

# CONSTRUCTING THE PHILIPPINE CLIMATE CHANGE LEGAL FRAMEWORK

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# CONSTRUCTING THE PHILIPPINE CLIMATE CHANGE LEGAL FRAMEWORK\*

*Rommel J. Casis\*\**

*Climate change poses clear, catastrophic threats. We may not agree on the extent, but we certainly can't afford the risk of inaction.*

*- Rupert Murdoch*

## I. INTRODUCTION

Climate change poses a problem requiring a solution. According to experts, human activities are causing changes in the climate all over the world. Regardless of the scientific debate, people readily believe this as fact considering that the seasons have been changing. The Philippines is registering the hottest days on record. People are seeing and feeling the change in the climate.

This change is critical because the climate has a great impact on people. The climate determines the kind of food people eat, where people live, the kind of clothes they wear, the nature of their work and the kind of activities they can indulge in. Any significant change in the climate will change the lives of people and the society they are in.

Because this is not a scientific paper, the technical merits of the debate on whether human activities are to blame for climate change will not be discussed at length. However, it must be said that the most recent scientific data does support the view that human activities are causing the earth's climate to change in a manner and at a pace inconsistent with natural cycles. Assuming that human behavior is directly to blame for climate change, the establishment of laws regulating or prohibiting such behavior becomes readily apparent. What is less apparent but no less important is the need for law and policy that seeks to address the impacts of climate change.

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Thus, law and policy must address the cause as well as the effects of climate change.

As originally conceived this paper was titled “Philippine Climate Change Law.” However, such title is misleading because at this point there is, strictly speaking, no such thing as a particular body of law enacted by the Philippine legislature for the sole purpose of addressing the cause or the impacts of climate change in the Philippines. At best, what exists in the Philippines are administrative regulations on climate change and a few provisions in statutes relevant to climate change. Thus, while there is an existing legal framework it has not reached a stage where it can be properly considered as “climate change law.”

This paper offers an analysis of the evolving Philippine legal framework on climate change by answering two questions: First, what is the Philippines doing to address climate change by way of legislation and regulation? And second, is there a need for further legislation and if so what should such legislation provide?

Part I of this paper discusses the basic scientific concepts involved in climate change. Those familiar with these concepts may find this part unnecessary. However, while this is not a scientific paper, a basic understanding of climate change is the foundation of a proper analysis of the issue. Effective law and policy must take into account the science of climate change. Part II summarizes the provisions of the United Nations Framework Convention on Climate Change (“UNFCCC”) and its Kyoto Protocol, which have relevance to the Philippines. As such, Part II is not intended to be an exhaustive discussion on these two legal instruments. However, Part II does identify the provisions of these agreements that need to be considered in Philippine climate change legislation, and offers some legislative proposals in line with international climate change law.

Part III analyzes the current Philippine legal framework. As mentioned previously, this includes the administrative regulations and the relevant statutes. Hence, Part III seeks to answer the first question posed above. Part IV outlines a proposed legal framework and enumerates both significant policy considerations and items for legislation. It therefore answers the second question listed above. Although some proposals are discussed in Parts II and III within the context of current laws and regulations, the bulk of the proposals are found in Part IV.

## II. MAKING SENSE OF CLIMATE CHANGE: SCIENCE AND TERMS

*Climate* may be defined as ‘average weather’ and “is usually described in terms of the mean and variability of temperature, precipitation and wind over a period of time, ranging from months to millions of years.”<sup>1</sup>

Science teaches that “[t]he climate system is a complex, interactive system consisting of the atmosphere, land surface, snow and ice, oceans and other bodies of water, and living things.”<sup>2</sup> This climate system has been changing over millions of years “under the influence of its own internal dynamics and due to changes in external factors that affect climate.”<sup>3</sup> These external factors are called *forcings*.<sup>4</sup>

Thus, even without human intervention, the climate has been changing because of its own internal dynamics and forcings caused by natural phenomena (e.g. volcanic eruptions). Scientifically speaking, *climate change*:

“[R]efers to a change in the state of the climate that can be identified (e.g. using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity”.<sup>5</sup>

However, in this paper, climate change is referred to in its legal sense or as defined in the UNFCCC which identifies it as an *anthropogenic* or human-induced phenomena or:

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<sup>1</sup> Le Treut, H., R. Somerville, U. Cubasch, Y. Ding, C. Mauritzen, A. Mokssit, T. Peterson and M. Prather, *Historical Overview of Climate Change* in CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS. CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 96 (Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller, eds. 2007). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA p. 96.

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

<sup>4</sup> *Id.*

<sup>5</sup> Climate Change 2007: Synthesis Report, *Intergovernmental Panel on Climate Change* p.30

“[A] change of climate which is *attributed directly or indirectly to human activity* that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”.<sup>6</sup> (Emphasis supplied)

Scientific studies show that human activities have reached a magnitude capable of altering the planetary climate. This is possible because human activities are affecting the radiation balance of the earth.

“Solar radiation powers the climate system. There are three fundamental ways to change the radiation balance of the Earth: 1) by changing the incoming solar radiation (e.g., by changes in Earth’s orbit or in the Sun itself); 2) by changing the fraction of solar radiation that is reflected (called ‘albedo’; e.g., by changes in cloud cover, atmospheric particles or vegetation); and 3) by altering the longwave radiation from Earth back towards space (e.g., by changing greenhouse gas concentrations). Climate, in turn, responds directly to such changes, as well as indirectly, through a variety of feedback mechanisms”.<sup>7</sup>

Human activities are changing the greenhouse gas concentrations in the atmosphere. These greenhouse gases keep the Earth’s surface warm because they “act as a partial blanket for the longwave radiation coming from the surface”<sup>8</sup> and “[t]his blanketing is known as *the natural greenhouse effect*”.<sup>9</sup> Unfortunately,

“[h]uman activities intensify the blanketing effect through the release of greenhouse gases. For instance, the amount of carbon dioxide in the atmosphere has increased by about 35% in the industrial era, and this increase is known to be due to human activities, primarily the combustion of fossil fuels and removal of forests. Thus, humankind has dramatically altered the chemical

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<sup>6</sup> Article 1.2 United Nations Framework Convention on Climate Change [hereinafter “UNFCCC”].

<sup>7</sup> *Supra* note 1.

<sup>8</sup> *Id.* at 97.

<sup>9</sup> *Id.*

composition of the global atmosphere with substantial implications for climate”.<sup>10</sup>

This intensified greenhouse effect is what is commonly known as *global warming*.

### III. INTERNATIONAL CLIMATE CHANGE LAW

#### A. UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

The UNFCCC is the primary international agreement that commits states to address *anthropogenic* climate change. Prior to the UNFCCC, there was “no overall convention constituting a comprehensive international framework that can address the interrelated problems of the global atmosphere, or that is directed toward the issues of climate change.”<sup>11</sup> The UNFCCC was adopted at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992 and signed by 154 states. It entered into force on 21 March 1994 and “enjoys near universal membership, with 192 countries having ratified it.”<sup>12</sup>

##### 1. The end to be achieved

The main objective of UNFCCC is:

“to achieve...stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner”.<sup>13</sup>

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<sup>10</sup> *Id.*

<sup>11</sup> Legal Aspects, Conference Statement and Recommendations of Working Groups, downloaded from <http://www.cmos.ca/Metphotos/ChangingAtmosphereConference1988.html> accessed on 24 December 2008.

<sup>12</sup> UNFCCC Website [http://unfccc.int/essential\\_background/convention/items/2627.php](http://unfccc.int/essential_background/convention/items/2627.php)

<sup>13</sup> Article 2, UNFCCC.

*a. Mitigation*

The above quoted paragraph clearly indicates that “[m]itigating climate change and its impacts lies at the heart of the Convention’s objective”.<sup>14</sup> The stabilization of greenhouse gases in the atmosphere can be reached in two ways: 1) by limiting or reducing greenhouse gas emissions by sources, and (2) by preserving or enhancing sinks or reservoirs.<sup>15</sup>

As defined under the UNFCCC, a *source* is “any process or activity which releases a greenhouse gas, an aerosol or a precursor of a greenhouse gas into the atmosphere”.<sup>16</sup> Examples include the burning of fossil fuels (e.g. coal) and conversion of forestlands to agricultural or industrial use.

On the other hand, a *sink* is “any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere”.<sup>17</sup> There are *natural sinks* such as absorption of carbon dioxide by the ocean, photosynthesis by plants and algae, and mineral sequestration or when carbon is trapped in solid carbonate salts. There are also *man-made sinks* such as carbon capture and storage and direct CO<sub>2</sub> injection.

Finally, a *reservoir* is “a component or components of the climate system where a greenhouse gas or a precursor of a greenhouse gas is stored.”<sup>18</sup> Reservoirs include the soil, forests, oceans and limestone.

*b. Adaptation*

The objective of the UNFCCC qualifies that the stabilization of greenhouse gas concentrations in the atmosphere “should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change.”<sup>19</sup> Thus, adaptation is a key element in the UNFCCC’s objective.

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<sup>14</sup> United Nations Framework Convention on Climate Change Handbook: [hereinafter “UNFCCC Handbook”] Climate Change Secretariat 74 (2006).

<sup>15</sup> *Id.*

<sup>16</sup> Article 1.9, UNFCCC.

<sup>17</sup> Article 1.8, UNFCCC.

<sup>18</sup> Article 1.7, UNFCCC.

<sup>19</sup> Article 2, UNFCCC.

Adaptation is “the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects that moderates harm or exploits beneficial opportunities.”<sup>20</sup> It is “the ability to respond and adjust to actual or potential impacts of changing climate conditions in ways that moderate harm or take advantage of any positive opportunities that the climate may afford.”<sup>21</sup>

As discussed in the later paragraphs, one of the arguments put forward by this paper is that the Philippines should prioritize adaptation measures over mitigation measures in dealing with climate change.

## 2. Annex I and Non-Annex I Parties

The UNFCCC distributes the Parties into two main groups – Annex I and Non-Annex I parties. These groupings are in keeping with the principle of *common but differentiated responsibilities*, which is one of the guiding principles of the UNFCCC.<sup>22</sup> The principle is based on the recognition that there are historical differences in the contributions of developed and developing States to global environmental problems, and differences in their respective economic and technical capacity to tackle these problems.<sup>23</sup>

“States have common responsibilities to protect the environment and promote sustainable development, but due to different social, economic, and ecological situations, countries must shoulder different responsibilities. The principle therefore provides for asymmetrical rights and obligations regarding environmental standards, and aims to induce broad State acceptance of treaty obligations, while avoiding the type of problems typically associated with a lowest common denominator approach. The principle also reflects the core elements of equity, placing more responsibility on wealthier countries and

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<sup>20</sup> *Supra* note 15, at 94.

<sup>21</sup> VILLARIN, ET. AL., IN *THE EYE OF THE PERFECT STORM: WHAT THE PHILIPPINES SHOULD DO ABOUT CLIMATE CHANGE* 58 (2008).

<sup>22</sup> See Article 3, UNFCCC.

<sup>23</sup> The Center for International Sustainable Development Law. (n.d.). *The Principle of Common But Differentiated Responsibilities: Origins and Scope*. Retrieved April 14, 2009, from CISDL: [http://www.cisdll.org/pdf/brief\\_common.pdf](http://www.cisdll.org/pdf/brief_common.pdf)

those more responsible for causing specific global problems. Perhaps more importantly, the principle also presents a conceptual framework for compromise and co-operation in effectively meeting environmental challenges”<sup>24</sup>

Annex I Parties are those countries with “higher per capita emissions than most developing countries and they have greater financial and institutional capacity to address climate change.”<sup>25</sup> Within the Annex I Parties are two groups – Annex II parties and countries with economies in transition or EIT Countries.

Annex I Parties “have a special obligation to provide ‘new and additional financial resources’ x x x to developing countries to help them tackle climate change x x x and must also facilitate the transfer of climate-friendly technologies to both developing countries and EITs.”<sup>26</sup> On the other hand EIT Countries are “allowed a certain degree of flexibility in implementing the commitments”<sup>27</sup>

Non-Annex I Parties are developing countries. The Philippines belongs to this group. Within Non-Annex I parties is a sub group called Least Developed Countries or LDCs.

### 3. The “Ten Commitments”

It is a commonly held belief that developing countries do not have binding commitments under the UNFCCC. However, Article 4.1 of the UNFCCC clearly provides for commitments of *all* parties. Although Article 4.1 states that in complying with the commitments under the article Parties are to “tak[e] into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances,”<sup>28</sup> it cannot be taken to mean that developing countries are completely excused from complying with the commitments under the UNFCCC. Thus, even developing countries like the Philippines are bound to comply with the following commitments:

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<sup>24</sup> *Id.*

<sup>25</sup> *Supra* note 15 at 46.

