Mobilizing Investments for the Implementation of NDCs

Learning Theme #3 - Integrated Governance

Philippines

Implementation of the Energy Efficiency & Conservation Act by Local Government Units

Part A: Institutional Mapping

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Introduction

With the ratification of the Paris Agreement in 2015 by the Philippines, its INDC has become its official NDC, while waiting for submission of its revised and updated version in 2020. This sets a ***70% conditional GHG emission reduction target*** from the country's 2020-2030 Business-as-Usual (BAU) scenario, which is anchored on the extent of external funding support.

Despite the absence of any absolute mitigation targets which would have made its NDC a more binding commitment, the Philippines has been setting sector-specific policies and pursuing initiatives which have strong GHG emission reduction co-benefits. **Consistent across all these strategies is the recognition of the significant financial resources and investments necessary**.

The mobilization of the financial resources required to respond adequately to climate change is a global goal shared by all countries, with critically important collective action challenges across all scales. **Climate finance refers to *"local, national or transnational financing—drawn from public, private and alternative sources of financing—that seeks to support mitigation and adaptation actions that will address climate change."***[1]

The multi-national project, "**Mobilizing Investment for NDC Implementation**" (MI) is focused on diverse interventions in 7 different countries: Bangladesh, Dominican Republic, Ethiopia, Kenya, Peru, Philippines, and Viet Nam.

Among the various components of the MI project is Learning Theme #3 (LT3)—focused on gaining insights and better understanding the role of "Integrated Governance" on improving investments in NDCs. Three distinctive country scenarios were explored under LT3, with the intent to map and better understand the climate governance landscape and the unique capacity and coordination challenges manifest in each countries' emerging NDC investment strategy. The LT3 countries of study include Peru, Kenya, and the Philippines.

While opportunities for economic growth and human development exist everywhere, the way forward, i.e. "the favorable conditions," varies for different places— even within the same country. This is especially true under the pressures of climate change; not only to cope and adapt to its direct and cascading indirect impacts, but also to improve energy access while defying the gravitational pull from legacy systems dependent on carbon intensification for economic growth.

Climate and infrastructure expenditures, along with de-risking and attracting additional sectoral investments, remains a challenge for both national and sub-national governments in the majority of countries where such investments are pressingly needed. **In fact, the challenges are proving much more complex than simply supplying the wanting finance or ramping up new technologies.**

Pursuing new opportunities for human and economic development at the local level, requires (among other things) **addressing coordination and capacity challenges between actors, sectors, levels of government, and public & private sector interests.** While at the same time, maintaining a balanced, inclusive, trans-institutional approach across the urban-rural interface (e.g. monitoring the water, energy, food nexus).

Understandably, public investment in both hard and soft infrastructure[2] has a strong impact on where people decide to live and work. This in turn, directly influences the nature and location of private investments. Well-managed **public investments to strengthen resilience to climate change and low carbon infrastructure can be a growth enhancing form of public expenditure**. In contrast— uncoordinated, unmonitored poor choices in public investment wastes resources, erodes public trust, and hampers growth and private sector investment opportunities.[3]

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[1] UNFCCC, 2019. "Introduction to climate finance. https://unfccc.int/topics/climate-finance/the-big-picture/introduction-to-climate-finance

[2] Infrastructure includes a wide variety of systems (both built and natural) that are essential to the functioning of communities - they can be hard or soft infrastructure. Hard infrastructure generally refers to the large physical infrastructure, such as bridges, sewers, and electric distribution systems, etc., while soft infrastructure refers to the institutions and programmes that support the economy, education, safety and health of the city residents; such as law enforcement, public education, and the health care system, etc.

[3] OECD (2014) Recommendation of the Council on "Effective Public Investment Across Levels of Government." Adopted March 12, 2014

LT3 Philippines - Thematic Focus

The application of LT3 on Integrated Governance of the MI project in the Philippines is comprised of two components:

- **Part A:** An Institutional Mapping diagnostic with the objective to lay the ground work for discussion and specification of the coordination and capacity challenges to integrated, multi-level climate governance MLG and the challenges being faced by sub-national governments or local government units (LGUs) to implement and comply with national climate action directives. Specifically, ***the governance challenges to formulate effective local climate change action plans (LCCAPs) and accelerate energy efficiency & conservation (EE&C) investments at the LGU level.***

- **Part B:** A Domestic Technical Consultation will be held in Manila in Feb 2020, with planning officials from 14 Local Government Units and the national government. The technical consultation will be informed by the Institutional Mapping Diagnostic, with the interactive discussions organized to incentivize analysis and elaborate recommendations. The learning objectives of the DTC include:
    - How do the Comprehensive Land Use Plans, the Comprehensive Development Plans, and Local Climate Change Action Plans create or hinder investment opportunities? Are there different approaches when trying to mobilize public vs private investments at the local level?
    - What would a registry to monitor bottom-up EE&C investments and energy savings, or other GHG mitigation activities look like? Do Environment and Natural Resources Offices (ENROs) have a role?
    - Generate specific recommendations to help LGUs attract budgetary support and investments.

