Towards stronger local government and educational institutions in climate change impact mitigation: A policy paper on fiscal sustainability on climate change

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Abstract

Through a careful analysis of official government documents such as national statutes, national agency memorandum orders, policy directives reports, and national and local plans, among others, pertinent to the Philippine Government's response to climate change mitigation and adaptation, the paper elucidated the policy directions of the country concerning climate change response. Aimed at proposing recommendations to enhance the current legal, organizational, and fiscal frameworks of the Philippine Government in its efforts to mainstream its climate change strategy, the paper identified some of the gaps and possible areas of improvement in the standing legal and structural constellations of policies employed in the country. It has been found by the research that though there have been actions related to the international mandate of promoting sustainable development, there are still areas that can be reformed and revisited if the government programs and institutions are to remain in fidelity to the commitments of the Philippines to combat the impacts and mitigate the effects of climate change. As the title suggests, the paper offers policy directions to strengthen government and academic institutions to better respond to this daunting challenge.

Keywords: Climate Change, Fiscal Sustainability, Local Governance, Policy Analysis Paper, Public Program Implementation

Background of the Study

One of the greatest, if not the greatest, challenges humanity faces today is climate change impact mitigation and adaptation. As a phenomenon that is accompanied by risks and demands that are global in scale, the world communities cannot help but make adjustments to the daily conduct of human affairs. Manifestations of the effects of this phenomenon in the form of rising temperature, sea-level rise, droughts, floods, forest fires, and heatwaves are visible in different parts of the world.

Indeed, combatting the multifarious effects of climate change calls for strong institutions. Though this phenomenon is considered a global concern, responses and efforts in mitigating its effects remain to be local i.e. at the hands of individual states. The Philippines is a party to several international conventions such as the United Nations Framework Convention on Climate Change (UNFCCC) with its legally binding document, the Kyoto Protocol, the Convention on Biological Diversity, the ASEAN Agreement on Disaster Management and Emergency Response, and other international agreements and declarations, is duty-bound to integrate, as a matter of policy, the different strategies, programs, and projects that promote stabilization of greenhouse gas concentrations maintaining a healthy ecosystem, sustainable food production, and economic development, among other things.

One of the responses of the Philippine Government to the Sustainable Development Goals outlined in this respect is the integration of state policies aiming for increased resilience of communities to the expected, albeit inevitable, effects of climate change. Indeed providing a legal framework for implementation of programs for climate change effects mitigation on one hand and minimizing contributory factors to it, on the other hand, is not just desirable but necessary. Be that as it may, warranted by the usual case in the Philippines; having set up the legal framework and policies to respond to the dictates and pronouncements of these international declarations and agreements is one thing and the manner to effectively and efficiently administer and actualize these programs is another. After more than a decade from the enactment or promulgation of the landmark policies of the country vis a vis climate change response, this study examined the idiosyncrasies of its actual integration into mainstream government programs.

Specifically, the paper analyzed the existing implementation framework and the attached programs in mainstreaming the Climate

Change Act of 2009, as amended by RA 10174 (People's Survival Fund Act of 2012), and RA 10121 (Philippine Disaster Risk Reduction and Management Act of 2010). It also explored the operative areas of program and project monitoring and implementation taking the lens of budget sustainability in its analysis of data. The paper specifically examined the bilateral nature of the interventions and program development as elucidated in the framework i.e. national level and local level. As the title of the research suggests, this paper aims to put forward some of the gaps and bumps in the policies of the country concerning climate change impact mitigation and control with a focus on how such policy is being carried out, particularly in the local government units. Since this unit of the Philippine Government is primarily tasked to implement the mandates of the law. It has been hoped that in the end, the policy recommendations that this research work elucidates can contribute to the improvement of the existing policies and the recalibration of the manner of implementation of the same.

Statement of the Problem

With the ultimate goal of developing policy recommendations toward stronger institutions in the Philippines in climate change impact mitigation, the paper specifically explores the following problems:

1. What are the pertinent policies of the National Government pertinent to climate change adaptation and mitigation in terms of:
    a. Legal Infrastructure;
    b. Institutional Infrastructure/Mechanism;
    c. Fiscal Demands and Sustainability.

2. What are the gaps and challenges in the current policy implementation of climate change adaptation and mitigation in the sublevel government agencies in terms of:
    a. Policy gaps;
    b. Planning gaps;
    c. Implementation gaps.

3. In line with policy implementation sustainability indicators, what are the policy measures or implementation strategies that can be proposed to advance stronger institutions in climate change impact mitigation?

Review of Related Literature and Studies

The Philippines and the Imperative to Respond

As a gateway to the Pacific, the Philippines is among the countries where the effects of climate change are more clear than apparent. Due to its geographical location, the country is home to an average of twenty (20) typhoons per year. Approximately, five (5) of these typhoons are causes of massive destructions that cut across the economic, social, settlement, and educational aspects of the lives of its inhabitants. "Its geographical location and physical environment also contribute to its high-susceptibility to tsunami, sea-level rise, storm surges, landslides, flood/flash flood/flooding, and drought" (ADRC, n.d.). These susceptibilities and risk factors are among those phenomena usually accompanying news reporting of the many effects of typhoons in the country year after year.