<sup>26</sup> *Id.* at 47.

<sup>27</sup> *Id.* at 48.

<sup>28</sup> Article 4, UNFCCC.

*a. Prepare National Inventories*

Article 4.1(a) of the UNFCCC provides that each Party must develop, periodically update, publish and make available to the COP<sup>29</sup> national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases.

The Philippines submitted its Initial National Communication in 1999. Considering that it has been ten years since this submission, the Philippines should endeavor to submit an updated inventory. Providing for a mechanism that will ensure an accurate and regular updating and publication of national inventories, is an item that can be included in Philippine climate change legislation.

*b. Formulate National Programmes on Mitigation and Adaptation Measures*

Article 4.1(b) of the UNFCCC provides that each Party must formulate, implement, publish and regularly update national programmes containing measures to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all greenhouse gases, and measures to facilitate adequate adaptation to climate change.

The Philippines has yet to legislate a national program on mitigation and adaptation measures. It should be noted that this national program must contain both mitigation and adaptation measures.

*c. Promote Development and Transfer of Technologies*

Article 4.1(c) of the UNFCCC provides that each Party must promote and cooperate in the development, application and diffusion, including transfer of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors.

While this is a commitment of all Parties, the development and transfer of technologies is mainly the responsibility of developed countries. However, developing countries like the Philippine should provide for mechanisms that would facilitate technology transfer to their countries. As

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<sup>29</sup> This refers to the Conference of the Parties which is the supreme body under the UNFCCC.

will be discussed in later paragraphs, one way of promoting technology transfer is through the Clean Development Mechanism under the Kyoto Protocol.

*d. Promote Sustainable Management of Sinks and Reservoirs*

Article 4.1(d) of the UNFCCC provides that each Party must promote sustainable management, and promote and cooperate in the conservation and enhancement of sinks and reservoirs of all greenhouse gases including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems.

One way the Philippines can comply with commitment is by supporting projects which seek to protect and conserve forests and other ecosystems. The Philippines already has a number of environmental laws that seek to accomplish this, so it may be matter of implementing these laws.

*e. Cooperate in Preparing for Adaptation*

Article 4.1(e) of the UNFCCC provides that each Party must cooperate in preparing for adaptation to the impacts of climate change and to develop and elaborate appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particularly in affected by drought and desertification, as well as floods.

This commitment makes adaptation not merely a national necessity but also a matter of international responsibility, as the impacts of climate change cuts across national boundaries. In this regard, the Philippines must participate in regional initiatives on climate change adaptation.

The Philippines can comply with this commitment by being an active participant in climate change initiatives of the Association of Southeast Asian Nations (hereinafter ASEAN). The ASEAN has issued three declarations on climate change, namely:

- i. ASEAN Declaration on the 13<sup>th</sup> Session of the Conference of the Parties (COP) to the UNFCCC and the 3<sup>rd</sup> Session of Conference of the Parties Serving as Meeting of the Parties (CMP) to the Kyoto Protocol;
- ii. ASEAN Declaration on Environmental Sustainability; and

iii. Singapore Declaration on Climate Change, Energy and the Environment.

ASEAN leaders have also agreed to encourage the efforts to develop an ASEAN Climate Change Initiative, which is “envisaged to be a consultative platform to further strengthen regional coordination and cooperation in addressing climate change, and to undertake concrete actions to respond to its adverse impacts.”<sup>30</sup>

*f. Consider Climate Change in Policies and Methods*

Article 4.1(f) of the UNFCCC provides that each Party must take climate change considerations into account, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change.

This commitment is a recognition that climate change impacts are pervasive and must be considered in policy-making.

*g. Promote and Cooperate in Climate Change Research*

Article 4.1(g) of the UNFCCC provides that each party must promote and cooperate in scientific, technological, technical, socio-economic and other research, systematic observation and development of data archives related to the climate system and intended to further the understanding and to reduce or eliminate the remaining uncertainties regarding the causes, effects, magnitude and timing of climate change and the economic and social consequences of various response strategies.

It would seem that scientific, technological, technical, socio-economic and other research on climate change is an international commitment. In this regard, the Philippine climate change framework must provide for a mechanism whereby our scientists and researchers can share and exchange information relevant to the climate.

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<sup>30</sup> Press Release: ASEAN Cooperates on Climate Change. ASEAN Website. <http://www.aseansec.org/21248.htm> accessed on 22 April 2009

*h. Promote and Cooperate in Open Exchange of Information*

Article 4.1(h) of the UNFCCC provides that each party must promote and cooperate in the full, open and prompt exchange of relevant scientific, technological, technical, socio-economic and legal information related to the climate system and climate change, and to the economic and social consequences of various response strategies.

However, before the Philippines can effectively exchange information with other countries, the research data from the various government agencies must be collated and organized. Ideally, there should be a common repository of information for the government where private research institutes can also contribute. In this manner, policymakers can access this information from one authoritative source. The creation of this mechanism to collate, organize and analyze scientific data on climate change is one of the items that can be included in Philippine climate change legislation.

*i. Promote and Cooperate in Climate Change Education*

Article 4.1(i) of the UNFCCC provides that each Party must promote and cooperate in education, training and public awareness related to climate change and encourage the widest participation in this process, including that of non-governmental organizations (hereinafter NGOs).

The Philippines has made some headway in making climate change known to the general population largely because of the support of mass media and NGOs. The next step is perhaps institutionalizing these efforts or making these efforts a continuous and concerted action.

*j. Communicate Implementation Information to COP*

Article 4.1 (j) of the UNFCCC provides that each Party must communicate to the COP information related to implementation. Hence, the Philippines must report to the rest of the world what it is doing to address climate change. In this sense every party to the UNFCCC is accountable to each other.

As a Party to the UNFCCC, the Philippines must comply with the aforementioned commitments. These “10 Commitments of the UNFCCC”

may also serve as the criteria for measuring the comprehensiveness of efforts made by the Philippine government to address climate change.

## B. THE KYOTO PROTOCOL

The Kyoto Protocol to the United Nations Framework Convention on Climate Change (hereinafter Protocol) is an international agreement linked<sup>31</sup> to the UNFCCC. It was adopted in Kyoto, Japan, in December 1997 and entered into force on 16 February 2005. The Protocol was developed to meet the ultimate objective of the UNFCCC because the negotiators noted the apparent lack of commitment and quantified targets under the instrument.<sup>32</sup>

### 1. The heart of the protocol

Article 3.1 of the Protocol commits Annex I Parties to individually or jointly, ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A do not exceed their assigned amounts<sup>33</sup> with a view to reducing their overall emissions of such gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012. Emissions reduction is the heart of the Protocol. It is primarily a mitigation measure intended to reduce greenhouse gas emissions by requiring developed states to reduce their overall emissions by certain percentages. In addition, the Protocol provides for other commitments from Annex I Parties but emissions reduction still remains the core commitment under the Protocol.

It should be noted that the Protocol also provides for commitments for both Annex I and Non-Annex I Parties. However the Protocol does not add to the commitments of Non-Annex I Parties but merely reiterates those indicated in Article 4.1 of the UNFCCC.

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<sup>31</sup> Only parties to the UNFCCC can become parties to the Kyoto Protocol.

<sup>32</sup> LEONCIO A. AMADORE, CRISIS OR OPPORTUNITY: CLIMATE CHANGE IMPACTS AND THE PHILIPPINES 45 (2005).

<sup>33</sup> This is calculated pursuant to their quantified emission limitation and reduction commitments inscribed in Annex B and in accordance with the provisions of Article 3.

## 2. The means to achieve the end

The Protocol allows Annex I Parties to add to or subtract from their initial assigned amount, thus raising or lowering the level of their allowed emissions over the commitment period, by trading units with other Parties.<sup>34</sup> These mechanisms are joint implementation, emissions trading, and clean development mechanism.

These are called flexibility mechanisms because they “enhance the flexibility of Annex I Parties to meet their emission reduction or limitation commitments, by allowing these Parties to take advantage of lower-cost emission reductions outside their territories”.<sup>35</sup>

### *a. Joint implementation*

Article 6.1 of the Protocol provides that, for the purpose of meeting its commitments under Article 3, Annex I Parties may transfer to, or acquire from, any other such Party emission reduction units resulting from projects aimed at reducing anthropogenic emissions by sources or enhancing anthropogenic removals by sinks of greenhouse gases in any sector of the economy. In other words, joint implementation “is a project-based mechanism by which one Annex I Party can invest in a project that reduces emissions or enhances sequestration in another Annex I Party, and receive credit for the emission reductions or removals achieved through that project”.<sup>36</sup>

### *b. Emissions trading*

Article 17 allows countries that have excess capacity to sell to countries that are over their targets. Because carbon dioxide is the principal greenhouse gas this has also been known as “carbon trading” or the “carbon market.” In emissions trading, an Annex I Party may transfer Kyoto units to or acquire units from another Annex I Party.

Although it is possible for a party to obtain an unlimited number of units under this mechanism, the number of units that a party may transfer is

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<sup>34</sup> UNFCCC, Kyoto Protocol Reference Manual On Accounting of Emissions and Assigned Amount 15 (2008).

<sup>35</sup> *Id.*

<sup>36</sup> *Id.* at 17.

limited by the commitment period reserve which is the minimum number of units that a party must hold in its national registry.<sup>37</sup>

*c. Clean development mechanism*

Clean Development Mechanism (hereinafter CDM) is a project-based mechanism which allows emission-reduction or emission removal projects in Non-Annex I parties to earn certified emission reduction (hereinafter CER) credits which are equivalent to one ton of carbon dioxide.

The Protocol states that the purpose of the CDM is to assist Non-Annex I Parties in achieving sustainable development and in contributing to the ultimate objective of the UNFCCC, and to assist Annex I Parties in achieving compliance with their quantified emission limitation and reduction commitments under Article 3.<sup>38</sup> Through CDM, Non-Annex I Parties will benefit from project activities resulting in certified emission reductions while Annex I Parties may use the certified emission reductions accruing from such project activities to contribute to compliance with part of their quantified emission limitation and reduction commitments under Article 3, as determined by the Conference of the Parties serving as Meeting of the Parties to the Kyoto Protocol.<sup>39</sup>

Being a Non-Annex I Party, CDM is the flexibility mechanism most relevant to the Philippines. Based on a presentation made in 2008, the Philippines ranks in the top 10 in the world as far as project activities registered.

“As of July 11, 2008, we have been able to receive eighty (80) project activities in terms of CDM projects. Of these eighty (80) project activities, we have been able to issue 56 Letters of Approval (LOA) for project activities x x x. Most of the approved projects deal with energy-related activities, while the rest pertains to waste management measures. The first project activity to be issued an LOA in 2005—and which has also been issued Carbon Emission Reduction (CER) credits—is a wind power project in Ilocos Norte.

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<sup>37</sup> *Id.* at 16.

<sup>38</sup> Article 12.2, Kyoto Protocol.

<sup>39</sup> Article 12.3, Kyoto Protocol.

From the applications received so far, we have an estimated annual CERs of about 2,879,843 tons of carbon dioxide. Also, as of July 14, 2008, the Philippines ranks seventh (7<sup>th</sup>) in the world in terms of the project activities registered, having successfully registered 19 ... These projects registered in the Philippines represents about 1.70% of the 1,116 project activities registered throughout the world. The top countries in terms of CDM approval include India, China, Brazil, Mexico, Malaysia, and Chile. The Philippines is currently competing with Korea in the rankings”.<sup>40</sup>

CDM offers multiple benefits to the country. First, CDM projects obviously help the environment. Second, it is a source of foreign investment. Third, it is an opportunity for technology transfer to the Philippines. Thus, Philippine climate change legislation should facilitate and promote CDM projects and other similar mechanisms.

#### IV. PHILIPPINE LEGAL FRAMEWORK

##### A. CLIMATE CHANGE RELATED

At present the Philippines does not have climate change specific legislation. However, the executive branch has issued a number of climate change specific administrative regulations. These are Administrative Order No. 220 (1991), Executive Order No. 320 (2004), DENR Administrative Order No. 2005-17, Administrative Order No. 171, as amended, DILG MC 69-08, and Executive Order No. 774. Each will be discussed below, summarizing its content and its salient points.