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Part A: Institutional Mapping

Introduction

Integrated governance refers to more than political process. Specifically, it concerns the processes of interaction and decision-making among the diverse actors involved in a collective problem that lead to the creation, reinforcement or reproduction of social norms and institutions.[4] **Integrated, multi-level governance (MLG) therefore, refers to the synergistic interplay between institutions, levels of government, and civil society organizations that shape how policies and actions are defined and implemented.** This can involve vertical and horizontal interactions and take numerous forms.[5]

An outcome of the 2017 Global Nationally Determined Contributions (NDC) Conference in Berlin was that integrated governance is a key pillar for NDC implementation, transparency, and climate finance. Countries cannot meet their climate goals unless national governments work hand-in-hand with all tiers of government, civil society and the private sector partners under a balanced territorial approach.[6]

Recognizing that MLG is an underserved concept, an informative step to help mobilize climate finance is to conduct an institutional mapping exercise as a diagnostic to help identify and prioritize improving MLG coordination and capacity gaps. Institutional mapping is concerned with understanding the existing distribution of power that influence the outcome of a decision-making process.[7] It focuses on the key actors, their interactions, where power is located, who has the ability to influence decisions, and who makes decisions. The aim is to identify roles and responsibilities of different actors in order to clarify their relationships towards improved climate action. (see Appendix 1: Integrated Governance; Definitions, and Concepts)

The Philippines has submitted its Intended Nationally Determined Contributions (INDC) to the United Nations Framework Convention on Climate Change (UNFCCC) with **a 70% conditional emission reduction targets from the country's 2020-2030 Business-as-Usual (BAU) scenario, which is anchored on the extent of external funding support.** With the ratification of the Paris Agreement in 2015 by the Philippines, its INDC has become its official NDC while waiting for submission of its revised and updated version in 2020.

The Philippines, to date has not indicated any absolute mitigation targets and has not identified specific mitigation actions which would have made its NDC a more binding commitment. Despite this, sector-specific policies and initiatives which have strong emission reductions as co-benefits are being rolled-out on a nationwide scale.

The **Energy Efficiency and Conservation (EE&C) Act, signed into law on April 2019**, and establishes the general governance and strategies to improve energy use is one such example. This Act acknowledges the importance of strategic investments into energy saving measures in the national and sub-national (local) levels while at the same time addressing mitigation goals in the NDC.

The Republic of the Philippines has a population over 100 Million people, with diverse ethnicities and cultures stretching across a complex archipelago consisting of more than 7,600 islands. **There are three**

[4] Hufty, M; (2011) "Investigating Policy Processes: The Governance Analytical Framework (GAF).

[5] Ibid

[6] GIZ, UNDP, LEDS-GP (2017) "NDC Conference 2017" Berlin, May 2-6, 2017

[7] McFadden, L., Priest, S. and Green, C. (2010) Introducing institutional mapping: A guide for SPICOSA scientists, *Spicosa Project Report*, London, Flood Hazard Research Centre, Middlesex University.

official levels of subnational government in the Philippines, all of which are referred to as Local Government Units (LGUs). The three levels that comprise LGUs include; Provinces[8] and Independent Cities (independent from a province); Municipalities; and Barangays, the smallest level of LGU[9].

The Constitution of the Philippines was ratified in 1987 and **guarantees "local autonomy" to the local governments**. In 1991, the National Congress created the Local Government Code of the Philippines to to ensure accountability through a decentralized system of powers, resources, and responsibilities allocated across different levels of government.[10] **Under the EE& C Act, the LGUs are mandated to come up with their Local EE & C Plans**.

However, while the **EE&C Act does provide a framework with tight implementing schedules to ensure local implementation** of energy savings and EE investments— it also presents the LGUs with the challenge of integrating with the several other priority planning-related challenges in motion.

In the Philippines, the Mobilizing Investment (MI) Project seeks to identify the integrated coordination and capacity challenges to financing NDC implementation at the LGU level, while advancing local and international learning on some of the practical challenges presented to subnational governments.

In particular, the MI team's efforts seek to specify the challenges being faced by the LGUs in complying with the requirements of EE & C Act vis-à-vis all other local climate-related policies, particularly in crafting robust and responsive plans that can realistically be implemented and will translate to investments in climate change mitigation actions in their localities.