To mention a few, still fresh in the collective memories of the Filipinos, which somehow led to the evolution of disaster response in the country, are some of the most devastating experiences of different areas ravaged by some of the strongest typhoons. Still lingering in the consciousness of people from Southern Luzon including the Bicol Region, CALABARZON, and even Metro Manila is their experience of Typhoon Milenyo's (Xangsane) wrath that claimed more than 200 lives and displaced more than 40,000 residents from their settlements ("Remembering Milenyo's", 2014). In 2008, Typhoons Frank (Fengshen) and Reming (Durian) both ravaged provinces in the Visayas and Bicol Regions respectively. More than 500 lives were lost in the former with more than 10 billion pesos worth of agricultural products and infrastructure ruined ("NDCC: Typhoon Frank", 2008) while more than 100 persons were killed by flash floods and landslides in the latter in Bicol Region. Even the southernmost part of the country is never exempted from these phenomena. Typhoon Pablo was named internationally Bopha. brought destruction to Mindanao in 2012. Its destructions left almost 2,000 people dead with estimated damage to agriculture, infrastructure, and private property that reached almost $600 million (Brown, 2012). Finally, vivid in the memories of every Filipino is the effects brought about by Typhoon Yolanda (Haiyan) in 2013, which had been considered by International Weather Agencies as Category 5 storm, that practically displaced and affected more than four (4) million people across several provinces in Central Philippines ("2013 Typhoon Haiyan", n.d.).

Indeed, given its geographical location and its current capacity to respond to the effects of climate change, not to mention its inability to rapidly respond to the economic, educational and social impacts brought

about by this phenomenon, the Philippines is, to say the least, of high-risk vulnerability.

International Mandates and the Philippine Response

As can be gleaned, climate change and its effects are truly one of the major threats in a developing country such as the Philippines, not to mention its global threat to humanity's survival. Good enough, though a bit late, international organizations such as the United Nations consolidated the commitments of its member countries in operationalizing sustainable and inclusive actions in mitigating the effects of climate change. The United Nations Framework Convention on Climate Change (UNFCCC) developed mechanisms, global agreements, and declarations to this end. Among others, the Kyoto Protocol, a legally binding document to signatories set the parameters for stabilizing greenhouse gas concentrations in the atmosphere. Another milestone in the international moves to combat climate change is within the purview of community resilience and climate-change-related disaster preparation of local inhabitants. This is provided by the Hyogo Framework for Action which provides scientific indicators and strategies to prepare communities globally with this respect (Local Climate Change Adaptation Development, Inc., 2013).

Philippine Political Commitment and Policy Statements

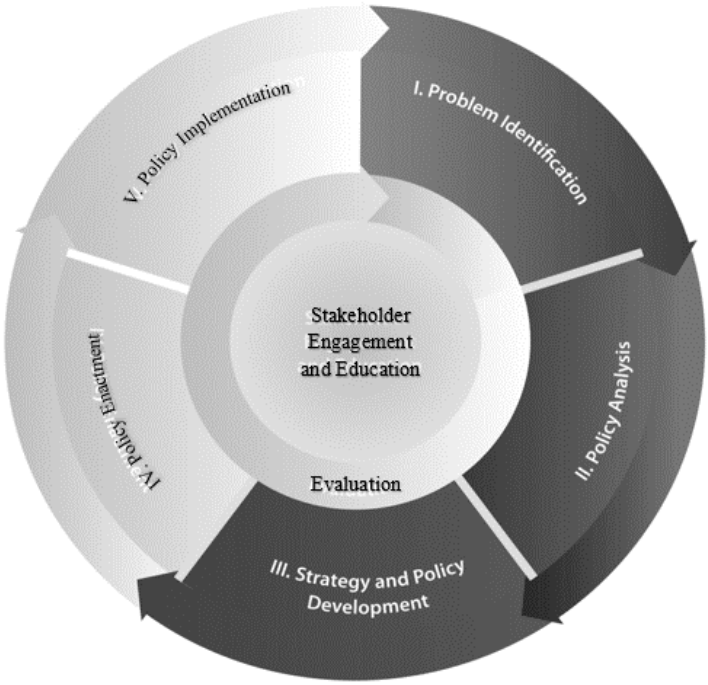
Before the enactment of different laws that aim to mainstream government programs and projects, it must be mentioned that the Philippines is also a signatory to the United Nations Sustainable Development Plans laid down in the United Nations Conference on Environment and Development held on June 3-14, 1992 in Rio de Janeiro, Brazil that gave birth to what will be subsequently known as Agenda 21. This document sets the tone for countries to adopt sustainability in their respective development agenda. Hence, the subsequent policy outputs of the government carried the following basic themes:

1. Protection of climate system;
2. Stabilization of greenhouse gas concentrations;
3. Sustainable development (economic and social);
4. Multistakeholders' approach;
5. Strengthening of disaster risk reduction and management.

Theoretical Framework

Figure 1.

Policy Analytic Framework
(Center for Disease Control and Prevention, 2013)



The theoretical framework that the paper will utilize particularly in the aspects of policy analysis and evaluation that leads to strategic policy development is the paradigm developed by the Center for Disease Control and Prevention (2013). The figure above emphasizes the colored domains i.e. problem identification, policy analysis, and strategy and policy development efforts. These domains are the areas applied by the authors in assessing the Philippine Climate Change National Framework and its operationalization. The first domain pertains to identifying the issues and predicaments in the implementation of the national framework. Identification of these issues and problems are necessary to be able to advance to the next domain, which is the policy analysis domain. This includes, among others, immersion in the swamp of literature and studies about the general principles and initial approaches of the national government and surveying of some of the best practices to be found among other LGUs implementing related projects and programs to climate change adaptation (CDC, 2013). Subsequently, upon identification of what the

paper will call 'policy gaps' (3rd domain in CDC framework) from the two earlier domains, the next step is to assess policy options and possible areas of reform both in the actual framework and its implementation as the data will suggest, which the paper will call as 'policy recommendations'. This framework will set the general tone of the need for policy analysis that will be conducted by the research. It will also help justify the conduct of research that is specifically aimed at strategy and policy development.

As this framework recommends, the research critically examined both the overall policy directions and the implementation strategies of the existing government infrastructure in climate change mitigation. Though there are quite a several areas that can be scrutinized in this topic, the research mainly focused on the three policy parameters i.e. legal framework, which includes the institutional structure that will operate the dictates of the law, actual program implementation and monitoring, and budget allocation. The paper tried to identify existing challenges and gaps in actualizing the main intent and the most salient features of policies related to the topic at hand. Subsequently, which is the most substantive part of the research, the paper offered policy development suggestions or recommendations based on the current study.