##### 1. Administrative Order No. 220 (1991)

As early as 1991, or even prior to the UNFCCC, the Philippine government recognized the “mounting scientific evidence of an impending global warming, a phenomenon caused by the accumulation of heat-trapping gases in the atmosphere with consequences which are far-reaching in scope and irreversible in nature.”<sup>41</sup> In line with this, President Corazon Aquino

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<sup>40</sup> Ma. Gerarda Asuncion Merilo, *Philippine Initiatives on Climate Change* in EXPERTS DIALOGUE ON PHILIPPINE CLIMATE CHANGE POLICY: MITIGATION AND ADAPTATION MEASURES (Institute of International Legal Studies U.P. Law Center, 2008).

<sup>41</sup> Administrative Order No. 220, (1991).

issued Administrative Order No. 220 (hereinafter AO 220) creating the Inter-Agency Committee on Climate Change (hereinafter IACCC). The IACCC Chairman is the Secretary of the Department of Environment and Natural Resources (hereinafter DENR<sup>42</sup>), and the Co-Chairman is the Secretary of the Department of Science and Technology (hereinafter DOST) with a senior representative from each of the following: Department of Foreign Affairs, Environment Management Bureau, National Mapping Resource and Information Agency, and Philippine Atmospheric, Geophysical and Astronomical Services Administration (hereinafter PAGASA).<sup>42</sup>

Other government agencies and concerned NGOs were tasked by AO 220 to give technical support.<sup>43</sup> Thus, the IACCC was essentially not a new government agency but a grouping of existing government agencies.

Under AO 220, the IACCC was tasked with the following functions:

- a. Formulate policies and response strategies related to climate change;
- b. Determine the national information requirements relevant to negotiations for the adoption of a central instrument at the UN Conference for Environment and Development, Brazil;
- c. Establish working groups to monitor and assess local climate change and its environmental and socio-economic impact in coordination with international agencies; and,
- d. Designate a focal point to serve as the link between the Philippines and the Secretariats of the United Nations Environmental Programs and the World Meteorological Organization.

## 2. Executive Order No. 320 (2004)

In June 2004, President Gloria Macapagal-Arroyo issued Executive Order No. 320 (hereinafter EO 320) designating the DENR as the National

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<sup>42</sup> Section 1, Administrative Order No. 220 (1991).

<sup>43</sup> Section 2, Administrative Order No. 220 (1991).

Authority for CDM. EO 320 states the value of Philippine participation in CDM in providing “numerous benefits in terms of foreign investments in CDM projects, employment and income opportunities, establishment of ecologically-friendly projects, technology transfer and income from carbon purchases by developed countries.”<sup>44</sup>

The designation of the national authority for CDM underscores the importance of CDM to the country. CDM is an opportunity that the Philippines should take advantage of because of the various benefits it can provide the country and the rest of the world. Through CDM, the Philippines can contribute to global mitigation efforts while at the same time increase foreign investment and transfer of green technologies.

EO 320 gives the DENR, as National Authority for CDM, the following powers and functions:

- a. Formulate and develop a national Clean Development Mechanism policy.
- b. Develop the criteria, indicators, standards, systems and procedures, and evaluation tools for the review of CDM projects
- c. Undertake the assessment and approval of CDM projects that will be submitted to the UNFCCC and Kyoto Protocol.
- d. Monitor the implementation of CDM projects, and
- e. Perform other functions that are related to and in pursuance of the development of CDM.

### **3. DENR Administrative Order No. 2005-17**

DENR Administrative Order No. 2005-17 (hereinafter DENR AO 05-17) provides for the Rules and Regulations Governing the Implementation of EO 320 “covering all proposed CDM project activities which will be implemented in the Philippines and which are seeking approval from the designated national authority for the CDM as a

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<sup>44</sup> Executive Order No. 320 (2004).

prerequisite to the submission by a designated operational entity of a validation report to the CDM Executive Board, requesting the registration of the project activity under the CDM.”<sup>45</sup>

DENR AO 05-17 has a three-fold objective: First, to articulate the national CDM policy;

Second, to define the Philippine CDM framework; and third, to implement a transparent, participatory, credible, efficient and effective process for the national approval of proposed CDM project activities.<sup>46</sup>

As stated in DENR AO 05-17, the policy of the DENR is:

“to facilitate and promote the development of CDM project activities that contribute to the UNFCCC objective of stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, lead to the transfer of environmentally safe and sound technology and know-how, contribute to the conservation of biological diversity and sustainable use of natural resources, comply with all other pertinent laws and regulations, and provide measures to alleviate poverty as part of their contribution to sustainable development”.<sup>47</sup>

DENR AO 05-17 also provides for support mechanisms “to ensure that the proposed CDM project activity meets the criteria for national approval of such proposed project activities.”<sup>48</sup> These mechanisms are, as follows:

*a. CDM Steering Committee*

Composed of an Undersecretary of the DENR as the Chair, an Undersecretary or Assistant Secretary from the Department of Energy and DOST, a representative of the private sector and a representative of

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<sup>45</sup> Section 4, DENR Administrative Order No. 2005-17 (2005) [hereinafter “DENR AO”].

<sup>46</sup> Section 3, DENR AO.

<sup>47</sup> Section 1, DENR AO.

<sup>48</sup> Section 7, DENR AO.

NGOs,<sup>49</sup> the CDM Steering Committee is responsible for reviewing the findings of the Technical Evaluation Committees (hereinafter TEC) and for endorsing the project application to the DENR Secretary for appropriate action.<sup>50</sup>

*b. CDM Technical Evaluation Committees*

Using the National Evaluation Protocol,<sup>51</sup> TECs are responsible for evaluating whether a proposed CDM project activity meets the national approval criteria.<sup>52</sup>

DENR AO 05-17 initially created the following TECs: a TEC for energy-related project activities; a TEC for waste management project activities; and a TEC for afforestation and reforestation project activities.<sup>53</sup>

*c. CDM Secretariat*

The CDM Secretariat is primarily responsible for facilitating the smooth implementation of the national approval process for proposed CDM project activities<sup>54</sup> and exercises the following functions:

- a. Verify the completeness of application documents;
- b. Identify the appropriate TEC(s) for a proposed CDM project activity;
- c. Refer a proposed CDM project activity to the appropriate TEC(s);
- d. Forward the Evaluation Report of the appropriate TEC to the CDM Steering Committee.

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<sup>49</sup> Section 7.1.1, DENR AO.

<sup>50</sup> Section 7.1.2, DENR AO.

<sup>51</sup> A document to be used by the relevant Technical Evaluation Committee to assess proposed CDM project activities in terms of basic project information and sustainable development criteria (Section 5.26 DENR Administrative Order No. 2005-17).

<sup>52</sup> Section 7.2.4, DENR AO.

<sup>53</sup> Section 7.2.1, DENR AO.

<sup>54</sup> Section 7.3.2, DENR AO.

- e. Provide administrative and technical support to the CDM Steering Committee and facilitate the transmission of the Endorsement Report and supporting documents to the Secretary;
- f. Serve as the focal point for information on the status of proposed CDM project activities that have been submitted for DNA approval, including advising the Philippine project proponent(s) of the Secretary's decision relating to their application for a Letter of Approval;
- g. Facilitate the dissemination of international and national requirements relating to the CDM among stakeholders; and
- h. Such other functions as are necessary for the implementation of DENR AO 05-17.<sup>55</sup>

DENR AO 05-17 also provides for the process of approving a CDM project activity.<sup>56</sup>

It would seem the Philippines has the necessary structures and processes in place for CDM projects. What may be lacking is a mechanism for promoting such projects or for a means of advertising the Philippines as a CDM project destination. The DENR may be an effective regulator but investment promotion is not within its mandate.

#### **4. Administrative Order No. 171, as amended**

In 2007, President Macapagal-Arroyo issued Administrative Order No. 171 creating the Presidential Task Force on Climate Change (hereinafter PTFCC) “to act with resolve and urgency in addressing the issue of climate change, mitigate its impact and adapt to its effects.” It was later amended by A.O. No. 171-A, revising the composition and budgetary support of the PTFCC.

Under AO 171 as amended, the PTFCC was composed of the Secretary of the Department of Energy as Chair and the Secretary of the DENR as Vice-Chair with the Secretaries of the DOST, DILG, and

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<sup>55</sup> *Id.*

<sup>56</sup> A project activity formally accepted by the Executive Board of the CDM for registration.

Department of Education, the Chairman of the Commission on Higher Education with two (2) representatives from the private sector/civil society as members.<sup>57</sup>

Under AO 171, PTFCC had the following functions:

- a. Conduct rapid assessment on the impact of climate change to the Philippine setting, especially on the most vulnerable sectors/areas, like water, agriculture, coastal areas, as well as on the terrestrial and marine ecosystems, among others;
- b. Ensure strict compliance to air emission standards and act with urgency to combat deforestation and environmental degradation as well as apprehend violators;
- c. Undertake/initiate strategic approaches and measures to prevent or reduce greenhouse gas emissions in the Philippines, including fuel efficiency, energy conservation, use of renewable energy, waste management, etc;
- d. Conduct a massive and comprehensive public information and awareness campaign nationwide to educate the public on the climate change situation and its adverse effects, and mobilize multi-sectoral actions on climate change;
- e. Design concrete risk reduction and mitigation measures and adaptation resources, especially to address short-term vulnerabilities, on sectors and areas where climate change will have the greatest impact;
- f. Collaborate with international partners at the bilateral, regional and multilateral levels to support a global front to stabilize greenhouse gas emissions and institute mitigating and adaptive measures, especially for developing countries;
- g. Cause the integration and mainstreaming of climate risk management into the development policies, plans and programs of government; and

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<sup>57</sup> Under Administrative Order No. 171 the PTFCCC originally had as its Chairman the Secretary of the DENR and did not include the Secretaries of DILG and DepEd and the Chairman of CHED as members.

- h. Perform such other functions as may be directed by the President.<sup>58</sup>

It would seem that the PTFCC was given broad powers under AO 171 which included assessment of impacts, law enforcement, policy-making, public relations and international cooperation. AO 171 also provided that the IACCC shall act as the technical arm of the PTFCC.<sup>59</sup> Thus, the creation of the PTFCC did not mean the end for the IACCC.

### **5. Department of Interior and Local Government Memorandum Circular No. 069-08**

The Department of Interior and Local Government Memorandum Circular No. 069-08 (hereinafter DILG MC 69-08), which took effect in 28 April 2008, is addressed to governors, mayors, sanggunian, and DILG regional directors and encourages them to implement Climate Change Adaptation and Disaster Risk Reduction Measures.

The rationale for the issuance of DILG MC 69-08 appears to be the “pressing need to prioritize community-based approach to disaster risk management that focuses on preventing or reducing disaster risks, mitigating socio-economic and environmental impacts of disasters, undertaking disaster preparedness and initiating rapid and effective disaster response and integrated rehabilitation and recovery program.”<sup>60</sup>

DILG MC 69-08 mainly provides that to address disaster-related concerns, local chief executives are encouraged to:

- a. mainstream climate change adaptation and disaster risk reduction measures into local policies, plans, budgets and investment programs as a priority concern;
- b. promote research and extension work on climate change adaptation thru local research institutions, the academe and other relevant stakeholders;

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<sup>58</sup> Section 3, Administrative Order No. 171, (2007).

<sup>59</sup> Section 4, Administrative Order No. 171.

<sup>60</sup> Department of Interior and Local Government Memorandum Circular No. 069-08.

- c. engage in programs, projects and activities particularly in land and water use, land use change and forestry, reducing emissions from deforestation and degradation, coastal zones and fisheries, industry, facilities, farming practices, and indigenous clean energy;
- d. encourage greater participation of the local media, inter-faith groups and local schools in disseminating information on climate change adaptation, within the overall framework of sustainable development, to local communities, at the grassroots level;
- e. promote dialogues between workers and employers (when applicable) to realize the potential for green and decent jobs through positive support from workers and employers in the transition towards environmentally sustainable patterns of production and consumption; and
- f. vigorously collaborate with the provincial government and the Regional Development Council to push for more aggressive emission reduction targets and expeditious implementation of adaptation programs, projects and activities that will ensure direct benefits to the local communities.

Likewise, all concerned Presiding Officers of the Sangguniang Panlalawigan, Parlungsod, Bayan are encouraged to direct its existing Sanggunian Committee on Environment or its equivalent, as the case may be, to give priority to the discussion of proposing appropriate resolutions/ordinances in support to the implementation of measures on climate change adaptation and allocation of resources for the purpose.

