

Briefing Paper

CLIMATE RESILIENCE IN THE PHILIPPINES: MONITORING AND EVALUATION APPROACHES

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PHILIPPINE RISK RESILIENCY AND SUSTAINABILITY PROGRAM (RRSP) MONITORING AND EVALUATION

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List of commonly used acronyms

CCA	Climate Change Adaptation
CCC	Climate Change Commission
DRR	Disaster Risk Reduction
DRM	Disaster Risk Management
ENR	Environmental and Natural Resources
GDP	Gross Domestic Product
HLURB	Housing and Land Use Regulatory Board
IEC	Information, Education, Communication
IPCC	Intergovernmental Panel on Climate Change
LCCAP	Local Climate Action Plans
LDRRMO	Local Disaster Risk Reduction Management Offices
LDRRMP	Local Disaster Risk Reduction Management Plans
LGUs	Local Government Units
M&E	Monitoring and Evaluation
NCCAP	National Climate Change Action Plan
NDRRMC	National Disaster Risk Reduction Management Council
NDRRMP	National Disaster Risk Reduction Management Plan
NGAs	National Government Agencies
PDP	Philippines Development Plan
PDRRMA	Philippine Disaster Risk Reduction and Management Act
PHP	Philippine Peso
PSF	People's Survival Fund
RRSP	Risk Resilience Sustainability Program
ToC	Theory of Change
UNISDR	United Nations Office for Disaster Risk Reduction

Introduction

While disasters occur all around the world, their impacts are uneven, affecting some countries more than others. A recent analysis of weather-related disaster highlighted that the Philippines is the fourth most disaster-prone country in the world and among the top 10 most-affected countries in terms of 'highest absolute number of affected people' (130 million)(UNISDR, 2015).

Rapidly growing lower-middle income countries such as the Philippines bear the brunt of disaster-induced losses (30% of all weather-related disasters and 50% of all deaths) (UNISDR, 2015). The Philippines, in particular, is extremely hazard-prone, subject to volcanic eruptions, earthquakes, typhoons, storm surges, tsunamis, sea level change, floods, landslides, droughts and delays in the monsoon. This vulnerability has taken a toll not only in terms of economics but also mortality. Over a ten year span (2006 - 2016), disasters have cost the Philippines on average \$1.7 billion per year (\$13.7 billion in the last three years alone), while accounting for almost 1,600 deaths per year (International Disaster Database - EM-DAT, 2016).

Climate change threatens future development by increasing disaster risks, including increasing frequency and severity of extreme climate events and straining ecosystems (and thus compromising ecosystem services like water supply, food supply, waste management, public health). Climate change projections for the Philippines suggest an increase in mean temperature by 0.9 °C to 1.1 °C by 2020 and by 1.8 °C to 2.2 °C by 2050, and high variability in rainfall intensity (DOST-PAGASA, 2011). Impacts of sea level rise due to both climate change and local land subsidence are expected to be severe. Climate change impacts are likely to be cross-sectoral, affecting agriculture, fisheries, health, water resources, and tourism. In addition, unsustainable development practices along with rapid urbanization will contribute to environmental deterioration and likely exacerbate climate and disaster risks and vulnerability in the Philippines.

The Philippines' exposure to typhoons and other disasters compelled it to become an early adopter of climate change adaptation (CCA) and mitigation policies. The country has demonstrated leadership through its strong commitment to a comprehensive climate change policy, institutional, and financing reform agenda. Climate change is now being leveraged as one of the growing drivers of planning, prioritization, and budgeting processes. Through its national budgeting process, the Government has set the stage to more effectively identify, plan, budget, monitor and report its action on climate change.

The Government has set in motion a process to address gaps, and envisions an operational framework to improve response to climate risks through better adapted and more resilient ecosystems, infrastructure, and livelihoods in vulnerable areas across key landscapes.