Conceptual Framework

The operations of the research can be graphically presented as follows:

Figure 2.

Research Paradigm on Climate Change Policy Evaluation

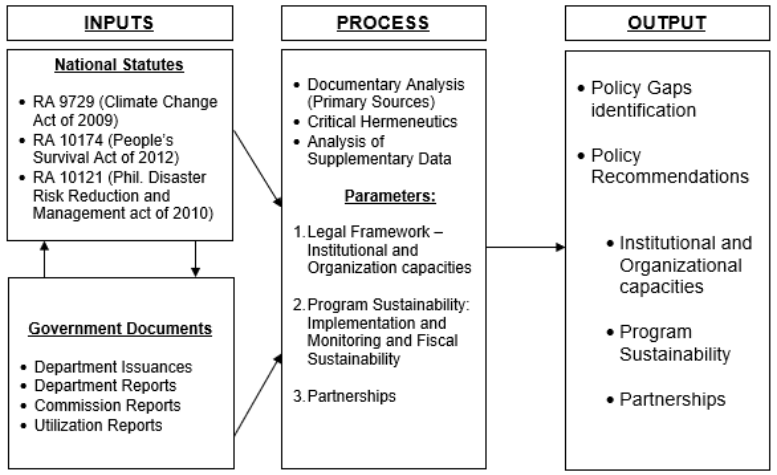


Figure 1 shows the flow of the entire research. The paper uses the IPO (Input-Process-Output) model to demonstrate the basic operative terms and the variables that had been examined by the researchers. The input includes the major national statutes that had been analyzed by the authors: the Climate Change Act of 2009, People's Survival Act of 2012, and the Philippine Disaster Risk Reduction and Management Act of 2010 together with their implementing rules and regulations. These will be examined side by side with other pertinent government documents such as, but not limited to, various department issuances, department reports, commission reports, and utilization reports by all concerned agencies like the Department of Interior and Local Government, Department of Budget and Management, Climate Change Commission, and the National Risk Reduction and Management Council, among others.

Significance of the Study

Climate change is a critical issue confronting the world today. As mentioned elsewhere in this paper, it cuts through most, if not all, of the aspects of man's daily life. Hence, the study finds its significance in the body of literature on the topic since it does not only elucidate the overall policy infrastructure of the Philippine government in combatting the effects of climate change. It also assesses its framework of implementation with the hope of finding policy and implementation gaps to better integrate climate change programs and projects of the government into the mainstream.

Specifically, the study ultimately recommends policy development measures and formulates implementation strategies that institutions can carry out in fulfilling their mandate to offer effective ways and mechanisms to mitigate the impacts and better adapt to the challenges of climate change. In the end, the paper opens possible areas of improvement in terms of policy development programs and public administrative strategies that the government in general and local governments, in particular, can incorporate into its framework.

Methodology

A triangulation approach had been used as the methodology for this paper: documentary analysis, critical hermeneutics, and data validation. Primary sources such as the Climate Change Act of 2009, People's Survival Fund Act of 2012, Philippine Disaster Risk Reduction Act of 2010, and their corresponding IRRs are examined using the framework

earlier alluded to coupled with critical hermeneutics to analyze the legal infrastructure on Climate Change. These Republic Acts had then been juxtaposed to official government issuances such as Department Orders and Joint Memorandum Circulars, particularly of the three agencies on top of the implementation of the program (NCCC, DILG, DBM). Moreover, actual reports generated by these concerned agencies had been gathered and analyzed in producing the findings and subsequent recommendations.

The three parameters that will be used in the analysis are legal framework, program sustainability, and partnerships. Through this, the paper was able to elucidate policy gaps for a more critical approach to formulating policy recommendations to enhance the current implementation of the phenomenon being examined. The policy recommendations were limited to three areas: institutional and organizational capacities, program sustainability, and enhancement of partnership (with a focus on partnerships with educational institutions).

Results and Discussions

With the international pressures and frameworks provided by various global institutions and agencies, in October 2009, the Philippines through Republic Act 9729 also known as the Climate Change Act of 2009 integrated into actual policy mainstreaming efforts of the country the mitigation of the effects of climate change. This has been one of the policy approaches of the Philippine Government to institutionalize and subsequently consolidate its programs and projects pertinent to its response to the effects of climate change in the country and beyond. Considered a major milestone in demonstrating the government's commitment to contribute to the global calls for a speedy address to the needs of climate change adaptation, then DENR Secretary Ramon Paje in a speech boasted such effort by uttering: “strong and responsible political will has been expressed by way of the passage of the Climate Change Act and very fresh to public knowledge is the signing of the National Framework Strategy on Climate Change (NFSCC) under the masterful oversight of the Climate Change Commission. And lately, we launched the Philippine Strategy on Climate Change Adaptation (PSCCA)” (Paje, 2009).

Some of the salient features of the law and to operationalize the aforementioned legal mandate developed by the Philippine Government concerning climate change response, the National Framework Strategy on

Climate Change had been formulated in 2010. The integrated framework included the creation of a Climate Change Commission that is mandated to be on top of the national governmental and administrative efforts in both climate change adaptation and mitigation. This law resulted in the formulation of the National Framework Strategy on Climate Change with sustainable development at its core with society, economy, and involvement as its main elements where adaptation and mitigation are the two main overarching goals. The means of implementation are also integrated into the same framework, which includes multi-stakeholder partnership, financing of programs and projects, valuation, and policy planning and mainstreaming. These implementing guides cut across the multifaceted areas of concern vis a vis climate change adaptation such as food security, water sufficiency, ecological and environmental stability, human security, climate-friendly industries, and sustainable energy.