It is interesting that the LGUs are encouraged to focus on adaptation measures. However, without proper technical support from the national government or NGOs it would be difficult for the majority of LGUs to do these. Thus, one item that can be included for legislation is a mechanism to provide technical support and training to officials of local government units.

## 6. Executive Order No. 774

On December 26, 2008 President Arroyo issued Executive Order No. 774 (hereinafter EO 774) titled "Reorganizing the Presidential Task Force on Climate Change."

EO 774 reorganizes the PTFCC by making the President the Chair and the entire Cabinet the members of the task force. This reorganization of the PTFCC seems to place climate change as a priority issue requiring attention by the President of the Republic and the cabinet secretaries themselves. While the PTFCC previously were composed of several cabinet secretaries, it now becomes the entire executive branch. There are of course advantages and disadvantages to this new arrangement.

The advantage provided by the revised composition of the PTFCC is that it highlights climate change as a high level priority of the government. By requiring the direct participation of the President and the Cabinet, climate change is no longer simply an environmental issue but *the* environmental issue.

However, one disadvantage of the reorganization is that with such a large membership composed of the busiest officials of government, the efforts in dealing with climate change may move at a snail's pace. As will be discussed later in this paper, a government agency dedicated solely to climate change issues may be the best administrative structure to deal with climate change.

It should be noted that EO 774 does not mention any amendment to the powers previously granted to the PTFCC under AO 171. It can therefore be presumed that the PTFCC as reorganized has the same functions. In addition, there was also no mention of any change in the role of the IACCC as the PTFCC's technical arm.

But EO 774 does more than simply reorganize the PTFCC. As discussed further in the following paragraphs, EO 774 provides for regular presidential visits to various government agencies and creation of 14 task groups on various environmental concerns.

*a. Solid waste management and presidential visits*

EO 774 provides that the “offices”<sup>61</sup> of the cabinet members are to “immediately practice proper solid waste management, the most basic form of environmental responsibility, pursuant to the Solid Waste Act”.<sup>62</sup> It further provides that offices must “help in the implementation of the aforesaid discipline”.<sup>63</sup> The President or Presidential Adviser on Climate Change (hereinafter PACC) shall personally visit government offices. To ensure that these weekly visits happen, EO 774 provides that the Presidential Management Staff Appointments Office shall clear the President’s schedule on Fridays and devote 5 hours to concerns and initiatives for environmental security

As to how long these visits will continue, EO 774 provides that:

“The weekly visits shall continue until it shall be proclaimed that the mindsets have been converted into attitudes and practices by the government offices of conservation, protection and restoration (hereinafter CPR)”.<sup>64</sup>

These regular presidential visits could serve as an incentive for compliance. It is submitted however that perhaps these visits should go beyond compliance with Republic Act No. 9003 (hereinafter RA 9003) or the Ecological Solid Waste Management Act of 2000, and cover government compliance with or enforcement of environmental laws. While RA 9003 is crucial to the environment, there is more to climate change than solid waste management. To be consistent with mandate of a task force on climate change, the visits should cover all mitigation and adaptation measures being undertaken by the government.

*b. Task groups*

EO 774 provides for the creation of Task Groups, which are to be headed by specific government agencies. It should be noted however that

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<sup>61</sup> Presumably the term refers to the entire agency headed by the cabinet level official including the regional offices, if any and not simply location where the official holds office.

<sup>62</sup> Section 1, Executive Order No. 774 (2008).

<sup>63</sup> *Id.*

<sup>64</sup> Section 1 (b), Executive Order No. 774 (2008).

EO 774 does not explicitly provide for the membership of each task group. One Task Group is created for every area of concern that EO 774 seeks to address. The succeeding paragraphs briefly describe the function of each group.

*i. Solid waste management*

This task group, led by the DENR, will “target the reduction of solid waste generation by fifty percent (50%) within the next six months”<sup>65</sup> In line with this, EO 774 enjoins all local government units to fully implement the law on solid waste management. In this connection:

“[t]he President or the PACC on Climate Change [sic] shall visit the regions, provinces, towns and cities every week until it is proclaimed that the Filipino people shall have fully integrated into the mainstream of their thought their personal environmental responsibilities and thereby effectively implement the Solid Waste Act”.<sup>66</sup>

In connection with the work of the Task Group on Solid Waste Management, EO 774 further adds that:

“The DENR shall report to the President in person or through the PACC every Friday during the weekly visits to offices and regions to<sup>67</sup> campaign for responsible solid waste management”.<sup>68</sup>

EO 774 does not specify how the 50% reduction will be computed. Conservatively, the target may be construed to cover only the departments. But considering the mention of LGUs and the presidential visits to regions, provinces, towns and cities, it seems that even LGUs are to be covered.

EO 774 further provides that the DENR together with the DOH and the Metropolitan Waterworks and Sewerage Systems “shall enjoin the

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<sup>65</sup> Section 2, Executive Order No. 774 (2008).

<sup>66</sup> Section 2 (a), Executive Order No. 774, (2008).

<sup>67</sup> Perhaps the intended word is “the” and not “to” because it makes sense for the DENR to report on “the campaign” to the President while it would be unclear why the DENR would need to “campaign to” the President.

<sup>68</sup> Section 2(b), Executive Order No. 774, (2008).

private sector, such as sludge excavation contractors and water concessionaires, to undertake a methane recovery program from human and animal waste and convert it into cooking gas and other forms of energy.”<sup>69</sup>

*ii. Watershed protection*

Led also by the DENR, the Task Group on Watershed Protection will undertake a survey and mapping for the protected areas of the country and the needed areas for forest land.<sup>70</sup> Under Section 4 of EO 774, the survey and mapping is supposed to be undertaken “within the next six months” presumably from the issuance of the executive order. However, EO 774 earlier stated in Section 3 that “the next stage and level of the focused CPR campaign x x x to identify and regenerate the forest lands and protected areas of the islands and seas of the Philippines” will be commenced “after six months of [the] campaign of solid waste management.”

There is an apparent conflict with regard to the periods. While Section 4 stated that the survey and mapping of protected areas will begin *within* 6 months from the issuance of the executive order, Section 3 states that the identification will only begin *after* six months of the campaign on solid waste management. To resolve the conflict, perhaps what section 4 refers to are protected areas in connection with a watershed while section 3 refers to other protected areas. The alternative would be to consider the term after as a typographical error and interpret EO 774 to provide that the work of the task group should begin immediately.

The specific work of the task group is outlined by EO 774, as follows:

- a. Water resources and watersheds shall be immediately identified and protected and their water flow improved and their floral cover regenerated;
- b. the fund set aside for the rehabilitation of watersheds under the Electric Power Industry Reform Act shall be made available by the National Power Corporation for forest delineation and reforestation projects;

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<sup>69</sup> Section 2(c), Executive Order No. 774 (2008).

<sup>70</sup> Section 4 Executive Order No.774, (2008).

- c. the DENR, the state universities and colleges, particularly their Departments of Biology and Marine Sciences, DOST and other scientific institutions shall mobilize the youth to conduct and complete an inventory of the flora and fauna in the terrestrial and marine ecosystems of their respective localities within 180 days from the issuance of the Order; and
- d. the DENR and the CHED shall report to the PACC the progress of this initiative every Friday of every week until almost all the flora and fauna have been identified.<sup>71</sup>

*iii. Rainwater conservation*

The purpose of the Task Group on Rainwater Conservation, which is led by the DPWH in cooperation with the United Architects of the Philippines, is “to design and implement the efficient rainwater collection and aquifer systems.” EO 774 further provides that

“[d]emonstration projects shall be in operations within ninety (90) days from issuance of this Order. Plans for scaling them up nationwide, especially areas highly vulnerable to draughts [sic], shall be presented to the President through the PACC.”<sup>72</sup>

*iv. Water recycling*

The purpose of the Task Group on Water Recycling, led by the National Water Resources Office in cooperation with the Local Water Utilities Administration and the water districts, the DTI and manufacturers of irrigation implements and toilet facilities, is to efficiently use, recover and reuse water. The rationale for the work of the task group is explained by EO 774, as follows:

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<sup>71</sup> *Id.*

<sup>72</sup> Section 6, Executive Order No. 774 (2008).

Water recycling – the prevention, recovery and treatment of used water – shall be placed at the highest priority of survival.<sup>73</sup>

According to an officer of the National Water Resources Board, as of April 2009, two items have been accomplished: First, the National Water Resources Board has issued a Board Resolution regarding water recycling in all golf courses of the country, and DPWH is implementing the waterways clean-up.

*v. Atmospheric activities*

The purpose of the Task Group on Atmospheric Activities, led by the DOST, is to transform the PAGASA into a world-class atmospheric and meteorological facility.<sup>74</sup> In this connection EO 777 provides that, “a Filipino Scientist Program on Atmospheric Sciences shall be immediately incorporated into the DOST Research and Development Program to attract the best Filipino minds, both young and more senior, both in the Philippines and abroad, to develop the Filipino capability for weather sciences.”<sup>75</sup>

According to an officer of PAGASA, as of April 2009 it has already formulated the draft EO 774 roadmap (up to 2013) to make PAGASA a world-class atmospheric and meteorological institution. The roadmap is still subject to revisions/amendments to incorporate suggestions of DOST officials. The officer also stated that prior to EO 774, there has already been a "Balikscientist" program akin to the Filipino Scientists Program and that PAGASA will be sending some of its young scientists under an educational package to take up graduate studies abroad. This is included in the EO 774 draft roadmap.

Apart from this program, perhaps the task group should consider looking into technology transfer possibilities to upgrade the capacity of PAGASA to monitor the weather and climate. What would make PAGASA a world-class atmospheric facility is not only the quality of its scientists but also the quality of its equipment.

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<sup>73</sup> Section 7, Executive Order No. 774 (2008).

<sup>74</sup> Section 8, Executive Order No. 774 (2008).

<sup>75</sup> *Id.*

*vi. Fossil fuels*

The Task Group on Fossil Fuels, also led by the DOTC, is to reform the transportation sector so as to reduce the consumption of fossil fuels.<sup>76</sup> The philosophy and policy thrust behind this reformation is provided by EO 774 as follows:

“The new paradigm in the movement of men and things must follow a simple principle: “Those who have less in wheels must have more in road.” For this purpose, the system shall favour non-motorized locomotion and collective transportation system (walking, bicycling, and the man-powered mini-train).”<sup>77</sup>

EO 774 further outlines the steps on how this reform is to be achieved.

- a. The DOTC and the DPWH shall immediately transform roads using aforesaid principle.
- b. Malacañang Palace and all Cabinet offices will bring down by 50% the consumption of fossils fuels within 2 years from the issuance of EO 774.
- c. The PACC shall consult with the biggest consumers and undertake extensive mass media social marketing and mobilization campaigns to reduce the consumption of fossil fuels.
- d. The Department of Budget and Management (DBM) shall immediately make available funds from Road Users’ Tax.
- e. The Secretaries of the DOTC, DBM and DPWH shall personally report to the President through the PACC every 48 hours on the progress of the initiatives.

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<sup>76</sup> Section 9 (a), Executive Order No. 774 (2008).

<sup>77</sup> *Id.*

- f. The DILG shall coordinate with local government units and guide them on the plan to transform the locomotion and transportation system to favor parties who have no motorized vehicles.<sup>78</sup>

In connection with Section 9 of EO 775, President Arroyo issued on January 30, 2009 Administrative Order No. 254 (hereinafter AO 254) titled *Mandating the Department of Transportation and Communication to Lead in Formulating a National Environmentally Sustainable Transport (EST) for the Philippines*.

AO 254 lists the members of the Task Group on Fossil Fuels as follows:

- a. Secretaries of the DOTC, DENR, DOE, DPWH, DBM, DILG, DOH, DOF and DTI;
- b. The Executive Secretary;
- c. The PACC;
- d. Director General of NEDA;
- e. Chief Executive Officer and Commissioner of the Housing and Land Use Regulatory Board;
- f. Chairpersons of MMDA and National Commission on the Role of Women; and
- g. representatives from the academe and the private sector.

Aside from those listed in EO 774, AO 254 enumerates the following functions of the task force:

- a. Review the conformity of existing Philippine laws and regulations with established standards and provisions of EST;
- b. identify, classify and prioritize programs toward realizing EST in the Philippines;
- c. identify and establish the institutional and technical infrastructure requirement to implement the National EST Strategy;
- d. through the DILG, coordinate with local government units and guide them on the plan to transform the

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<sup>78</sup> Section 9, Executive Order No. 774 (2008).