The specific objectives of this report include:

- Provide a background on how climate change mitigation governance co-exists with sector-specific initiatives in promoting investments, particularly in energy efficiency ;
- Outline the challenges being faced by LGUs in complying with national climate change mitigation directives, such as in formulating local climate change action plans (LCCAPs) and the EE & C plans; and
- Acknowledging that EE measures need to be undertaken, identify gaps that hinder EE investments from flowing smoothly to the local levels

This paper contains the following:

- Introduction of the MI Project and its relevance to Philippine's attainment of its NDC;
- Methodological approach;
- Context which provides a background on how climate change mitigation governance co-exists with sector-specific initiatives in promoting investments, particularly in energy efficiency;
- Preliminary assessment of gaps (institutional/functional, information, technical capacities, technological etc.) being faced by LGUs in complying with national climate change mitigation directives, such as in formulating local climate change action plans (LCCAPs) and the EE & C Act;
- Preliminary assessment of financing-related gaps that hinder EE investments from flowing smoothly to the local levels; and
- Conclusion: Opportunities for LGUs to address the gaps.

[8] There are currently 81 Provinces in the Philippines.

[9] Every city and municipality in the Philippines is divided into barangays. although barangays can be divided into smaller units called *sitios* and *puroks* though these divisions do not have elections supervised by national government.

[10] Local Government Code of 1991 http://www.officialgazette.gov.ph/downloads/1991/10oct/19911010-RA-7160-CCA.pdf

Methodological Approach

This report adopted a step-wise approach consisting of:

- Step 1: Desktop Review

  The Philippines has a wealth of information on climate change governance and financing both in the national and LGU levels. Particularly, various national plans have been formulated and are continuously increasing in numbers, mostly to complement existing ones and/or to address identified gaps. These national plans have also been translated to policies which provide steps and guidelines on how to implement these plans. The LGUs, being at the forefront of implementation of these plans at the local levels, has tried to comply with national policies and has tried to implement them.

  Literature related to national plans and policies, as well as those that detail LGU experiences in dealing with their commitments have been reviewed for this paper.

- Step 2: Interviews

  Interviews were conducted with key resource persons to complement Step 1. Interviewees included the following:

  - LGU representatives - as key players in the implementation of local plans, particularly LCCAP and Local EE&C Plan, various LGU representatives in Metro Manila, Luzon, Visayas and Mindanao were considered so that various ideas that were reflective of the LGUs current status were taken into account. The following were the criteria used in selecting these LGU representatives:
    - At least one LGU with an LCCAP that is either incorporated in their Local Development Plans (LDP) and/or those with enhanced LCCAPs, meaning those with adaptation and mitigation components ;
    - At least one LGU with strong EE measures in their localities;
    - At least one LGU with no LCCAP or with an LCCAP but with no mitigation section considered;
    - Are members of the Philippine League of Local Environmental and Natural Resources Officers;
  - National Government Agency - the Department of Energy
  - Supporting institutions
    - Academe
    - Non-government organizations/ consulting firm
  - Private EE professionals

  Interviews were conducted from November 2019 until January 2020.

- Step 3: Data analysis and processing

  Results from the interviews and desk reviews were processed and gaps were identified in the implementation of NDCs at the LGU levels, with focus on EE investments.

Findings of this paper will then be presented in a stakeholder technical consultation which will gather all these key resource persons to validate and enhance the findings.

In an effort to focus on the NDC and mobilizing investments related to it, the paper only looks into the mitigation aspect of climate governance and did not delve into the adaptation aspects.

Climate Mitigation Governance in the Philippines

The Philippine Government views climate change mitigation as a function of adaptation. With this outlook, adaptation and disaster risk reduction measures have been the primary focus of climate change policies and programs with mitigation measures coming in as support to enhance climate-resilient developments (CCC). In 2015, this outlook translated to 95% of the countries' total climate change expenditures being directed towards adaptation, mostly for flood control and prevention (Worldbank, 2017).

Attaining the 70% conditional emission reduction targets in the NDC therefore is **an ambitious challenge for the country as it needs to increase total climate change investments – not divert adaptation to mitigation expenses.**

Total country emissions in 2000, net of Land Use and Land-use Change and Forestry (LULUCF) sequestration amounted to 126,879 Gg CO_2e (SNC, 2010). **BAU projections for 2020-2030 are currently being re-evaluated**, which partly explains why the Philippine Government has not identified specific mitigation actions in the NDC.

However there are relevant laws in support for this ambitious challenge which includes **the Climate Change Act of 2009**. The Act provides for a systematic integration of climate change action into policy making processes and development planning by all agencies and levels of government. In the national level, the Act provides for the formulation of the National Climate Change Action Plan (NCCAP) which is the long-term plan of the country in addressing climate change and is consistent with AmBisyon Natin 2040 and the Philippine Development Plan 2017-2022. The **Climate Change Commission (CCC) is the primary government body tasked to oversee and monitor attainment of this NCCAP**.