Also considered to be a milestone in the enactment of RA 9729 is the mandate it provided to the Commission and other national agencies to initiate the formulation of the national and local climate change action plans. In 2011, spearheaded by the Climate Change Commission, the National Climate Change Action Plan (NCCAP) 2011-2028 had been formulated. Up to date, this action plan serves the purpose of guiding the Climate Change Commission in tracking its outputs concerning the implementation of the dictates of the law.

Imperatives for Local Government Units

RA 9729 also prompted the formulation of the country's local government units' Local Climate Change Action Plans (LCCAP). This however came a little later as compared to the formulation of NCCAP. The first memorandum circular issued by the Department of Interior and Local Government for this purpose only came out in 2014 through Memorandum Order 2014-135 which sets the guide in formulating the said plan. In 2015, the Climate Change Commission, Department of Interior and Local Government, and the Department of Budget and Management issued Joint Memorandum Circular 2015-1 to identify and prioritize climate change-related programs and projects in the LGU's Annual Investment Plans (Climate Change Commission, 2020). The annual investment plans are yearly plans being formulated by local government units to set out their priority development programs that are integrated into their annual budget proposal that subsequently will form part of the appropriation ordinance that will be implemented in their respective jurisdictions.

For the National Climate Action Plan to be fully realized, it is more clear than apparent at this point that it is necessary that each local

government unit in the Philippines, especially those that are considered to be high-risk areas, must implement their respective programs and projects both in climate change impact mitigation and adaptation. However, it must be noted that in terms of monitoring, the Climate Change Commission as the main national agency in charge of this task, is merely limited to monitoring submission compliance. The more substantive task i.e. monitoring compliance of LGUs in allocating funds, let alone, utilizing them, remains to be elusive. As reported by the Commission (2020), compliance with the submission of LCCAP is more than 80%, however, compliance to the dictates of these LGUs' LCCAPs is not yet known. This leaves the Commission blind as to the status of implementation of each LGU's plan. Another missing point in this respect is the actual review/evaluation of the technical aspects and the substance of the LCCAPs submitted. Most of the plans were carried out hastily and without technical guidance. While it has been the practice in making these plans to be guided by DILG officials, the majority of local government units in the country lack the technical manpower to formulate the same.

Despite having a national agency specifically tasked to operationalize the national framework on climate change, it is undeniable that the national government still relies on the plans, funds, manpower, and implementation of local government units. This is no longer surprising since this has always been the approach of the national government in its policy implementation efforts elsewhere. Though the structure of the Philippine Government is largely considered to be a unitary system, the influence, powers, and functions of Local Government Units in the implementation of national programs and projects are indisputable (Brillantes, 1998).

This approach falls under the dictum of decentralization. "Decentralization was defined as the transfer of authority, responsibility, and resources—through deconcentration, delegation, or devolution—from the center to lower levels of administration" (Cheema & Rondinelli, 2007). Decentralization, strictly speaking, takes three forms: deconcentration, delegation, or devolution. Deconcentration pertains to the administrative approach in public bureaucracy that decongests certain functions and responsibilities of the national or central government to its lower-level units. In the Philippines, this can be demonstrated by the track of establishing regional and provincial offices of government agencies operating at the national level. It must be noted however that decision-making and planning functions in this strand still reside in the national

level administrators. Meanwhile, delegation pertains to the public administrative approach where certain activities and projects are being delegated to either sublevel government agencies or the private sectors. This is usually carried out whenever technical expertise is needed to implement certain projects, something that the government may not have capacities on. The most common manifestation of this trajectory is the programs in the country that are being delegated to private firms such as through Public-Private Partnerships or Joint Ventures. Lastly, devolution is the most extensive form of decentralization for it does not only transfer responsibilities to lower-level administrative organizations but also devolves certain powers and resources necessary to fulfill their mandate. This is also referred to as 'political decentralization'.

Prevalent in public administration literature at the turn of the century is the confidence in the efficiency and effectiveness of program implementation and in responding to the needs of the people at the local levels. As guided by the principles of decentralization comprehensively discussed above and lucid of the many advantages of this public administrative system, the paper presupposes that for the policy framework on climate change management to be successful, it must take the form of deconcentration of functions and devolution of powers and resources to lower-level government units. If the efforts of the government in this respect are to be consolidated and political will in its implementation is to be desired, the Local Government Units, being at the forefront of disaster risk reduction and management, must be strengthened as an institution. Monitoring of their programs and projects must also be sustained.

As the survey of related literature suggests, both in the general concept of public administration and climate change mitigation, the imperative for devolution of roles and tasks in the aspects of program implementation, monitoring, and budgeting is needed if national policies in facing the challenges related to climate change are to be sustainable. As the integrated framework of the National Government shows and existing literature manifests, both the demands for adaptation and mitigation are concerns that need to be addressed bottom-up. Climate change adaptation and mitigation necessitate localized sustainable strategies and community-based implementation of programs and projects since the effects of this phenomenon are subtly being felt in communities and local units.

Funding: Challenges and Prospects

Another major point in the initiatives of the government is the enactment of Republic Act 10174 providing funding support for climate change adaptation programs at the local level. This in turn amended the

earlier legislation; the Climate Change Act of 2009. This is a supplementary law that supposedly provides for the funding of national government projects and programs concerning climate change impact mitigation and adaptation. The funds allocated for this purpose are known as the People's Survival Fund hence the law is also known as the People's Survival Fund Act of 2011. As provided for in this law, funds for climate change-related projects are coming from the National Government that will be downloaded to local government units after applying and subsequently being approved to be beneficiaries of the same. The law envisions that the funds that will be provided will enhance the overall administrative framework of the Climate Change Commission by providing sub-level government agencies with the funds necessary to implement climate change-related projects in their areas. The law provides for 1 billion pesos replenishable/revolving funds that were to take effect in 2015.