- locomotion and transportation system to favor parties who have no motorized vehicles, and facilitate the mainstreaming of the National EST Strategy;
- e. through the PACC, consult and coordinate with pertinent agencies and other bodies concerned concerning EST related, plans and programs; and
  - f. perform such other duties and functions which may be necessary in the attainment of the objectives of the National EST Strategy, and such other acts as may be necessary and proper to implement this Order.<sup>79</sup>

*vii. Information*

The purpose of the Task Group on Information, led by the Philippine Information Agency, is to mobilize the government stations and channels and the private sector media to help make the people understand the threats and risks that the country is facing from climate change and to use the power of mass media and global communication to mobilize the people into positive action.<sup>80</sup>

EO 774 further provides that:

“[O]ther government agencies and the entire Filipino people shall be made to understand and enjoined to fully cooperate and perform their respective roles and responsibilities to face climate change. The agencies shall send the PACC a one page weekly report on the advances they have made on this initiative”.<sup>81</sup>

To enable the PIA and mass media to achieve the task given, they must be provided with latest data and scientific information. Thus, this task group may need the support of scientific, academic and research institutions.

*viii. Fisheries*

The purpose of the Task Group on Fisheries led by the Department of Agriculture (hereinafter DA) is to conduct a compliance audit of the

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<sup>79</sup> Section 4, Administrative Order No. 254.

<sup>80</sup> Section 10 (a) Executive Order No. 774 (2008).

<sup>81</sup> Section 10 (b) Executive Order No. 774 (2008).

strategic provisions of the Fisheries Code, particularly on the determination of the maximum sustainable yield, the total catch allowable, and the carrying capacity of our marine ecosystems.<sup>82</sup>

EO 774 outlines the task groups specific responsibilities as follows:

- a. With the DILG, the DA shall conduct massive information, education and communication campaigns with coastal local governments to implement Section 81 of RA 8550, otherwise known as the Fisheries code, mandating that at least 15% of their municipal waters must be devoted to fish sanctuary.
- b. The local governments of all coastal towns and cities are enjoined to identify and declare their fish sanctuaries not later than 6 months from the issuance of EO 774.
- c. The PACC shall compile the list of complying local governments. They shall be fully assisted in their implementation efforts, should they so desire. Non-compliant local governments shall be sanctioned as appropriate by the DILG.
- d. The DA and DILG Secretaries shall report to the President personally or through the PACC every Friday on the progress.<sup>83</sup>

*ix. Agriculture*

Section 12 of EO 774, which is titled *Task Group on Agriculture* provides:

- a. All Agricultural lands shall be immediately identified and delineated with clear boundary markers on the ground. Every effort shall be exerted to cleanse the fields of chemical pollutants, and extend and persuade owners and

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<sup>82</sup> Section 11 (a) Executive Order No. 774 (2008).

<sup>83</sup> Section 11 (b) to (d) of Executive Order No. 774 (2008).

caretakers to produce nutritious food crops in a sustainable manner.

- b. Public open places space along sidewalks and portions of roads and parking lots, which shall be rendered irrelevant by the mind-shift to non-motorized and collective transportation systems, shall be devoted to productive use through sustainable urban farming. These spaces shall be planted with, among others, nutritious fruit crops, vegetables, spices and medicinal herbs. All persons who live in the city who wish to care for a plot of arable land to plant their vegetables shall be provided a stewardship agreement. This agreement shall bind the holder to sustainably use the land plant it with food and other plants like nutritious vegetables, fruits, flowers, spices, etc. and receive benefit from its produce.<sup>84</sup>

Presumably, the DA will lead the Task Group on Agriculture although EO 774 does not explicitly state this. One area of concern is subsection (b) which requires conversion of sidewalks and portions of roads and parking lots into farm lots. Furthermore subsection (b) allows “persons who live in the city” may enter into a “stewardship agreement” which would allow them to “care for a plot of arable land to plant their vegetables.” It is not clear from the provision whether these sidewalks or roads are private or public property. If public property, will the conversion require action on the part of the relevant LGU? If private property, will the stewardship agreement be granted in favor of a person other than the registered owner? While this novel idea admittedly will have some benefits, it is not entirely clear from the provision itself how this will be accomplished without enacting a new law or how it is consistent with existing laws. According to an officer of the DA, the department has been implementing a policy on “urban gardening” but it is not clear if this is what EO 774 has in mind.

#### *x. Education*

The purpose of the Task Group on Education, which is led by the Department of Education, is “to develop the climate change component and incorporate it into the Science curriculum of the schools immediately upon completing”. EO 774 further provides that by the opening of the next

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<sup>84</sup> Section 12, Executive Order No. 774 (2008).

school year, environmental education must have been incorporated in all levels of the school Science curriculum. According to an officer of DepEd, climate change has been part of the curriculum at the secondary level since 2002.<sup>85</sup>

*xi. Foreign affairs*

The Task Group on Foreign Affairs, led by the DFA with the Department of Justice (hereinafter DOJ), is mandated “to cooperate with other island nations in exploring legal and meta-legal approaches on how to hold highly carbon dioxide-emitting countries accountable and liable for the climate change damages that are happening and will be happening in this generation and for sustainable development of future generations”.<sup>86</sup> In connection with this, the DFA and DOJ “shall tap the talent of law professors and top-caliber litigation and environmental lawyers in the Philippines, in Asia and in the rest of the world.”<sup>87</sup> It would seem that the purpose of this task group is obtaining relief from major greenhouse gas-emitting countries through litigation.

Obtaining relief from climate change impacts through major industrialized countries may prove to be too difficult at this time and may in fact be prejudicial to global efforts in addressing the problem. It should be noted that addressing climate change requires the cooperation of all states whether developed and developing. Focusing on litigation at this time may undermine efforts to arrive at a new agreement among these nations. Instead, the DFA can focus its attention on furthering the interests of the Philippine in the climate change talks and in other international fora.

However, if private institutions or individuals would like to pursue some form of *global legal action* as a means of dramatizing the harm caused by greenhouse gases from certain corporations, they may choose to do so. The difference is that these are private initiatives which should not affect the Philippines’ negotiating position at the international level.

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<sup>86</sup> Section 14, Executive order No. 774 (2008).

<sup>87</sup> *Id.*

*xii. Renewable energy*

Led by the DOE, the Task Group on Energy is mandated to implement the Renewable Energy Law with dispatch.<sup>88</sup> EO 774 does not provide further details on how the DOE will achieve this apart from what it is already doing.

*xiii. CPR economics*

The purpose of the Task Group on CPR Economics, led by the NEDA in cooperation with the DTI, is to promote CPR Economics as a paradigm of economic development.<sup>89</sup> To achieve this, the task group:

“shall prepare a ten, twenty, thirty (10-20-30) year CPR Economic Action Plan in the line the Principle of Seven Generation, which states that in deliberations today, especially in decisions to use the sources of Life of Land, Air and Water, the impact of decisions of to a horizon of Seven Generations – of the grandchildren of our grandchildren – must be considered.”

The other members of this task group appear to be the Board of Investments, Department of Finance, the Department of Tourism (hereinafter DOT) and the Department of Budget and Management, as these agencies have specific tasks under the section on CPR economics. The Board of Investments and the Department of Finance is tasked to “immediately implement a simplified and beneficial Investment Priorities Plan to shift the thrust of the economy from a consumerist economy of wasteful practices to an economy that is based on the sustainable use and conservation of the physical sources and resources of Life.”<sup>90</sup>

On the other hand, the DOT “shall develop on restorative ecotourism.”<sup>91</sup> Specifically:

“It shall seek not only to engage the people to restore the damaged land, forests, rivers and seas

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<sup>88</sup> Section 15, Executive Order No. 774 (2008).

<sup>89</sup> Section 16 (a), Executive Order No. 774 (2008).

<sup>90</sup> Section 16 (b), Executive Order No. 774 (2008).

<sup>91</sup> Section 16 (d), Executive Order No. 774(2008).

of our country but more importantly it shall to restore the connection between man and Nature.

The DOT shall pursue such CPR eco-tourism program focused on the Filipino people as its “target market”<sup>92</sup>

Finally, the role of the DBM is in the release of funds as EO 774 provides that:

“[t]he Priority Development Assistance Funds of Congressional representatives shall be given priority in facilitating release if the same is aligned towards the pursuit of CPR economics.”<sup>93</sup>

According to one of its officers, NEDA started conducting organizational meetings starting February 2009 with the different member agencies of the task group. The agenda was to level off the requirements of CPR economics. The basic function of these meetings was simply to highlight policy frameworks or documents of the different member agencies that match the requirements of CPR economics and also to look for gaps if there are any. One such document is the Enhanced Philippine Agenda 21. Philippine Agenda 21 has been in existence since 2004 but this *enhanced* version was promulgated just this year.

*xiv. Outdoor and rooftop structures*

The Task Group on Outdoor and Rooftop Structures, led by the DPWH, is mandated by EO 774 to require all neon and high-wattage lights on billboards and outdoor advertisements along roads and highways to be shut off at 9:00 p.m.<sup>94</sup> EO 774 further provides that “should the owners desire to turn them on after 9:00 p.m., they shall be charged a fee equivalent to their carbon footprint computed according to their wattage consumption”<sup>95</sup> and “where the structures are not in compliance with the laws and building regulations, they shall be immediately removed from the rooftops.”<sup>96</sup> In place of structures bearing such advertisements, EO 774

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<sup>92</sup> Sections 16 (d) and 16 (e), Executive Order No. 774 (2008).

<sup>93</sup> Sections 16 (f), Executive Order No. 774 (2008).

<sup>94</sup> Section 18 (a), Executive Order No. 774 (2008).

<sup>95</sup> *Id.*

<sup>96</sup> *Id.*

provides that the DPWH shall provide incentive subsidies to the owners to convert said rooftops into urban gardens.<sup>97</sup>

According to an officer of the DPWH, the shutdown of neon lights has been implemented since March 16, 2009. In addition, the DPWH has met with different service providers but the latter appealed for an extension of the shutdown up to 12 midnight. It appears that as of April 2009, the DPWH set the time of shutdown at 11:00 p.m. in the National Capital Region, Region 3 and some provinces in Region 4. The District Engineer's Office oversees the implementation.

It could be said that the creation of these task groups within the PTFCC implies that the government considers climate change as an issue that encompasses a broad spectrum of environmental concerns. It creates the perception that the government intends to deal with climate change simply by managing existing environmental concerns. One criticism lodged against EO 774 is that it "basically mandates all government agencies and local governments to comply with laws and responsibilities that the said agencies should already be doing in the first place."<sup>98</sup>

Climate change is not completely addressed simply by implementing environmental laws. It is foolish to consider climate change as simply the sum total of all environmental concerns. Addressing climate change will require more than protecting the environment. It will require changing the engine of economic growth, transforming the way buildings and structures are made, and re-orienting the way people live their lives. It is a challenge far more complicated than simply asking government to implement environmental laws.

## B. RELEVANT ENVIRONMENTAL LAWS

Aside from regulations emanating from the Executive branch, statutes have also been enacted by the Legislature that are oriented towards the protection of the environment. Three pieces of legislation will be summarized in the following paragraphs: Republic Act No. 8749, Republic Act No. 9367, and Republic Act No. 9513.

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<sup>97</sup> *Id.*

<sup>98</sup> Greenpeace, *Executive Order 774 Ridiculous and Confused* (2009), <http://www.pinoypress.net/2009/01/23/greenpeace-exccutive-order-774-ridiculous-and-confused/>

## 1. Republic Act No. 8749

Republic Act No. 8749 (hereinafter RA 8749), otherwise known as Philippine Clean Air Act of 1999, is primarily concerned with addressing air pollution. It should be noted that *air pollution* is not identical with *greenhouse gases* and that reducing the former does not necessarily mitigate the latter. In fact, RA 8749 defines *air pollutant* as:

“any matter found in the atmosphere *other than* oxygen, nitrogen, water vapor, *carbon dioxide*, and the inert gases in their natural or normal concentrations, that is detrimental to health or the environment, which includes but not limited to smoke, dust, soot, cinders, fly ash, solid particles of any kind, gases, fumes, chemical mists, steam and radio-active substances”.<sup>99</sup> (emphasis supplied)

Thus, RA 8749 does not cover the regulation of carbon dioxide which is the primary greenhouse gas sought to be limited by climate change regulation. However, RA 8749 does recognize greenhouse gases and define these as:

“those gases that can potentially or can reasonably be expected to induce global warming, which include carbon dioxide, methane, oxides of nitrogen, chlorofluorocarbons, and the like”.<sup>100</sup>

Although RA 8749 was not enacted to directly mitigate greenhouse gases, it is still a mitigation measure because as an emissions controlling expedient, it will have an impact on emissions from motor vehicles and from incineration. Based on the 1994 greenhouse gas inventory of the Philippines,<sup>101</sup> 30% of the total greenhouse gases from the Philippines come from the transport sector. Thus, any reduction in emissions from the transport sector should have a positive and substantial impact even if carbon dioxide is not considered as an air pollutant under the law.