But it is the other national government agencies that were tasked to implement the NCCAP for their respective sectors. For the energy sector for example, the Department of Energy (DOE) is the primary agency. Similarly, waste sector is governed by the Department of Environment and Natural Resources (DENR). **Designated national government agencies in-charge of specific sectors are required to report sectoral emissions to the CCC under the existing Greenhouse Gas Inventory Management and Reporting System (PGHGIMRS) and are likewise in-charged of implementing emission reduction measures in their sectors.**

In the sub-national government front, **the Act mandates the formulation of the Local Climate Change Action Plan (LCCAP)**. This local action plan addresses local impacts of climate change using risk-based and scientific approaches. The LGUs are tasked to serve as frontline agencies in the formulation, planning, and implementation of LCCAPs in their respective areas. The LGUs are autonomous, self-reliant institutions created under the Local Government Code of the Philippines and are being overseen by the Department of Interior and Local Government (DILG). Under this arrangement, **LCCAPs are to be submitted to the DILG as compliance to the Climate Change Act**, with copies to the CCC for monitoring.

The Act mandated LCCAP compliance starting on 2009 but by 2016, only 9% of the 1,684 LGUs had LCCAPs. These LGUs have committed to the President of the Philippines their completion of the said plans by end of 2017. However, interviews with LGU representatives have revealed that this was not attained.

Promotion of Energy Efficiency in the Philippines

National energy efficiency and conservation policies and measures are primarily targeted to address energy security and achieve energy savings. As energy savings are directly proportional to emission reductions, EE & C measures are also considered mitigation activities— in fact, belonging to the "low-hanging mitigation initiatives." .It is good decision to pursue opportunities for energy savings because they are cost-efficient and make for a good business case. Thus, even without looking into its co-benefits that include emission reductions, EE & C measures will happen anyway (interviews with LGU and EE practitioners, 2019).

EE & C measures are also in line with AmBisyon Natin 2040, particularly in "reducing dependence on traditional energy sources such as coal." **It is to be noted that the DOE still allows for coal-fired power plant contracts, which may seem contrary to the country's long term visions.** EE & C measures aim to balance the effects of increased coal use by reducing energy demand.

Republic Act 11285 or **the EE & C Act, signed into law on April 2019, may be one of the pioneering national policies to legally bind the LGUs to the country's national mitigation targets**. The Act's implementing rules and regulations, which were approved by the DOE on November 22, 2019, aims to mainstream and integrate LGUs' performance in reducing national electricity and fuel consumptions through submission of an EE & C Plan, which covers the LGUs' whole community (e.g. buildings, commercial and residential establishments, public infrastructures, transportation etc. within its geographical boundaries) to the DOE. The DOE will set standards and targets, as well as monitor compliance of LGUs to these goals. And as discussed in the preceding section, it is the DOE that implements the energy sector goals under the NCCAP and the PGHGIMRS.

Importantly, **LCCAPs do not bind local governments to national climate change targets. There is still no mechanism in place for the DILG and the CCC to address this concern**. Hence, the EE & C Act may fill in for that gap, albeit only to the extent of EE measures.

The EE & C Act is the main policy tool for the DOE to implement its **EE Roadmap which aims to reduce energy demand BAU by 24% in 2040 and achieve savings of 10M tons of oil equivalent** (DOE, 2017). Industry practitioners estimate that achieving full savings will generate a reduction of 1.7 Gt CO_2e by 2040. They also estimate that **in order to achieve this target, an investment of US$243 Billion (PHP 12 Trillion) by 2040 is required**. Self-financing (using existing internal capital to procure EE technologies), as well as debt-financing schemes— will likely be insufficient to attain this total investment. Therefore, novel private financing strategies, such as those offered by energy savings companies (ESCOs) will be critically important. (Ablaza, 2019)

LGU's Planning Documents

The two major LGU planning documents are the:

(1) **Comprehensive Land Use Plan (CLUP).** This is a tool that determines the local government's land allocation and regulations. It is used in demarcating areas for development and is the basis of the zoning ordinances. At the national level, formulation of CLUP is being regulated by the Housing and Land Use Regulatory Board (HLURB) and is updated every five (5) years.

(2) Comprehensive Development Plan (CDP). The CDP provides strategic directions and guidance to the LGUs' multi-sectoral programs, projects, and activities. The CDP is updated every three years. The oversight national agency for CDP is the DILG.