Be that as it may, after more than seven (7) years of taking effect, which is potentially equivalent (if utilized efficiently) to 7 billion by 2022, the funds have not sufficiently been utilized. Based on the 2020 Accomplishment Report of the Climate Change Commission, since the institutionalization of the People's Survival Fund in 2015, only six (6) projects were approved. These projects are only amounting to 310.34 million pesos out of the 7 billion pesos possible budget allocated for the purpose. These projects only cover 6 local government units: 1 in Luzon, Gerona, Tarlac, 1 in the Vizayas, Camotes Island, Cebu; and 4 in Mindanao, Del Carmen, Surigao del Norte, Lanuza, Surigao del Sur, Kitcharao, Agusan del Norte, and Sarangani Province (Climate Change Commission, 2020). This just shows, among other things, that the current implementation phase of the country's framework is lagging.

The foregoing presented the challenges in terms of the national funding as provided for by the People's Survival Fund. However, funding and utilization problems do not only concern the national level. In the local government units, as of June 2021, the climate change expenditure tagging of Local Government Units shows a steady decrease. From almost 5% to Provinces, 35% to Cities, and 30% to Municipalities in the country in 2017 to less than 5% in all these units in 2022 (Department of Budget and Management, 2021). This is aside from the fact that it is very hard to identify budget allocations of LGUs for climate change-related projects since the allocations are usually mixed up with other appropriations. There is no dedicated budget for climate change adaptation and mitigation at the

local level. If this trend persists, sustainability in this regard is far from being achieved.

Climate Change Measures within Disaster Risk Reduction and Management Framework

Another milestone legislation that is associated with the country's climate change efforts is the enactment of Republic Act 10121 also known as the Disaster Risk Reduction and Management Act of 2009. This is the primordial law that sets the policies and guidelines of the National Government in disaster risk reduction and management. One of the main features of this law is to shift the focus of disaster management from the limited framework of disaster response to include risk reduction and management in its operative principles. Suffice it to say that the law veered away from a merely reactionary stance of the government in its disaster management to favor a more proactive, revitalized stance.

The Disaster Risk Reduction and Management Act of 2009 led to the creation of the National Disaster Risk Reduction and Management Council, an interagency body that is tasked to formulate the national plans and implement mechanisms concerning the country's disaster risk reduction and management initiatives. This law also established the creation of Local (from regional level down to barangay level) Disaster Risk Reduction and Management Councils and the subsequent authorization to local government units to create their own Local Disaster Risk Reduction and Management Offices.

Upon careful study of this law, it can be surmised that the statute institutionalized not just the offices that are tasked to execute programs and develop local policies regarding disaster risk reduction and management but also the institutionalization of the local disaster risk reduction and management fund. The law included in its dictates the creation of special-purpose allocation thereby creating special-purpose funds; funds that can only be used for a specific purpose, which in this case, for disaster risk reduction and management. Special purpose funds are created whenever there is an aspect of government service that must be prioritized. In terms of the DRRM fund, 5% of the revenues of local government units taken from regular sources must be allocated for disaster risk reduction and management programs and projects. This is noteworthy at this point since one of the recommendations that will be proposed eventually by this paper is to create the same special-purpose funds for the sole purpose of funding programs and projects related to climate change mitigation and adaptation.

Currently, climate change mitigation and adaptation measures are usually being funded from the special purpose allotment taken from DRRM local funds. This is so since the overarching framework of disaster risk reduction integrates the areas of climate change mitigation and adaptation. Though this might be theoretically appropriate, there are some practical considerations concerning the financial sustainability of projects taken from the DRRM local funds that must be noted.

One of the primary concerns that can be surmised at this point is the fact that the budget allocation i.e. 5% from the regular sources, is not a huge budget that can cover projects and programs necessary to implement climate change mitigation and adaptation. The budget allocated for disaster risk reduction and management must be further divided into two aspects: 30% allocation for Quick Response Fund and 70% allocation for disaster prevention and mitigation, preparedness, response, rehabilitation, and recovery (NDRRMC & DILG, 2013). Based on the Joint Memorandum Circular of the National Disaster Risk Reduction and Management Council and the Department of Interior and Local Government issued in 2013, the utilization of the local disaster risk reduction and management funds must cover the areas of 1. Disaster Prevention and Mitigation, 2. Disaster Preparedness, 3. Disaster Response, 4. Disaster Rehabilitation and Recovery, and 5. Procurement/Acquisition of Disaster Equipment for Disaster Response and Rescue Activities. With the magnitude of the concerns of local government units concerning disaster risk reduction and management as stipulated in RA 10121 and its accompanying implementing guidelines and legal issuances, it is apparent that the budget cannot even suffice to fund all of the mandated tasks of LGUs to respond and prepare for calamities and disasters in their respective jurisdictions. It is therefore near to impossible that programs and projects related to climate change mitigation can get significant shares thereto.

Related to the aforementioned is the fact that most of the local government units in the Philippines have risk factors in terms of natural disasters that range from typhoon ravages, flash floods, and landslides to volcanic threats and earthquake threats that drain local funds allocated for disaster responses and preparation. Procuring necessary response and rehabilitation equipment and tools alone can consume most of the funds dedicated for disaster risk reduction and management.

The Philippines Exhibiting Political Commitment to Respond to Climate Change Demands

As demonstrated by the constellations of laws, issuances, and frameworks that the Philippine Government promulgated, it is not too much to assume that the country was able to establish an institutionalized approach to responding to the demands and challenges brought about by climate change. This is manifested by the constellation of laws, promulgations, and issuances that form part of the climate change adaptation and mitigation legal infrastructure and as reflected in the national climate change integrated framework of the Philippine Government.

