and the National Ecotourism Development Council (NEDC) are similar. Thus, they can issue a joint circular or guidelines, applying disaster risk reduction management to ecotourism and/or making ecotourism as a strategy in promoting disaster risk reduction management in vulnerable but potential areas of ecotourism that would also lead to an increase in the resilience of the surrounding community. An additional area of DRRM and ecotourism integration is planning. A planning guideline could be issued that amalgamates DRRM in ecotourism planning (from site selection to design of amenities, even providing attractions on DRRM in the ecotourism areas). Another scheme is strengthening decentralization in ecotourism and DRRM concerns. This means enabling (or even expanding the powers and responsibilities) local government units to utilize their authority in promoting DRRM in ecotourism (or vice versa – utilizing ecotourism as a strategy in promoting DRRM and resiliency). Local chief executives (mayors and governors) as area managers in their jurisdiction can integrate these two concerns. Ecotourism and DRRM can also be integrated through regulatory measures. In formulating and implementing their comprehensive land use plan/ zoning ordinance and enforcing the building code and other related regulations (that affect ecotourism), disaster risk reduction and resiliency should be incorporated. This means building design, location, standards of construction, and materials, among others, should be considered. The last measure is through market-based instruments – ecotourism ventures that promote disaster risk reduction and resiliency should be able to obtain grants (matching and/or performance grants) through special funding from international or national organizations.

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