In principle, the LGU understands that the CLUP and the CDP are all-inclusive plans that must take into consideration all other specific, stand-alone plans being formulated by the LGU, as required by various laws and agencies. These specific plans may include the following:

- LCCAP, as mandated by the Climate Change Act which contains a discussion of the LGUs' adaptation measures. Submission is overseen by the DILG and the CCC.
- LGUs can voluntarily do an enhanced LCCAP that has a mitigation component which contains a community-level GHG inventory and a set of mitigation measures to address its community-level emissions.
- Solid Waste Management Plan, as mandated by the Ecological solid Waste Management Act.
- Local Disaster Risk Reduction and Management (DRRM) Plan as mandated by RA 10121 or the DRRM Act.
- Local Investment Development Program, which lists the funding sources for the CDP.
- Other plans, (totaling 30 or so) such as Local Shelter Plan, Transportation Management Plan etc.

Though newly enacted, and albeit a very important development priority, **the requirements to formulate an EE & C Plan exacerbate the already bureaucratic obligations to formulate a myriad of LGU plans and reporting requirements.** This is on top of existing concerns about the dearth of resources, capacity gaps, confusion and overlapping guidelines provided by national government agencies. (Adelphi and Un Habitat, 2018)

Gaps Assessment, complying with national directives for climate mitigation

In our research, several challenges were identified that LGUs face in formulating robust and responsive LCCAPs and EE& C Plans if they are to be realistically implemented and in compliance with national climate change mitigation directives. Below, while each challenge is discussed separately, in reality these challenges are not isolated and very much overlap each other in complex co-dependencies. These challenges summarize the experiences conveyed during interviews with different key institutions, decision makers and stakeholders, as well as the analysis of available literature on the topic. Key gaps identified are those related to institutional/ functional mechanisms, adequacy of data for better climate governance, technical capacities and technology-related barriers.

Fig. 1 - Gap Assessment

Gaps- Complying with National Directives	
Institutional / Functional Gaps	- voluntary GHG reporting in LCCAPs/ inconsistent
	- mandatory GHG MRV in EE&C plans, linked to national accounting
	- LGU staffing obligations, role overlaps
Information Gaps	- non-transparent NDC baselines & target
	- unavailable local data
	- producing mitigation project pipelines from emission inventories
Technical Capacities	- LGU identification of feasible mitigation projects
	- Generational challenge, older LGU staff
	- Full schedules, lack of time/bandwidth for new skill learning.
	- No guidelines yet on EE&C implemetnation
Technology-related barriers	- LGUs lack of familiarity with available mitigation options & technologies

A. Institutional / functional gaps

Optional or voluntary reporting of mitigation component of the LCCAP

The LCCAPs, seen as the primary document that outlines the LGU's contribution to the attainment of the NDC, do not in fact bind LGUs to the NDC targets. While the NCCAP and the NDC were developed through exhaustive, inclusive and participatory processes (USAID, 2016), it did not prosper in addressing the gaps to harmonize top-down approaches (such as the NDC and the PGHGIMRS reporting) with bottom-up initiatives that originate from LGU's data (LCCAPs and other plans), partly because of **the lack of mechanisms to monitor** and process these local data.

To wit, the DILG requires all LGUs to submit their LCCAPs as part of their reporting commitments. The CCC, monitors submission of LCCAPs and, in partnership with various international donor agencies provides for capacity building initiatives to formulate enhanced LCCAPs. Despite this, **many LGUs still submit LCCAPs which are incomplete in form, content, and process** (CCC). One major reason for this is that LGUs see the drafting of the LCCAP as only for DILG compliance purposes. The rigorous adaptation component of the LCCAP, which is mandated, takes up a lot of effort, time and resources to do. Meanwhile, the mitigation component of the LCCAP, which identifies and quantifies **mitigation measures remain to be an optional undertaking**. Only LGUs with enough political will, resources and capacities will voluntarily formulate this component. The Philippine League of Local Environment and Natural Resource Officers PLLENRO[11] members with enhanced LCCAPs were only able to do so with

[11] PLLENRO is an organization of local environment and natural resources officers nationwide. It is a non-profit organization, organized in 2009 and registered in the Security and Exchange Commission in 2010. It as founded to help strengthen the environment advocacy and facilitate capacity building and development of all local ENROs to address complex environmental laws and concerns.

USAID assistance. Furthermore, without strict monitoring and feedback mechanisms from the DILG or the CCC, the LCCAP cannot deliver reliable and robust data that can be fed into the NDC.

Such is not the case with the EE & C Plans. First it is mandatory and, second, the law seems to have a strong monitoring and feedback mechanism. If implemented properly as planned, the EE & C Plans of the LGUs will be contributing directly to the NDC of the Philippines. There is a need therefore for the LGUs to be vigilant in making sure that the DOE guidelines are responsive and LGU-friendly.