The basic framework that these laws created and the plans that have been formulated, from the national level up to the local levels, show the sincerity of fulfilling the commitment of the Philippine Government to the international framework on climate change mitigation and adaptation. From the letters of the laws, the mandates provided by them, and the declaration of policies accompanying the same, it can be claimed that the Sustainable Development Goals (that were born out of the Millenium Development Goals) that puts a premium on holistic sustainable development, the Hyogo Framework for Action that aims to build the resilience of nations and communities to disasters vis a vis climate change effects, the ASEAN statements on climate change, among others, are all integrated with the policies, statutes, and the legal frameworks on climate change of the country. The general themes exhibited in the National Climate Change Action Plan that serve as the overall guide to the policy formulations, program implementation, and localized strategies and responses are in line with the sustainability goals set forth by international organizations and agencies. In other words, in terms of the policy context for climate change mainstreaming, the Philippines has achieved its basic goals. The national roadmaps and plans have been formulated. The legal framework has been structured; the initial government organization has been mainstreamed.

Towards Stronger Institutions in Climate Change Impact Mitigation: Gaps and Challenges

Be that as it may, careful examination of the legal infrastructure on climate change reveals some policy gaps and areas for improvements if a more sustainable and efficient translation to actual government programs and projects in climate change mitigation and adaptation are to be fully and efficiently implemented. Though the legal infrastructure provides for the ultimate results identified by the international standards and policies on the subject matter, the actual implementation and the applicability of the laws

related to on-ground operationalizations of their dictates can still be improved. There is still much to be desired if climate change efforts are to be further strengthened.

As the title of this paper suggests, the areas of improvement that will be elucidated in the succeeding paragraphs will be focused on strengthening institutions that are considered major stakeholders in climate change response. Determination of the gaps herein provided is centered on three main areas within the parameter of stronger institutions: institutional structure and organizational capacities, program sustainability (that has been subdivided into planning, monitoring, implementation, and fiscal sustainability), and partnerships. These areas are consistent with the main intent of the study i.e. look for ways to strengthen institutions to better respond to the demands of climate change impact mitigation and adaptation.

Institutional Structure and Organizational Capacities

The gaps identified in terms of the institutional structures and organizational capacities by this research are divided into two areas: national structure and local capacities. These areas are in line with the two administrative layers of the Philippine Government that are in line with the implementation of the programs and projects related to climate change impact adaptation and mitigation. Specifically, the gaps identified are pertinent to strengthening the Climate Change Commission and other pertinent national agencies on one hand and the local government units on the other.

National Level Gaps

As mentioned elsewhere in this paper, the establishment of the Climate Change Commission demonstrate the political will of the government to advance its climate change-related policies and projects. However, though the Commission had been created, the body remains to be recommendatory by nature and is limited to merely monitoring and updating climate change-related activities undertaken by other agencies, both national and local levels. The law and other legal issuances do not provide enough legal capacity and/or enough power to the Commission to oblige subnational agencies and other national instrumentalities to actualize the programs and projects pertinent to climate change mitigation strategies. Hence, despite the policy directives to the Commission to fully implement its plans and its mandate, its hands are still tied to advance all its directions.

In the same manner, coordination remains to be one of the biggest challenges of the Commission in its aim for more efficient and speedier implementation of projects and programs at the national and local levels. Going through the reports of the Climate Change Commission in its evaluation of the National Climate Change Action Plan, this aspect had also been identified as a gap. The Commission reiterated that: "coordination problems to cohere and synergize policies, plans, and actions across scales and sectors remain given the current framework of collaboration.." (Climate Change Commission, 2019). This same gap had been identified by the researcher through a careful review of reports and issuances included in the study as well as through the analysis of the existing legal framework and parameters being applied in the Commission. The Commission, being an attached agency to the Office of the President needed to pass through all other national agencies to coordinate its plans, directions, and projects before being implemented on the ground. It cannot, as a matter of framework, motu propio, act on its own causes delays and inefficiencies. Cascading national projects to local units remains to be challenging the result. Due to this, after more than a decade since the Commission's establishment, it is still trapped in establishing the monitoring and coordination protocols that it can adapt to improve its implementation capacities.

Local Level Gaps

The organizational capacity to respond to climate change in the local government unit, which is supposed to be at the forefront of climate change adaptation and mitigation responses, remains to be very limited. Despite the supposed 'urgency' of the situation, there is no devoted person let alone a dedicated office in the local government units that will plan (update if necessary), implement, and monitor climate change-related programs and projects. While the Disaster Risk Reduction and Management Act creates the local DRRM offices with its accompanying personnel plantilla, the Climate Change Act remains elusive to this. Currently, the local disaster risk reduction and management offices in the localities are the ones being appointed as focal persons. With this setup, the urgent atmosphere to realize the plans and policy directions related to climate change is not felt at the local level. Due to this as well, the task to consolidate and monitor the implementation of local government units' local climate change action plans, not to mention the drive to realize it, remains ambivalent.

The Challenge for Sustainability: Program Sustainability and Fiscal Sustainability

Examining the specificities of program implementation also raises some concerns, particularly concerning planning, monitoring, and actual implementation of climate change adaptation and mitigation programs and projects. Since plans needed for climate change response are highly technical, the formulation of 'substantive and appropriate' local government units' local climate change adaptation plans remains to be a major challenge. The presence of technical data and the inputs of experts in the field are sine qua non for the development of these plans. With the current structure and the manpower and logistics limits of the majority of local governments in the Philippines, these were not provided in the planning process. Moreover, there is no actual review/evaluation of the technical and substantive part of the LCCAPs. The Climate Change Commission and other national agencies were only limited to consolidating and updating compliance of plan submission. The task of going into the specifics of the plans is, for whatever reason, not yet being done. It must be noted at this juncture that the said task is something nearly impossible in an overly centralized organization, such as the Climate Change Commission. If the plans are not appropriate and suited to the needs of the locality and if they are not based on scientific and well-studied data, the whole program implementation and its sustainability will be compromised.