Despite the traction CCA has gained in the Philippines and globally, it can be unclear what exactly is being achieved, and what the impact is. M&E for CCA is an emerging field, and rife with uncertainties about how to best navigate the many methodological challenges. And, increasingly, the international development community is seeking to assess whether higher-order goals such as climate resilience and/or transformation are being achieved. There are several issues at hand that make this challenging:

- CCA—and even more so resilience—are new concerns and strategies are often experimental insofar as an evidence base is only emerging.
- There are no standard terms and definitions in use; different agencies and individuals use the same terms differently—or, all too often—interchangeably. This contributes to conceptual confusion about how to define and measure progress, much less establish causal relationships and linkages.
- Adaptation and resilience encompass an enormous diversity of interventions which span sectors and scales. Moreover, they are shaped by *in situ* environmental, socioeconomic, and governance contexts, and so it is difficult to generalize ‘success’ from one locale to another.
- Climate change unfolds over the long term, making it difficult to confidently pinpoint success during the course of a typical policy or program cycle.
- There are no common, straightforward, or universal indicators or metrics for either CCA or resilience. Past attempts to identify them have largely been unsuccessful, and international best practice now recognizes that M&E frameworks which work best are those that encompass a suite of indicators which are tailored to a specific development context.

In short, adaptation and resilience pose a thorny bundle of M&E challenges for which there are no easy answers. Our aim is to instead identify promising pathways for more coherently defining and measuring climate resilience for the Philippines context in a way which directly builds upon the Philippines’ CCA policy instruments and their existent M&E frameworks. In this way, policymakers and planners will be better able to set and achieve strategic results. We will begin by defining core concepts—indeed, we have observed that key terms used in various documents and communications are highly inconsistent (and sometimes, not defined at all). The table below presents operational definitions being used in this paper (further terms and concepts are defined in the Annex II):

Table 1: Key terms used in this Briefing Note¹.

Concept	Definition
Vulnerability	The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt (IPCC, 2014).
Adaptation	“The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects” (IPCC, 2014, p. 5).
Resilience	“The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation.” (IPCC, 2014, p. 127)

¹Note: There are several definitions for each of the terms, and these definitions are highly contested in theory and practice. We will be maintaining the definitions below as operational definitions for this note and project.

One of the key *distinctions* in how these terms are presented is that adaptation is fundamentally actor-centric and focused on ensuring that those within a system can absorb changes. Resilience, on the other hand, is more macro. It focuses on whether systems themselves—socioeconomic, political, and ecological—can absorb changes or leverage that change to configure to a better state. While adaptation is more geared towards acting in the context of specific, predicted impacts, resilience is geared towards acting in the context of uncertainty.

To build resilience, it is critical to focus on systems that provide core services (e.g. water, power, food, communication, education), agents (e.g. people, government actors, municipal entities) and the institutions (e.g. cultural norms and law enforcement) that mediate their interactions. Key to this is avoiding cascading failures between inter-dependent systems. For example, a catastrophic harvest failure will probably lead to a sudden influx of rural poor into urban slums, straining a city’s capacities to deliver core services such as water, waste management, and schooling. Levees are the basis of the next example. Levee failures during floods can catastrophically impact surrounding communities. Therefore, levees in and of themselves do not build resilience; they can actually lead to maladaptation, i.e., interventions which are intended to promote CCA but instead cause harm (usually inadvertently) to people or ecosystems. To build resilience in

an area with levees, it is critical to: (1) understand how people interact with levees (Will they settle behind them? Will they flock to them as safe zones during floods?); (2) prevent perverse incentives that may lead to maladaptation and exacerbate vulnerability (e.g. building roads on top of levees could drive development around them); and (3) develop regulations that prevent people from settling behind levees (e.g. through building regulations).

The Philippines currently has national frameworks for M&E of CCA, but to date resilience and its relationship to CCA are not clearly conceptualized, making it difficult to assess progress. This paper lays the foundation to do so, and thus ensure that strategies are sound and that any investments made are advancing them. Any national resilience framework needs to be flexible to accommodate for a wide variety of in-country contexts and scale-specific goals. It also needs to be rooted in systems thinking, transcending current approaches which too often focuses on outputs and specific one-off projects. CCA activities are thus a significant entry point for building resilience. The critical next step is thus to outline a forward pathway towards 'big picture' thinking which also reflects and respects diverse contributors. This is no easy task.