Mandatory vs. optional staffing requirements within the LGU and overlapping of roles

The Planning and Development Office (PDO) headed by the Planning Officer is the organization within the LGU that is in usually in-charge of formulating the LGUs' plans, particularly the CDP and the CLUP. However, the Environment and Natural Resources Office (ENRO), consistent with its mandate, has typically led the formulation of LCCAP and other environmental-related plans such as the solid waste management and DRRM among others.

It is to be noted however, that not all LGUs have an ENRO and therefore do not have an ENR Officer. This is because the Local Government Code mandates the creation of a Planning Office, among others, but provides only for an optional creation of the ENRO. The LGU, if it wished to have its ENRO may enact a local ordinance creating it. The **absence of an ENRO and an ENR officer is among the factors that contributed to non-compliance of LGUs with their LCCAPs** as there are no focal persons that can focus on its formulation.

Also, EE measures are considered as mitigation activities, and are therefore identified under the LCCAP, which is typically formulated by the ENRO. However **the EE & C Act mandates the creation of an EE & C office and the appointment of an energy efficiency and conservation or "enercon" officer, with permanent employment status within the LGU**. The EE & C office may be the PDO or the ENRO or any other office assigned by the LGU to perform the mandates under the EE & C Act. To add to the complexity, the latter may actually be the Engineer's Office, as they are taking charge of building maintenance which involve EE activities.

B. Information gaps

Non-transparent NDC baselines and targets; unavailable local data

Most LGUs are not aware of the specific NDC targets of the country aside from the general statement of 70% conditional reduction against BAU scenarios. What's more, **not many LGUs are aware of their community-level emissions** and how they fare against the country's total emissions.

Greenhouse gas (GHG) emissions, whether be it community-wide or country–level, are estimated using tools for GHG inventory and accounting. However, the CCC has not yet shared how it is able to compute the country's baselines. Also, a number of LGUs have still not undergone the process despite aggressive efforts of PLLENRO to educate their members and even provide for GHG accounting and training. Lack of funds and inadequate staffing within the LGUs are some of the reasons for not exercising this process.

GHG inventory and accounting is the first step in managing emissions. Some LGUs were quick to point out the mantra that "you cannot manage what you cannot measure" which is associated with the conduct of GHG inventory (GHG toolkit, CCC; and interviews, 2019). The CCC has advocated for the conduct of GHG inventory and accounting by coming up with simplified templates, methodologies and calculation tools to enable the LGUs to start their inventories. This is embodied in the GHG Toolkit which is available together with a Manual for LGUs to download at the CCC website.

The process of identification of local mitigation measures follows the inventory. It is noteworthy to mention that PLLENRO has come up with a milieu of local mitigation measures that the LGUs can copy. This list draws from a wealth of experiences of PLLENRO members who were able to undergo the process and complete their enhanced LCCAPs.

The EE& C plan complements well in these portions of the LCCAP. Energy savings can be translated to emission reductions and local mitigation targets can be drafted.

However, both the inventory and the mitigation options need to be vetted out and validated, as LGUs do not always have the same circumstances. Validation of the accuracy and soundness of the LGU reports have also been a concern for some LGUs

The GHG inventory results and the list of mitigation options for the LGUs constitute a significant portion of the mitigation components of the enhanced LCCAP. Without these, LGUs would not be able to quantify their contributions to the NDC. It follows that the lack of these data in the LCCAPs of the LGUs will hinder the national government, particularly the DILG and the CCC, to aggregate and analyse cumulative emissions and mitigation efforts.

C. Technical capacities

Much has been said about the lack of technical capacities among the LGU personnel. It is a common perception among smaller and less financially-abled LGUs that **formulating the mitigation component of the LCCAP require specialized skills** and significant funds to undergo the process. Though it may be true, simplified templates and standardized tools are available to aid the LGUs in doing GHG accounting and identifying mitigation options.

It may be helpful therefore to look into the barriers for developing technical capacities among the LGU. One LGU representative mentioned that he is too old to learn, and that GHG accounting are for the computer-savvy personnel. Others are just **simply too busy or do not have time** to study. Others are not aware of the existence of learning opportunities and tools to make the process easier.

Meanwhile, one of the most anticipated developments among the LGUs is how to implement the requirements of the EE and C Act. **Guidelines on the creation of the EE&C office, the selection of the enercon officer and the contents of the plan are being eagerly anticipated by the LGUs**, as those guidelines will define whether LGUs have the inherent technical capacity so that they can easily comply with the law or not.

A quick review of the criteria for selection of an enercon officer yields a conclusion that the LGU's city/municipal engineer and correspondingly, the Building Office may make the right fit. For one, they are already doing basic energy audits within LGU properties, and possess the minimum qualifications of an enercon officer. **Energy audits will be an essential activity under the EE&C Plan.** The technical challenge for LGU personnel in the future will be on the conduct of more extensive energy audits that cover big and complex establishments under the LGU's jurisdictions, as part of the monitoring and EE enforcement obligations of the EE&C office.