As earlier discussed in this paper, there is still much to be done if fiscal sustainability in the program implementation is to be achieved. On one hand, the funds allocated for programs coming from the People's Survival Fund are still largely unutilized. Though there are fund requests from different LGUs, very few have been approved and funded. The primary reason owing to this, again, is the lack of technical experts of local government units to assist them in the formulation and their inability to anchor these plans to scientifically-backed data. It is precisely due to these reasons that their proposals are not approved.

The local budgetary gap that this paper identified had also been elucidated in the previous discussions. As long as funds allocation for climate change mitigation and adaptation remain integrated with the local disaster risk reduction and management funds, prioritization of the same can never be expected. With the demands of disaster management and response to every local government unit where climate change adaptation and mitigation get its budget share, the budget allocation for special

projects for climate change mitigation is not highlighted let alone given proper prioritization. As was discussed earlier, aside from the fact that the funds are not enough to cover all of the areas needed for both disaster preparedness and climate change impact mitigation and adaptation, without special allotment for the sole use of programs related to climate change response efforts, prioritization of the same is still far from sight.

The Challenge to Partnerships and Collaboration with the Academe

One of the main aims of the current legal framework in climate change mitigation and adaptation as stipulated in the declaration of policy of the Climate Change Act in the area of partnership and collaboration among stakeholders. Despite this, it is the case however that based on accomplishment reports of the Commission, this area has not been largely substantiated. Major collaborative programs and projects are limited to interagency program implementations and shared funding from foreign institutions. This can be attributed to the lack of a clear mechanism and overall cooperation and collaboration framework to govern such undertakings. Though the law, through its declaration of policy, provides for its legal mandate, its operationalization and mechanisms of it have not been provided.

A sector that is so fertile for collaborative and cooperative program development when it comes to climate change mitigation and adaptation is the academe. Indeed, there are so many areas of cooperation that can be explored between the Philippine Government both through the local government units and pertinent national agencies and the private and public educational institutions to further advance the dictates of partnerships and collaboration. Among others, curricular integration of climate change in the academe, sharing of knowledge and expertise of government and the academe, climate change effects on community education programs, and climate education mainstreaming are just among the areas where the said collaboration and cooperation can take place. Up to the time being, however, despite the diversity of areas of collaboration mentioned, there is no actual operationalization of the inclusion of the academic community in the national climate change adaptation strategy, something that can be developed if the effort of the government is to be multisectoral and proactive. As the data indicate, only two (2) projects collaborated with the academic sector. These projects only involve nine (9) Stat Universities and Colleges out of 119 in the Philippines. Moreover, only 1 project from a private higher educational institution out of the more than 2,400 HEIs in the Philippines had been conducted. A clear policy of integration of the academe accompanied by a mechanism of operationalization is needed. Needless to say, this is an endeavor that is

not just appropriate but necessary if the government is to remain steadfast in its commitment to mainstreaming its climate change response program.

Recommendations: Empower, Decentralize, Devolve, and Collaborate

Empower. Government institutions on top of climate change response must be further empowered. The framework in the creation of the Climate Change Agency (in this case Climate Change Commission) should be shifted from an entity limited to monitoring and coordination to a full-blown working government agency. The current framework is akin to just an ad-hoc council where administrative powers, resources, and manpower are heavily dependent on other collaborating agencies. If self-sufficiency is to be attained, the law should grant more power to the Commission either as a separate department in the executive branch, such as the case in Germany, Canada, and Pakistan, or as an independent body with quasi-judicial functions. The former will enable the Climate Change Commission to maintain and utilize the national government's resources like any other national agency in the country like having field offices, and enough manpower plantilla to fully implement the rationale of the law. On the other hand, the latter will provide the Commission enabling power and more jurisdiction to be able to implement more efficiently the dictates of the laws by directing other government agencies, subnational government agencies, industries, and communities to follow its mandates.

Decentralize. To fully implement the programs and strategies of the government in terms of climate change response, decentralization is not just desirable but necessary. Both in terms of resource distribution and sharing of technical expertise, the current climate change national strategy is overly centralized. If the aim is to strengthen the organizational and institutional capacities of the institutions tasked to implement the policy directives on climate change, decentralization in the form of deconcentration of the national agency in charge must take place in the form of the creation of regional offices. These regional offices must both have administrative and technical divisions (the technical division can be in the form of a Regional Technical Advisory and Validation Board) to be able to assist and help subnational agencies with all their pertinent concerns. This will also minimize, if not eradicate, the coordination problems arising from the current coordination framework since there are already national agency counterparts in the current government setup.

Devolve and capacitate. Full devolution of functions with its accompanying strengthening of capacities among local government units

can further add to the current government framework towards climate change. Specifically, the policy should provide for the creation of a local government climate change office instead of just being integrated into LDRRMO. Therefore that it must also come with the creation of a manpower plantilla that is headed by at least a division head with administrative staff and technical staff. This will truly put into the mainstream the government's efforts to make a difference in climate change adaptation and mitigation. In terms of resources needed for local government units, there has to be created special-purpose appropriation to establish special funds for climate change-related programs and projects. This can be, like the local risk reduction and management fund, 5% of revenue coming from regular sources of each LGU. If this will be provided, then, the national agency (Climate Change Commission) can then formulate the menu, areas, and types of programs and projects that can be funded using this special purpose appropriation. Real mainstreaming means funds, dedicated office, competent manpower, and accountable institutions.

Collaborate. Finally, partnerships must be institutionalized. The framework of such must be clear and operational. Mandatory inclusion of climate change-related studies at all levels must be integrated into our educational system (currently it has only been stipulated albeit very vaguely in the General Appropriations Act). If the preceding policy recommendations will be addressed, then a possible framework of collaboration and cooperation can take place between the Regional Climate Change Offices and educational institutions both public and private. This will pave the way for better cooperation and collaboration.