This report is aimed at an audience of Filipino policymakers, to crystallize current thinking and identify options to formulate a more coherent overarching M&E framework for climate resilience. We focus specifically on the results matrices of the Philippines Development Plan (PDP) 2017-2021 (NEDA, 2014a; NEDA, 2015b) and National Climate Change Action Plan (NCCAP) (Climate Change Commission, 2012). This understanding will then inform the development of an M&E framework for the Risk Resilience and Sustainability Program (RRSP) while ensuring alignment with the PDP and NCCAP. Also included is a description of potential measurement methodology and data sources and briefly discuss how these options can be applied in the context of other relevant national programs, plans and commitments.

Policy Context and Institutional Arrangements

While the Philippines has long had an established institutional structure for managing disaster risk, the institutional structure for CCA was created more recently (disaster risk reduction (DRR) predates CCA). These two bodies of work are *not* identical or interchangeable, but there is considerable overlap. Resilience (like “transformational change”) is a newer ‘entrée’ into this policy arena, and is not yet fully manifested in core policy documents.

The Philippines’ Disaster Risk Management (DRM) system includes a focus on mainstreaming DRR into development to reduce the impact of disasters on infrastructure,

property and lives. Key policies orienting DRM goals include the Hyogo Framework for Action 2005-2015 and the Philippine Disaster Risk Reduction and Management Act (PDRRMA). Though DRM is overseen by the National Disaster Risk Reduction Management Council (NDRRMC), the DRM network is decentralized such that sub-national bodies have significant autonomy over what DRM activities they want to pursue. Local Disaster Risk Reduction Management Offices (LDRRMO), created by Local Government Units (LGUs), are responsible for planning and implementing programs on DRR, preparedness and response. By GoP mandate, five percent of local revenues are set aside to fund local DRM activities. The majority of this fund is allocated for disaster mitigation, risk reduction, and recovery.

The CCA framework to complement and strengthen DRR, and infuse new priorities and strategies that more specifically address risk and resilience to the exigencies posed by climate change. The Climate Change Act of 2009 was key to setting the stage for national climate change policy in the Philippines, and led to the creation of the Climate Change Commission (CCC). The CCC is mandated to coordinate, monitor and evaluate government programs focused on climate change. Their goal is to mainstream climate change into policy and development through a cross-cutting, cross sector, integrated approach. There are no designated sub-national government offices that deal explicitly with CCA, however. As a result, there is limited flow of (1) climate information from the national and international levels to the local levels and (2) adaptation learning from the local level to the regional and national levels. The CCA network and its activities are funded using the People's Survival Fund (PSF)¹. This fund is used to finance local CCA programs and serve as guarantee for risk insurance needs of agricultural workers and other stakeholders.

There have been efforts to better integrate DRR and CCA into public policy, such as the National Framework Strategy on Climate Change (NFSCC), the National Disaster Risk Reduction Management Plan (NDRRMP), and the Philippines Development Plan (PDP) 2011-2028. All have identified DRR and CCA as major, cross-cutting issues and stressed the importance of mainstreaming CCA and DRR into development. Taking the NDRRMP as an example, while almost all government agencies are involved in implementing the Plan, the Housing and Land Use Regulatory Board (HLURB) in particular, is mandated to ensure that land use plans are DRR and CCA sensitive.

As a key policy piece, the National Climate Change Action Plan (NCCAP) has also played an important role, as a platform for (i) designing a nationally-driven program focused on integrated CCA and mitigation and developing local programs and (ii) developing priority programs to address immediate needs with regards to the adverse effects of climate

¹ The balance of the PSF is maintained at a minimum of PHP 1 billion annually.

change. The PDP and the NCCAP are instrumental documents that lay out the goals and outcomes of national-level CCA and DRR programs².

Overview of existing national resilience M&E approaches

Context: the Philippines Development Development Plan

In recent years, the Philippines has made strides in economic growth and governance, both key goals in the PDP 2011-2016. Having maintained a 7% growth of GDP for five consecutive quarters, the Philippines has emerged as a strong economy in Asia. Despite significant economic gains, the goal of inclusive development has not yet been reached – poverty rates remain high and employment has not grown fast enough. According to the PDP, inclusive growth needs to be achieved on a platform of good governance, stable national security, and ecological integrity (Figure 1). The Philippines government recognizes that a sustainable and climate-resilient environment is a necessary prerequisite for inclusive growth, especially given its vulnerability to natural hazards and climate change.

² A more detailed overview of the policy landscape and institutional arrangements for DRR and CCA in the Philippines can be found in Annex I.