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<sup>99</sup> Section 5 (a), Republic Act No. 8749 (1999).

<sup>100</sup> Section 5 (i), Republic Act No. 8749 (1999).

<sup>101</sup> INTER-AGENCY COMMITTEE ON CLIMATE CHANGE, 'THE PHILIPPINES' INITIAL COMMUNICATION ON CLIMATE CHANGE, 25 (1999).

On the other hand, RA 8749 bans *incineration* which is defined as the burning of municipal, bio-medical and hazardous wastes, which process emits poisonous and toxic fumes. In connection with the ban on incineration, RA 8749 provides:

*With due concern on the effects of climate change, the Department shall promote the use of state-of-the-art, environmentally-sound and safe non-burn technologies for the handling, treatment, thermal destruction, utilization, and disposal of sorted, unrecycled, uncomposted municipal, bio-medical and hazardous wastes.*<sup>102</sup> (emphasis supplied)

On greenhouse gases, RA 8749 states:

“The [PAGASA] shall regularly monitor meteorological factors affecting environmental conditions including ozone depletion and greenhouse gases and coordinate with the Department in order to effectively guide air pollution monitoring and standard-setting activities.

The Department, together with concerned agencies and local government units, shall prepare and fully implement a national plan consistent with the United Nations Framework Convention on Climate Change and other international agreements, conventions and protocols on the reduction of greenhouse gas emissions in the country.”

Thus, while not a piece of legislation specifically designed for the regulation of greenhouse gases, RA 8749 does provide for the monitoring of greenhouse gases and the preparation and implementation of a national plan consistent with the UNFCCC and other agreements on the reduction of greenhouse gas emissions in the country.

## 2. Republic Act No. 9367

Republic Act No. 9367 ( hereinafter RA 9367), also known as the Biofuels Act of 2006, provides for the mandatory use of biofuels such that

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<sup>102</sup> Section 20, Republic Act No. 8749 (1999).

all liquid fuels for motors and engines sold in the Philippines shall contain locally-sourced biofuels components in such amounts as found under a schedule provided for in the law. RA 9367 states mandating the use of biofuels is among others a measure to “mitigate toxic and greenhouse gas (hereinafter GHG) emissions”.<sup>103</sup>

Under RA 9367 *biofuel* refers to the bioethanol and biodiesel and other fuels made from biomass and primarily used for motive and thermal power generation, with quality specifications in accordance with the Philippine National Standard. *Bioethanol* refers to ethanol (C<sub>2</sub>H<sub>5</sub>OH) produce from feedback and other biomass.<sup>104</sup> *Biodiesel* refers to Fatty Acid Methyl Ester (FAME) or mono-alkyl ester delivered from vegetable oil, or animal fats and other biomass-derived oils that shall be technically proven and approved by the DOE for use in diesel engines, with quality specifications in accordance with the Philippine National Standards.<sup>105</sup> *Biomass* refers to any organic matter, particularly cellulosic or ligno-cellulosic matter, which is available on a renewable or recurring basis, including trees, crops and associated residues, plant fiber, poultry litter and other animal wastes, industrial wastes and biodegradable component of solid waste.<sup>106</sup>

The use of biofuels will have a mitigating effect on greenhouse gas emission if the biofuels used emit less greenhouse gases than fossil fuels. It should be noted that according to some studies certain kinds of biofuels emit the same amounts of GHGs as fossil fuels.

“Greenhouse gas emissions from using corn ethanol in cars do not differ substantially from emissions from using gasoline in cars. The net effect of using corn-based ethanol may even increase greenhouse gases due to land-use changes, as farmers worldwide clear forests and grasslands to grow corn in response to higher prices and demand.”<sup>107</sup>

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<sup>103</sup> Section 2, Republic Act No. 9367 (2006).

<sup>104</sup> Section 3 (c) Republic Act No. 9367 (2006).

<sup>105</sup> Section 3 (d) Republic Act No. 9367 (2006).

<sup>106</sup> Section 3 (g) Republic Act No. 9367 (2006).

<sup>107</sup> SENGE, ET. AL. THE NECESSARY REVOLUTION: ARE WORKING TOGETHER TO CREATE A SUSTAINABLE WORLD 6 (2008).

Thus, the promotion of biofuels is not a climate change measure *per se* unless it results in a net reduction in greenhouse gas emissions.

Section 18 of RA 9367 also provides that the Act shall not be interpreted as prejudicial to clean development mechanism (CDM) projects that cause carbon dioxide and greenhouse gases emission reductions by means of biofuels use.<sup>108</sup>

### 3. Republic Act No. 9513

Republic Act No. 9513 (hereinafter RA 9513), also known as the Renewable Energy Act of 2008, is a law that provides the legal and institutional framework for harmonizing policies on the development of geothermal, hydropower, solar, biomass, wind and ocean energy technologies.<sup>109</sup> It establishes the framework “for the accelerated development and advancement of renewable energy sources, and the development of a strategic program to increase its utilization.”<sup>110</sup>

But RA 9513 is not climate change legislation. The primary policy consideration for the enactment of RA 9513 is to:

[a]ccelerate the exploration and development of renewable energy resources such as, but not limited to, biomass, solar, wind, hydro, geothermal and ocean energy sources, including hybrid systems, *to achieve energy self-reliance*, through the adoption of sustainable energy development strategies *to reduce the country's dependence on fossil fuels and thereby minimize the country's exposure to price fluctuations in the international markets*, the effects of which spiral down to almost all sectors of the economy

Thus, the primary rationale behind RA 9513 is not environmental but economic. Nevertheless, the promotion of renewable energy sources as alternatives to energy sources requiring the burning of fossil fuels will have some mitigating effects provided that the production or usage of renewable

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<sup>108</sup> Section 18 of RA 9367 (2006).

<sup>109</sup> Burgonio, T. (2007, December 12). Retrieved April 14, 2009, from Inquirer.net: <http://www.inquirer.net/specialfeatures/thegoodnews/view.php?db=1&article=20081217-178399>

<sup>110</sup> Section 3, Republic Act/No. 9513 (2008)..

energy source itself does not release greenhouse gases. Some renewable energy projects may also qualify as CDM projects.

## V. A PROPOSED PHILIPPINE LEGAL FRAMEWORK

### A. POLICY CONSIDERATIONS

Any piece of legislation must begin with policy considerations. Legislators must be clear on what they intend to achieve: this is policy. But determining policy is merely the beginning; a policy must also be *good*. A good policy is one which effectively deals with the issue or problem to be resolved.

Determining effective policy is not simply a matter of copying policies adopted in other jurisdictions. While climate change is a global concern, there are regional-, national- and local government-specific issues. Thus, in the case of the Philippines, the determination of good climate change policy must be based on the extent such policy specifically concerns the Philippines. The policy considerations must answer the question: What should be the goal of Philippine climate change legislation?

#### 1. Adaptation Measures as Top Priority

This paper proposes that as policy, the Philippines should consider adaptation measures as the top priority. There are three reasons for this: First, climate change impacts are imminent; the impacts of a changing climate cannot be avoided as it cuts across national boundaries to affect the entire planet, and such impacts are already being felt. Second, the geographic profile and position of the Philippines is such that it has high vulnerability to climate change impacts. Lastly, the Philippines has negligible impact on global emissions due to its relatively under-industrialized economy. Each of these reasons will be elaborated in the following paragraphs.

##### *a. Climate change impacts are imminent*

Even if emissions reductions are drastically made immediately, the effects of climate change will still be felt for the reason that greenhouse gases are already in the atmosphere. In fact, the impacts of climate change are already being felt. Sea-levels worldwide are rising, typhoons are

stronger, the temperatures are registering hotter figures, and the seasons are changing.

*b. The Philippines has high vulnerability to climate change impacts*

According to studies, developing countries are the most vulnerable to climate change impacts, “because they have fewer resources to adapt: socially, technologically and financially.”<sup>111</sup> These studies predict “that billions of people, particularly those in developing countries, face shortages of water and food and greater risks to health and life as a result to climate change”<sup>112</sup>

In addition to the fact that the Philippines is a developing country, geographic and geological considerations make it particularly vulnerable to climate change impacts. According to a study commissioned by DENR and executed by the Manila Observatory<sup>113</sup> the climate change impacts on the Philippines can be summarized as follows:

*i. Sea level rise*

According to the study, “one of the most discernible effects of global climate change on the Philippines will be the accelerated rise in sea level.”<sup>114</sup> The danger brought by sea-level rise to an archipelago like the Philippines is not limited to flooding and displacement of communities but includes contamination of groundwater sources and exposure of communities to harsh storm surges.<sup>115</sup> The other potential impacts of accelerated sea-level rise include the following:

- a. “Increased frequency and intensity of storms and storm surges, causing backflows in rivers and bays;
- b. Salt-water intrusion into surface and ground water, affecting the amount and quality of water supply;

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<sup>111</sup> UNFCCC, CLIMATE CHANGE: IMPACTS, VULNERABILITIES AND ADAPTATION IN DEVELOPING COUNTRIES 5. (2007)

<sup>112</sup> *Id.*

<sup>113</sup> *Supra* note 22 at 16.

<sup>114</sup> *Id.*

<sup>115</sup> *Id.*

- c. Mangroves and other habitats of benthic organisms will be greatly affected by the changes in salinity; and
- d. High precipitation would increase run-off, move fresh water seaward, and result in low dissolved oxygen availability. The pattern of fish reproduction would be affected. Livelihood based on subsistence fishing would be put to risk. Low-pressure systems could pump nutrient-rich waters from outer to middle shelves, and affect spot fish yields.”<sup>116</sup>

*ii. More hot days ahead*

The study also indicated that “[t]he pattern of surface temperatures in the Philippines parallels the global trend over the last half-century.”<sup>117</sup> This means that, “[t]he length of the cold dry season has been decreasing, while that of the warm wet season has been increasing.”<sup>118</sup> Therefore, “[t]he prognosis is that there will be more hot days and warm nights with fewer cold days and nights in the coming years.”<sup>119</sup>

*iii. Changes in typhoon schedule, frequency and strength*

According to the study, “there are projections for fewer typhoons in January to March while frequency will increase in July to November.”<sup>120</sup> The study also indicates a rise in typhoon crossings that is most pronounced over the Visayas area.<sup>121</sup> Although there is very little research on the changing intensity or strength of typhoons in the Philippines, warmer sea surface temperatures may “mean more frequent and stronger storms.”<sup>122</sup>

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<sup>116</sup> *Id at 17.*

<sup>117</sup> *Id.*

<sup>118</sup> *Id.*

<sup>119</sup> *Id.*

<sup>120</sup> *Id.*

<sup>121</sup> *Id.*

<sup>122</sup> *Id.*

*iv. Downstream effects*

According to the study, “[v]arious sectors in the Philippines will be affected by the changes in climate” as follows:

“In agriculture, the country is expected to experience dry days that are drier and wet days that are wetter, which may result in poorer crop production, storage, and distribution since changes in the timing and volume of rain are critical. In addition, a CO<sub>2</sub> rise favors crops, but weeds are more likely to proliferate simultaneously, thereby necessitating the development of new crop varieties or herbicides. Forest areas will also be affected. Moist forests will shrink and turn to dry forests. Biodiversity loss will be aggravated since global warming will raise the risk of floods, worsening degradation and species loss. Marine resources will be affected as well, since warmer waters induce coral bleaching which eventually leads to declining fish populations.”<sup>123</sup>

In addition to adversely affecting agriculture and marine resources, the changing patterns, volume and distribution of rainfall may affect the power supply as “[r]oughly 20% of total power supply in the Philippines comes from hydro-electric sources.”<sup>124</sup> There may also be health implications due resulting from climate change impacts.

“Prolonged periods of high temperature and water impounding due to sudden heavy downpours serve as ideal breeding conditions for disease vectors such as *Aedes* and *Anopheles* mosquito for dengue fever and malaria.”<sup>125</sup>

*c. The Philippines has negligible impact on global emissions*

Based on “The Philippines’ Initial National Communication on Climate Change” submitted to the UNFCCC Secretariat in 1999:

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<sup>123</sup> *Id.* at 18.