Conclusion

The paper examined the Philippine government's responses to climate change mitigation and adaptation. It explored the legal infrastructure, the implementation policies and frameworks, and the fiscal demands of sustainability to government programs and projects related to the case at hand. Based on these, the research elucidated policy recommendations that are hoped to restrengthen the Philippines' efforts to adapt to international demands of climate change response. The recommendations are also developed within the purview of program sustainability viewed through the lenses of program implementation, fiscal sustainability, and the legal basis.

However, as the title of this research aptly indicates, the focus of these policy recommendations is within the area of local government and

educational institutions; after all, the call of the paper for stronger institutions is clearly on these areas. Without elaborating the specificities, it is demonstrated that there is an imperative for devolution to the conduct of program implementation among Local Government Units in the country. This devolution must be carried out with proper support coming from the national agencies both in terms of technical capacities, budgetary imperatives, and organizational establishment. Moreover and as earlier alluded, for the programs and projects to be more proactive, the paper also recommends wider participation from educational institutions that cut across the areas of curriculum, instruction, and sharing of expertise in climate change mitigation and adaptation.

References

2013 Typhoon Haiyan: Facts, FAQs, and how to help. (n.d.). *World vision*. https://www.worldvision.org/disaster-relief-news-stories/ 2013-typhoon-haiyan-facts.

Asian Disaster Reduction Center. (n.d.). *Information on disaster risk reduction of member countries.* https://www.adrc.asia/ nationinformation.php?NationCode=608&Lang=en.

Asian Development Bank. (2012). *Addressing migration and climate change in Asia and the Pacific: Final report*. ADB.

Blair, H. (2000). Participation and accountability in the periphery: Democratic local governance in six countries. *World Development 28*(1). 21-39.

Brillantes, A. & Montes, R. (2007). Federalism: Logical step after devolution? *Philippine Journal of Public Administration 51*(1-4). 1-32.

Brillantes, A. (1987). Decentralization in the Philippines: An overview. *Philippine Journal of Public Administration*, 31 (2): 131-148.

Brillantes, A. (1998). Decentralized democratic governance under the local government code: A governmental perspective. *Philippine Journal of Public Administration, 32*(1&2): 38-57.

Brown, K. (2012). Typhoon Pablo batters 'typhoon-free' Mindanao. *The Asia Foundation*. https://asiafoundation.org/2012/ 12/19/ typhoon-pablo-batters-typhoon-free-mindanao/.

Capuno, J. (2019). Tugs of war: Local governments, national government. *Public Policy Journal*, 16 & 17: 98-116.

Cheema, S. & Rondinelli, D. (2007). *Decentralizing governance: Emerging concepts and practices.* Brookings Institution Press.

Dorotan, E. & Carizo, J. (2014). *Issues and critical actions in local governance.* Galing Pook Foundation.

Hannah, R. (2014). *Climate change and human development*. Zed Books Ltd.

Griggs, G. (2017). *Coasts in crisis: A global challenge*. University of California Press.

Jha, A. & Geddes, Z. (2013). *Strong, safe, and resilient: A strategic policy guide for disaster risk management in East Asia and the Pacific*. The World Bank.

Local Government Academy of the Philippines. (2013). *User's manual for LGUs: Guidebook for the preparation of LCCAP*. Fabi's Enterprises.

Manila Observatory for the Congressional Commission on Science and Technology and Engineering. (2010). *COMSTE Technical primer on climate change in the Philippines conference engineering resilience, confronting risk beyond adaptation*. Sofitel Manila

Mayon mud buries 100 in Bicol amid 'Reming' fury. (2006, Nov. 30). GMA News Online. https://www.gmanetwork.com/news/news/nation/22465/mayon-mud-buries-100-in-bicol-amid-reming-fury/story/.

National Climate Change Commission. (2021). *2020 Accomplishment Report: Adapting for a sustainable future.*

National Climate Change Commission. (2011). *National climate change action plan.*

National Climate Change Commission. (2019). *The Philippine national climate change action plan.*

NDCC: Typhoon 'Frank' damage estimate now at P 10B. (2008, July 1). GMA News Online. https://www.gmanetwork.com/news/news/nation/104407/ndcc-typhoon-frank-damage-estimate-now-at-p10b/story/.

Perez, R. (2017). *Assessment of vulnerability and adaptation to climate change in the Philippines coastal resources sector*. Natural Disaster Reduction Branch – PAGASA.

Remembering Milenyo's wrath in 2006. (2014, July 15). Philippine Star. https://www.philstar.com/news-commentary/2014/07/15/1346515/remembering-milenyos-wrath-2006.

Republic Act 9729, An act mainstreaming climate change into government policy formulations, establishing the framework strategy and program on climate change, creating for this purpose the climate change commission, and other purposes (2009). https://www.officialgazette.gov.ph/2009/10/23/republic-act-no-9729/.

Republic Act 10174, An act establishing the people's survival fund to provide long-term finance streams to enable the government to effectively address the problem of climate change, amending for the purpose Republic Act 9729, otherwise known as the 'Climate Change Act of 2009', and for other purposes (2012). https://www.officialgazette.gov.ph/2012/08/16/republic-act-no-10174/.

Republic Act 10121, An act strengthening the Philippine Disaster Risk Reduction and Management System, providing for the National Disaster Risk Reduction and Management framework and institutionalizing the National Disaster Risk Reduction and Management Plan, appropriating funds therefore and for other purposes (2010). https://www.officialgazette.gov.ph/2010/05/27/republic-act-no-10121/.

Republic Act 7160, An Act for a Local Government Code of 1991 (1991). https://www.officialgazette.gov.ph/1991/10/10/republic-act-no-7160/.

Walker, R. & Mason, W. (2015). *Climate change adaptation for health and social services*. CSIRO Publishing.