If this will be the case as some LGU representatives envision, the ENRO and the Planning Office may need to work hand-in-hand with the city/municipal engineers in using proper planning tools and in identifying the most efficient mitigation options that is consistent with the LCCAP.

D. Technology-related barriers

Mitigation actions are usually equated with technologies that reduce emissions. In identifying mitigation measures under the LCCAPs and the EE&C plans, **LGU planners need a certain sense of familiarity with mitigation technologies**. The following are some of the barriers that the LGUs often encounter related to use of technologies:

- Availability - availability of the technology itself including parts, services and warranties.
- Reliability and efficiency - proven performance track record.s
- Adaptability - can be modified, or is adaptable to the specific circumstances of the LGU.
- Ease of use.
- Cost effectiveness - government procurement procedures stipulate preference to least-cost options for government purchases.

Assessment of financing -related gaps

Further research identified gaps that hinder EE investments from flowing smoothly to local levels. It is to be noted that even if EE measures are cost-efficient and are considered "low-hanging mitigation initiatives," they are still difficult to implement due to financing barriers.

Private sector EE measures, such as those in commercial & residential sectors, are impeded by a number of financing-related barriers; such as scarcity of finance, and limited incentives to name two. Public sector EE measures such as LGUs own building retrofits, public lighting, etc.— encounter an added burden due to public accounting and strict procurement rules and are subject to government's auditing procedures.

It is worthy to know that the above-mentioned barriers have been partly addressed, at least on paper, by the EE&C Act. Its effectiveness during actual implementation remains to be seen.

Fig. 2 - Gap Assessment

Financing related Gaps and Barriers	
Scarcity	- significant upfront capital investments
	- bank credits require LGU Internal Revenue Allotment as loan guarantee
Limited Incentives	- lack of stand-alone market incentives (pre-EE&C)
	- need guidelines for forthcoming EE&C fiscal and non-fiscal incentives
Public Accounting and Procurement Rules	- procurement restrictions on "savings-based"services
	- no life-cycle considerations

A. Scarcity of financing

Implementing EE measures usually involves large upfront costs such that even if efficient technologies are available in the Philippines, these measures are not implemented. Even with high returns on investment due to the significant energy/fuel savings achieved, this still may not be sufficient to convince property owners to invest in the upfront costs for EE projects.

Debt financing can be considered but are usually not preferred due to creditworthiness issues which limit access to financing via these options. For LGU-initiated EE projects financed through credits from banks, the **assignment of the Internal Revenue Allotment (IRA) as guarantee for the loan is a major turn-off for LGUs as this entails setting aside LGU budget** which could have been used for other priority LGU undertakings.

Financing through energy service companies (ESCOs) is another option which allows for no or minimal upfront costs for EE projects, and financing these through energy savings.

B. Limited incentives

Up until the enactment of the EE &C act and release of its IRR, there were very limited incentives for EE measures in the country. The EE&C Act provides for both fiscal and non-fiscal incentives such as inclusion in the Bureau of Investment's (BOI) Investment Priority Plan for a total of 10 years which covers income tax holidays and duty free importation. It also allows for EE projects to avail of incentives regardless of ownership structures by nationality. Non-fiscal incentives include awards, recognition and technical assistance from the DOE.

Crucial to enabling these benefits are **the guidelines that need to be drafted by the DOE**.

C. Public accounting and procurement rules

Public sector projects are mandated by law to follow government procurement rules under the RA 9184 which in principle, provides for procedures that will allow the government to procure, at least

cost, the goods or services that it needs. It previously **did not allow for savings-based services** and payments.

Under the law, LGUs will now be allowed to repay ESCOs undertaking energy efficiency projects through applicable repayment schemes based on the cost savings to be generated from the projects and other sources.

Conclusion

Being at the forefront of climate action and GHG emission mitigation, the LGUs are faced with additional challenges to provide for an environment that fosters increased investments in mitigation activities without diverting away from adaptation activities.

Increased investments in energy efficiency measures across the country do not only address NDC goals but bring about energy savings, thereby contributing to the Philippine's long-term energy security goals.

But these measures come with significant, complex challenges for the LGUs. Formulating robust and responsive LCCAPs and EE&C Plans that are in compliance with national climate change mitigation directives encounter the following gaps: institutional/ functional mechanisms, adequacy of data for better climate governance, technical capacities and technology-related barriers. There are also gaps that hinder EE investments from flowing smoothly to local levels.