<sup>124</sup> *Id.* at 19.

<sup>125</sup> *Id.*

In 1994, the Philippines released a total equivalent amount of 100,738 ktons of CO<sub>2</sub> into the atmosphere. This is due to the combined effect of GHG emissions from the four sectors of Energy, Industry, Agriculture, and Wastes, and the net uptake (sink) of GHGs from the LUCF sector. In the global context, this national amount is still minimal relative to the GHG emissions of other nations, especially those of developed country parties to the UNFCCC.<sup>126</sup>

Thus, emissions reductions made by the Philippines will not have any significant impact on global greenhouse gas emissions.

## 2. Mitigation measures in support of adaptation measures

The debate on climate change legislation in developed countries generally centers on what is the most effective mechanism to reduce emissions. Legislators are arguing whether a carbon tax or a cap and trade system is preferable.<sup>127</sup> Philippine legislators should not fall into the trap of getting involved in such debates precisely because reducing emissions is not the primary concern of developing countries such as the Philippines. It takes a lot of time, resources and political capital to shepherd much needed legislation through the Philippine Congress. So it is best that such resources be spent on legislative items of primary concern.

That being said, mitigation measures must still be pursued albeit it is of secondary importance to adaptation measures. This is because mitigation measures have adaptive effects, and such measures may be used to fund adaptation measures. Further, international climate change law is leaning towards developing country participation in mitigation efforts. Each will be discussed briefly in the succeeding paragraphs.

### *a. Mitigation measures may have adaptive effects*

Certain mitigation measures may also be considered as adaptation measures. For instance, reforestation efforts which are intended to increase the re-absorption by trees of the CO<sub>2</sub> in the atmosphere can also be

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<sup>126</sup> The Philippines' Initial National Communication on Climate Change XIV (1999), <http://unfccc.int/resource/docs/natc/phinc1.pdf>.

<sup>127</sup> See Victor B. Flatt, *Taking the Legislative Temperature: Which Federal Climate Change Legislative Proposal is Best?* 102 NW. L. REV. COLLOQUY 123, 135 (2007).

considered an adaptive measure as reforestation in a watershed area may protect the water supply, a necessary adaptation measure. The re-planting of trees by communities may also be an adaptive measure in cases where such activities can become a source of livelihood for families affected by drought or floods.

*b. Mitigation measures may be used to fund adaptation efforts*

The promotion of investments in green technologies or renewable energy are primarily mitigation measures as these are intended to reduce the use of fossil fuels. However, the income from such activities, for instance under the Clean Development Mechanism, can be used to fund adaptation measures.

*c. International climate change law is leaning towards developing country participation in mitigation efforts.*

The Kyoto Protocol only required developed countries to reduce their emissions. However, recent developments in international climate change law appear to lean towards emissions reductions even from developing countries. For instance, under the Bali Action Plan the Conference of the Parties decided to address “[e]nhanced national/international action on mitigation of climate change, including:

“[i] Nationally appropriate *mitigation actions by developing country* Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner;

[ii] Policy approaches and positive incentives on issues relating to *reducing emissions from deforestation and forest degradation in developing countries*; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries;”<sup>128</sup> (emphasis supplied)

Thus, whereas in the past, requiring developing countries to emissions reductions seemed unconscionable under the principles of *equity*

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<sup>128</sup> Decision 1/CP.13, *Bali Action Plan*, 3 (2007), <http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=3>

and *common but differentiated responsibilities* there appears to be a growing acceptance that even developing countries should reduce their emissions albeit not to the same degree as developed countries.

#### 4. Exploiting international sources of funding

The UNFCCC recognizes that developing countries need financial support to address climate change impacts. Thus, the UNFCCC provides for a financial mechanism “for the provision of financial resources on a grant or concessional basis, including for the transfer of technology.”<sup>129</sup> Specifically, the parties to the Convention assigned the operation of the financial mechanism to the Global Environment Facility (hereinafter GEF).

The GEF “is a global partnership among 178 countries, international institutions, NGOs, and the private sector to address global environmental issues while supporting national sustainable development initiatives. It provides grants for projects related to six focal areas: biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants.”<sup>130</sup> In addition to the GEF the parties to the UNFCCC have established the Special Climate Change Fund and Least Developed Countries Fund and the Adaptation Fund.

One of the items that Philippine climate change legislation should contain is a provision establishing a mechanism which would allow the country access to these funds.

#### 5. Defining national and local government roles

During one of the public hearings on the proposed climate change bill proposed in the Senate, the role of local governments vis-à-vis the national government on climate change measures was discussed. On one hand, local governments may be more familiar with the needs of their local communities and may respond quicker than the national government. So it was argued that the local governments should take the lead in climate change related activities. On the other hand, some local governments may not have the technical know-how to properly address climate change impacts. While there are NGOs which may be willing to help, such NGOs cannot possibly reach all local government units. In addition, certain climate

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<sup>129</sup> Article 11.1, UNFCCC.

<sup>130</sup> See [http://thegef.org/interior\\_right.aspx?id=50](http://thegef.org/interior_right.aspx?id=50)

change activities may be of such magnitude that it requires coordination among several local government units or national agencies. In this cases, the national government is clearly in a better position.

It seems therefore that local governments may take the lead in certain activities while the national government must take the lead in others. Legislation must therefore provide the policy as to how to determine the roles of local and national government.

## B. ITEMS FOR LEGISLATION

As of July 2008, there were several pending bills in the Philippine Senate and House of Representatives on climate change.<sup>131</sup> However, by September 2008, Senate Bill No. 2583 (hereinafter SB 2583) was approved in substitution of the pending senate bills and other pertinent resolutions. SB 2583 is described as “an act mainstreaming climate change into government policy formulations, creating for this purpose the Climate Change Commission, and for other purposes.”

### 1. Creation of a Climate Change Commission

As discussed in Part IV, the government bodies created to handle climate change issues were the IACCC and the PTFCC. While a committee or a task force composed of heads of departments may be useful for purposes of policy coordination, the complexity and magnitude of climate change issues places it beyond the competence of a loose organization of department secretaries. After all, these secretaries have their own departments to manage and they cannot commit their full attention to climate change issues which require devoted study and unwavering focus. Mindful of the climate change impacts on the Philippines, it becomes clearly evident that a government agency dedicated solely to climate change issues is absolutely necessary.

This agency however must be designed specifically to address climate change issues. SB 2583 provides for the creation of a Climate Change Commission. This paper argues that in order to be commission

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<sup>131</sup> See Rommel J. Casis, *The Climate Change Crisis: Global Legal Framework, Policy Initiatives and the Philippine Response* in Experts Dialogue on PHILIPPINE CLIMATE CHANGE POLICY: MITIGATION AND ADAPTATION MEASURES (Institute of International Legal Studies, 2008).

designed to address climate change it must have the following design specifications:

*a. A commission composed of experts*

Climate change is a global concern that cuts across many disciplines - science and technology, economics, law, international relations and diplomacy – which makes it very challenging. In addition, there is a rapid development in the scientific, economic, political and legal issues related to climate change. Hence, the Commission tasked with addressing climate change must be composed of experts who have devoted themselves to climate change issues and who are capable of coping with the rapid developments.

For instance, climate change conferences occur every few months and there are several sub-groupings under the UNFCCC. The Philippines must be actively involved in as many of these talks as possible in order to protect its interests. The Commission should be comprised of individuals who are capable of studying, analyzing and articulating the Philippine position during these conferences and meetings. Therefore the Commission will need skilled negotiators.

The Commission will need scientists who can review and analyze scientific data and if necessary undertake their own research on climate change impacts in the Philippines. There is currently a dearth of scientific studies on climate change impacts on particular areas of the Philippines. Understanding these impacts is the first step in determining what actions need to be taken. Therefore the Commission must be composed of individuals who can undertake such studies or review and analyze the studies made by others.

The Commission will need medical practitioners, meteorologists and farming experts to determine how climate change impacts will affect the health and food production in particular communities. The Commission will need economists and financial experts to determine the best incentives for promoting green technologies and to determine how best to take advantage of funding mechanisms. The Commission will need legal experts and public administrators to determine what regulations are required to be enacted.

SB 2583 provides for a Commission with the President as Chairperson who shall appoint a Commissioner and two Deputy

Commissioners. The proposed Commission has as *ex officio* members the following:

- a. Secretaries of the DA, DOE, DENR, DILG, and DOST;
- b. Director General of the NEDA in his capacity as Chair of the Philippine Council for Sustainable Development;
- c. Secretary of the Department of National Defense in his capacity as Chair of the National Disaster Coordinating Council;
- d. Presidents of the League of Provinces, League of Cities, League of Municipalities and the LigangmgaBarangay; and
- e. Representatives from the academe, business sector, non-government organizations and civil society.

SB 2583 also provides for “representatives from the other sectors” who “shall be appointed by the President from a list of nominees submitted by their respective groups.”<sup>132</sup> It is not clear from the language of the bill if these representatives are the representatives from the academe, business sector, non-government organizations and civil society earlier mentioned or representative from “other sectors”.

It appears that SB 2583 envisions a Commission comprised mainly of heads of executive departments, elected local government officials and a few representatives from key sectors.

The role of the *ex officio* members in the day-to-day operations and the policy-making of the Commission is not clearly stated in SB 2583. While the participation of the department secretaries and local government officials is key in the proper enforcement and dissemination of climate change policies and regulations, their participation in policy-making itself would make the process cumbersome. As mentioned earlier, it may be best to leave the policy-making to a dedicated group of experts. While the department heads may be experts of their fields in their own right, the demand of leading their own departments may prevent them from devoting

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<sup>132</sup> Section 5, Senate Bill No. 2583 (2008).

sufficient time to climate change issues. Furthermore, SB 2583 provides that as general rule the Commission will only meet once every three months.

SB 2583 provides for a panel of technical advisers consisting of practitioners in areas related to climate change.<sup>133</sup> The role of the panel of experts is to

act as an advisory body tasked to provide support to the Commission in climate science, technologies, and best practices for risk assessment and enhancement of adaptive capacity of vulnerable human settlements to potential impacts of sea level rise, drought, floods, coral damage, strong storms and storm damage, heat-related illnesses and diseases, biodiversity and economic losses.<sup>134</sup>

Considering the nature of the problems posed by climate change and the rapid action required, perhaps it would be better if the Commission itself is composed of these panel of experts. This panel can divide themselves into sub-groups depending on their fields of expertise so that they can focus on specific problems and issues. The department heads and local executives may be invited to these panels as resource persons in areas of their jurisdiction.

The group consisting of department secretaries and local government officials may be retained as a consultative assembly. A mechanism may be provided whereby major policy decisions made by the Commission with substantial impact on the departments and local governments concerned may be reviewed by this assembly for consultation purposes. However, the majority of the work and decision making of the Commission should not require the *imprimatur* of department heads and local government officials.

As stated earlier, the work of the Commission will proceed much faster and more effectively if handled by a dedicated group of experts focused on climate change. The dangers posed by climate change is serious enough to merit not merely the part-time attention of department heads and local government officials saddled with other concerns.

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<sup>133</sup> Section 9, Senate Bill No. 2583 (2008).

<sup>134</sup> *Id.*

In addition, the Commission should be shielded from the partisan politics. The work of the Commission is too important to be hampered by political ambitions. Past experience has shown that political turf wars and election-related ambitions may stand in the way of effective policy-making. Thus, members of the Commission must be chosen not because of political affiliations but because of proven expertise in their fields. While some department heads are career officials who have risen from the ranks, as a general rule they are still political appointees serving at the pleasure of the President. While there may be nothing wrong *per se* with political affiliated appointees and locally elected officials serving in the Commission, it would better serve the interests of the public if the members of the Commission are technocratic rather than political.

*b. Authority of the Commission*

The Commission should be the lead government agency on climate change issues and should have policy-making and regulatory functions.

SB 2583 provides that the Commission will be the “sole policy-making body of the government which shall be tasked to coordinate, monitor and evaluate the programs and action plans of the government relating to climate change.”<sup>135</sup> More specifically, SB 2583 outlines the powers and functions of the Commission, as follows:

- a. Ensure the mainstreaming of climate change into the national, sectoral and local development plans and programs;
- b. formulate a Framework Program on Climate Change to serve as the basis for climate change planning, research and development, extension, and monitoring of activities on climate change;
- c. create an enabling environment for the design of relevant and appropriate risk-sharing and risk-transfer instruments;
- d. formulate guidelines for determining vulnerability to climate change impacts and adaptation assessments and facilitate the

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<sup>135</sup> Section 4, Senate Bill No. 2583 (2008).