The following are some of the opportunities seen in the challenges;

1. In the short term to medium term: Strengthening the the technical and institutional capacities and support mechanisms to **enable as many LGUs as possible to voluntarily formulate enhanced LCCAPs where GHG emission mitigation activities as well as GHG inventories are included.**

2. In the long-term; provide **mandatory climate MRV (monitoring, reporting and verification) provisions to require all LGUs to formulate and implement enhanced LCCAPs.**

3. Enactment of a law or an issuance, or revisions of other existing laws such as the Local Government Code or the Climate Change Act, which **permanently creates an ENRO and opens up a permanent position for the ENR officer**. This will ensure that all LGUs have dedicated personnel and focal persons to address climate change and other environmental concerns.

4. Actively **participate in consultations by the DOE in the crafting of various guidelines** under the EE&C Act. Specifically, the LGUs through the PLLENRO must be on-hand to provide ground-level experiences in crafting the guidelines for the following:
    - Guidelines for the creation of an EE&C Office and selection of an Enercon officer.
    - Guidelines for the contents of the local EE&C plans.
    - Guidelines for the various EE standards.
    - EE performance monitoring procedures.

5. Work with the DOE in **pilot testing the guidelines within the LGUs.** It may be good for LGUs to walk their talk by engaging in EE projects within the LGU operations, explore financing through ESCOs and document the same.

6. PLLENRO to liaise or work with the CCC or DILG to **fast track releases of toolkits that will ease the conduct by LGUs of LCCAP's GHG emission mitigation component** such as the supplementary guides for identifying mitigation options.

7. Identify and participate in **capacity building activities for LGU personnel** to develop technical capacities in GHG emission mitigation and in particular, on energy efficiency (e.g. energy audit activities, project level GHG emissions and reductions accounting of EE measures).

8. Supplement national EE&C Act's fiscal & non-fiscal incentives with **LGU-specific investment incentives.** =

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Appendix 1: Integrated Governance; Definitions, and Concepts

- **Governance** - "…processes of interaction and decision-making among the actors involved in a collective problem that lead to the creation, reinforcement, or reproduction of social norms and institutions." Importantly, "governance" does not presuppose vertical authority and regulatory power- like political systems do. Governance refers to formal and informal, vertical and horizontal processes, with no a priori preference.
- **Multi-level Governance** - the synergistic "interplay" between institutions, levels of government and civil society organizations that shape how policies and actions are defined and implemented. This can involve vertical and/or horizontal interactions and take numerous forms.
- **Actors/ stakeholders** - can be individuals or groups whose collective action leads to the social norms that guide, prescribe, and sanction collective and individual behavior.
- **Problems** - the interrelated issues at stake. Needs to be "deconstructed," since we are talking about governance challenges, it is important to recognize the assumption that the "problem" is a social construct. For example, river bank flooding is not a problem—it recharges topsoils, recycles nutrients, etc. However, river bank flooding into a populated area, or into a food system ready for harvest- is certainly a problem.
- This deconstruction of the "problem" is often a power struggle. Different actors try to impose their view of:
    - The nature, cost and impact of the problem, and;
    - The rules of the game for the negotiation process. (How are decisions made? What is an equitable solution to "the problem?" Who is going to be part of the process? What system of "rights" applies? etc.)
    - Alludes to "rules of the game." But also, "meta-governance" or the rules that determine how the rules of the game are established.
- **Norms** - Interactions between actors and collective decisions lead to the emergence and formulation of "norms;" defined in general terms as shared beliefs about what is considered "normal" or appropriate behavior. Norms themselves guide actors' behavior and are modified by collective interactions, which may be observed at the "Nodal points" (below). In fact- it is norms that actually create social institutions. When norms recur, they become institutionalized, meaning they are internalized by individuals and help to form an institution that sanctions actions and rules. Typology of Norms:
    - **Meta-norms** - Principles that guide values in societies, such as sustainable development, gender equality, how much alcohol is too much alcohol, the importance of a private vehicle, etc.
    - **Constitutive norms** - The organizational or institutional mechanisms that enable the operation of the analysis or the process that addresses the issue/problems. E.g. the statutes of the United Nations Environment Programme, or the norms concerning chieftainship in a tribal society. They define the actor, create identity, formalize authority/ mandate, etc
    - **Regulatory norms** - The rules that drive & control the behavior of individuals and groups. Rules define what are appropriate or inappropriate actions. They specify what each person can/cannot do. They can create rewards, punishments, sanctions, etc to further influence actions.
    - All of these norms also have life cycles, and they can co-exist, overlap often times they contradict each other. A major source of competition between actors is which type of norms determine the "rules of the game".
- **Nodal points** - the physical or virtual interfaces where problems, processes, actors and norms converge; where decisions are taken, agreements concluded, and social norms created.
- **Processes** - refers to these complex interactions over time.