- provision of technical assistance for their implementation and monitoring;
- e. coordinate with local government units and private entities to address vulnerability to climate change impacts;
  - f. facilitate capacity building of local communities in relation to local adaptation planning, implementation and monitoring of climate initiatives in vulnerable communities and areas;
  - g. recommend legislation, policies, programs on and appropriations for climate change adaptation, mitigation and other related activities;
  - h. review international agreements related to climate change and make the necessary recommendation for ratification and compliance by the government on matters pertaining thereto;
  - i. support scientific researches and other similar projects relevant to the formulation and development of programs geared towards adaptation and risk mitigation by local communities; and
  - j. disseminate information on climate change, local vulnerabilities and risk, relevant laws and protocols and adaptation and mitigation measures.

The list appears to be comprehensive enough to keep the Commission very busy. But perhaps a certain degree of prioritization is required. As discussed earlier, adaptation measures should be the priority and effective adaptation requires sufficient reliable information. Unfortunately, there is currently insufficient data on the local effects of climate change. While studies on the climate change impacts and vulnerabilities on Asia can be a good starting point, the government must act on Philippine specific studies. If the Philippines' initial (and currently the only) national communication to the UNFCCC secretariat is any indication, the Philippine government seriously lacks data and the data it does have are becoming quite dated. It is noted that support for scientific researches is found almost at the bottom of the list of the powers and

functions of Commission whereas it should at or near the top. It is the amount of scientific data available which will enable the Commission to design effective policies and programs. The Commission must be “an institutional mechanism to link advances in the study of impacts of climate change found within the mainstream scientific research community, to mainstream policies and programs of government.”<sup>136</sup>

Perhaps the proposed Commission should also have as function as primary negotiator or representative in international climate change conferences. Its role should not be limited to reviewing international agreements and making recommendations. Being the government officials primarily tasked with addressing climate change in the country, the members of the Commission are in the best position to articulate the interests of the country in this regard. Furthermore, active participation of the Commission in these international climate change conferences can facilitate the much needed technology transfer through the networks that will be established.

During the Bonn Climate Change Talks held last March 28 –April 9 2009, Yvo De Boer, the UN head of climate change said success in Copenhagen where a new agreement to succeed the Protocol is expected to be reached, depended on establishing four main pillars of agreement.

De Boer said the four key areas were clarity on reduced emission targets for industrialised countries, clear targets for developing countries to limit their growth in emissions, financial commitments for developing countries to reach these targets and *clear government structures to finance and oversee climate change policies.*<sup>137</sup> (emphasis supplied)

It is noted that the Commission’s functions do not include that of being the DNA for CDM. Currently, this function is being performed by the DENR. Understandably there may be political reasons why SB 2583 did not include this function. However, it stands to reason that the Commission should be the DNA.

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<sup>136</sup> *Supra* note 22 at 59.

<sup>137</sup> Earth Times, *UN climate change talks bring 'convergence' but no agreement* (2009), <http://www.earthtimes.org/articles/show/263645.un-climate-change-talks-bring-convergence-but-no-agreement.html>.

For purposes of continuity the government officials handling this function within the DENR as well as those performing functions under the IACCC and PTFCC may be transferred to the Commission. Some of these officials may have years of experience in climate change issues and it would be tragic if such technical know-how is lost upon the abolition of the IACCC and the PTFCC as provided by SB 2583.

## 2. Philippine Climate Change Policy Framework

One common hindrance to legislative action is the inability to clearly articulate an overarching policy framework apart from the motherhood statements in the Philippine Constitution and related laws.<sup>138</sup> The beauty of the UNFCCC is that it is a *framework convention*. Although it does not provide for specific action or timetables, it does provide guidance on what State parties consider most important in dealing with climate change. In the same way, Philippine climate change legislation must provide for an overarching policy framework that will guide specific action that will be taken.

### a. Framework program

Under SB 2583, the Commission will formulate “a Framework Program on Climate Change to serve as the basis for climate change planning, research and development, extension, and monitoring of activities to protect vulnerable communities from damage to lives, property and the environment due to adverse climate change impacts and to maximize beneficial effects thereof”<sup>139</sup> within six months from the effectivity of the proposed law.<sup>140</sup>

SB 2583 provides that the Framework Program will be formulated in accordance with the commitments of the Philippines under international agreements to which it is a party as well as specific adaptation needs and climate change vulnerabilities of the country. More specifically, SB 2583 provides that the Framework Program will have the following components: Policy formulation; Compliance with international commitments; Research and development; Database development and management, in the context

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<sup>138</sup> Generally a problem is easily identifiable (e.g. brain drain) but policy designed to solve the problem cannot be articulated and as a result, laws cannot be properly crafted.

<sup>139</sup> Section 11, Senate Bill No. 2583 (2008).

<sup>140</sup> The limited time frame to complete this is another reason why the Commission should be composed of experts and not busy department heads and local government officials who may only meet every three months.

of geographic information system; Capacity building/Mainstreaming; and Advocacy and Training.<sup>141</sup>

Noticeably absent from the list is an item on the CDM. Promoting CDM Projects in the Philippines can be a great source of technology transfer and foreign investment. Even assuming that the Commission is not given the function of DNA, the Framework Program should still provide for policy guidance on this matter.

*b. National and Local Action Plans*

SB 2583 also provides for a (i) National Climate Change Action Plan (hereinafter NCCAP) and (ii) Local Climate Change Action Plan (hereinafter LCCAP).

*i. NCCAP*

The NCCAP will be formulated by the Commission, concerned agencies, local government units, and with public participation, in accordance with the UNFCCC, other international agreements, conventions and protocols on climate change and the Framework Program within one year after the formulation of the latter.

The NCCAP is intended to fulfill the following objectives, among others:

- a. The identification of the most vulnerable communities/areas, including ecosystems to the impacts of climate change, variability and extremes;
- b. The assessment and management of risk and vulnerability; and
- c. The identification of options, prioritization, selection and implementation of appropriate responses for adoption as joint undertaking by both the national and local governments.<sup>142</sup>

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<sup>141</sup> Section 12, Senate Bill No. 2583 (2008).

<sup>142</sup>Section 13, Senate Bill No. 2583 (2008).

*ii. LCCAP*

With regard to the LCCAP, SB 2583 provides that “local government units shall act as the frontline agencies in the formulation, planning and implementation of climate change action plans in their respective areas” and “shall, upon consultation with relevant stakeholders, develop and implement local action plans on climate change at the provincial, city and municipal levels.”<sup>143</sup>

SB 2583 further provides that:

Barangays shall be directly involved with municipal and city governments in prioritizing climate change issues and in identifying and implementing best practices and other solutions. Municipal and city governments shall consider climate change adaptation as one of their regular functions. Provincial governments shall provide technical assistance, enforcement and information management in support of municipal and city climate change action plans. Inter-local government unit collaboration shall be maximized in the conduct of climate-related activities.

LGUs shall regularly update their respective action plans to reflect changing social, economic, and environmental conditions and emerging issues. LGUs shall furnish the Commission within one month from adoption, with copies of their action plans and all subsequent amendments, modifications and revisions. LGUs shall mobilize and allocate necessary personnel, resources and logistics to effectively implement their respective action plans.<sup>144</sup>

*c. Support programs*

In support of the implementation of the NCCAP and the local action plans the bill provides that the following activities shall be undertaken:

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<sup>143</sup> Section 14, Senate Bill No. 2583 (2008).

<sup>144</sup> *Id.*

“x x x

i. Education in Climate Change

The Department of Education shall integrate climate change into the primary and secondary education curricula and/or subjects, such as, but not limited to, Science, Biology, Sibika, History, including textbooks, primers and other educational materials, basic climate change principles and concepts.

ii. Training Program for LGUs in Climate Change

The Commission, with the DILG and the Local Government Academy, and building upon existing local climate change expertise and experiences, shall facilitate the development and provision of a training program for LGUs in climate change. The program shall include socio-economic, geophysical, policy, and other content necessary to address the prevailing and forecasted conditions and risks of particular LGUs.

iii. Climate Change Information Management System

The DENR shall oversee the establishment and maintenance of a climate change information management system and network, in collaboration with other concerned national government agencies, institutions and LGUs.”<sup>145</sup>

The Framework Program, National and Local Plans and Support Programs embodied in SB 2583 appear to be quite comprehensive. It is imperative that these programs and plans be completed as soon as possible.

*d. Funding climate change action*

According to one recent report “[d]eveloping nations will need at least \$267 billion a year by 2020 to fight climate change and adapt to

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<sup>145</sup> Section 13, Senate Bill No. 2583 (2008).

droughts, heat waves and rising seas.”<sup>146</sup>As with other developing countries, how to fund climate change related action is a big issue for the Philippines. Rigorous scientific study to obtain data on climate change impacts and vulnerabilities require funding for equipment and manpower. Preparing local government units to prepare for higher sea levels, stronger storms, changing levels of rainfall and weather patterns also require funds. These are just a few examples how climate change action will require funds. Thus, any climate change legislation must not only provide for programs of action but also how such programs will be funded.

One way to obtain funding is through the various funding mechanisms made available to developing countries like the Philippines. Under SB 2583, the Commission will “be authorized to receive donations from local and international sources in support of the development and implementation of climate change programs and plans.”<sup>147</sup> It further provides that the proceeds from such donations shall be used to finance:

- a. “Research, development, demonstration and promotion of technologies;
- b. Conduct of assessment of vulnerabilities to climate change impacts, resource inventory, and adaptation capability building;
- c. Advocacy, networking and communication activities in the conduct of information campaign; and
- d. Conduct of such other activities reasonably necessary to carry out the objectives of this Act, as may be defined by the Commission.”<sup>148</sup>

The other funding method provided by SB No. 2583 is for government-owned and controlled corporations, and other relevant financial institutions “to identify loan and financing mechanisms that will be made

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<sup>146</sup> Alister Doyle, *Africa Says Poor Need \$267 Bln/Year In Climate Fight* (2009), <http://www.reuters.com/article/latestCrisis/idUSLK631928> accessed on 21 April 2009.

<sup>147</sup> Section 16 Senate Bill No. 2583 (2008).

<sup>148</sup> *Id.*

available to support local climate change plans, including, but not limited to, alternative livelihood projects for small-scale farmers and fishermen.”<sup>149</sup>

It further provides:

“Subject to existing laws, local government units may raise revenues and secure funds to implement their Local climate change adaptation plans through:

1. Enactment of local tax ordinances;
2. Allocation of funds from the Internal Revenue Allotment, subject to the approval of their legislative councils;
3. Utilization of shares in the development of national wealth;
4. Loans, grants and donations as may be applicable;
5. Privatization of local government-owned enterprises and/or properties;
6. Adoption, where appropriate, of user fee schemes for environmental and other services related to their climate change action plan; and
7. Other means as may be allowed under relevant laws.”<sup>150</sup>

Finally, SB 2583 provides that “[a]ll relevant government agencies and local government units shall allocate from their annual appropriations adequate funds for the formulation, development and implementation, including training, capacity building and direct intervention, of their respective climate change programs and plans.”

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<sup>149</sup> Section 17 Senate Bill No. 2583 (2008).

<sup>150</sup> *Id.*

Thus, SB 2583 essentially provides for three main sources of funding: international and local donations and grants, generating revenue through taxes and fees and loans, allocation in general appropriations.

Funding may also be sourced from foreign investment in green technologies. Seeking to deal with the climate change and the global financial crisis in one blow, developed countries like the United States are exploring ways to make advances in green technologies as an engine in economic growth. The Philippines can take advantage of this by luring foreign investment in green technologies. This can be achieved through CDM and other mechanisms

## VI. CONCLUSION

Climate change is a multi-disciplinary issue. Law is just one aspect albeit a very important one. Law seeks to deal with human behavior. Though various means it causes one to act in manner consistent with the society's values. If Philippine society is in agreement with the need to address *anthropogenic* climate change then necessarily the law plays a pivotal role.

The absence of Philippine climate change legislation cripples the country's efforts to effectively address the problem. While the solution obviously requires the enactment of legislation, care must be taken that such legislation be designed properly. While no law is perfect, the imperfection of all laws does not grant the Philippines the excuse in passing ridiculous and confused legislation.

The impacts of climate change on the Philippines can be catastrophic. To a certain degree, effective law and policy can reduce the harm and allow the country to enjoy the benefits. Constructing an effective legal framework is imperative. While apathy is not an option, neither is passion without reason disguised as environmental activism. Intelligent choices must be made.