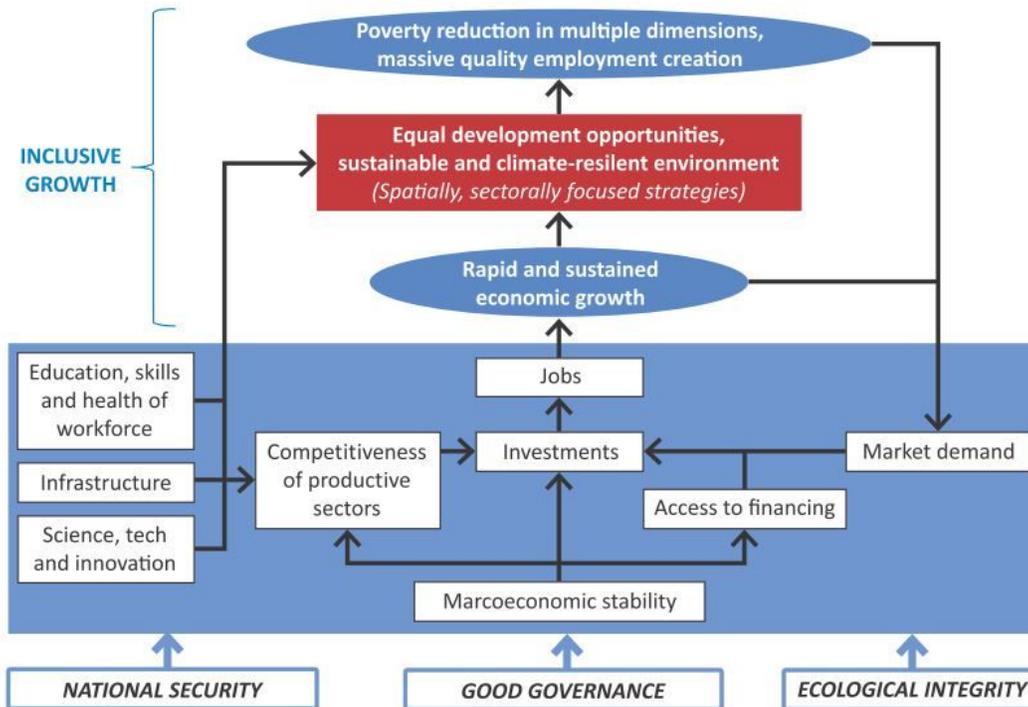


Figure 1. The Philippines Development Plan Strategic Framework (NEDA, 2014a)

Overview of key sectors actively involved in climate resilience

Building resilience is an explicit goal for three areas within the PDP: environment and natural resources (ENR) management; agriculture and fisheries, and infrastructure development (NEDA, 2014b). For environment and natural resources management, resilience is to be built by improving the adaptive capacities of communities, achieving sustainable management of natural resources, and improving environmental quality. Improving the adaptive capacity of communities involves a concerted focus on climate change adaptation and mitigation and disaster risk reduction and management. At the same time, building resilience meets the government guidepost of “Integrity of the Environment and Climate Change Mitigation and Adaptation”³.

The NCCAP utilizes a cross-sectoral approach for fulfilling the PDP’s climate-related sectoral targets. Strategic priorities outlined in the NCCAP include food security, water security, ecosystem and environmental stability, human security, climate-smart industries

³ The use of key concepts like resilience, adaptation, and mitigation seems to be inconsistent and at times inaccurate throughout the official documents which is problematic. Further clarity will be needed on how these terms are being used nationally in the Philippines.

and services, and sustainable energy capacity and development (Climate Change Commission, 2012). These strategic priorities are intended to pave a transition toward climate-smart development and enhance adaptive capacities of communities, resilience of natural ecosystems, and sustainability of the built environment. The table below outlines the NCCAP expected outcomes.

Ultimate Outcomes	Enhanced adaptive capacity of communalities, resilience of natural ecosystems and sustainability of built environment to climate change				Successful transition towards climate smart development		
Strategic Priorities	Food Security	Water Sufficiency	Ecosystem and Environmental Stability	Human Security	Climate Smart Industries and Services	Sustainable Energy	CC Knowledge and Capacity Development
Intermediate Outcomes	Availability, stability, accessibility, Safe and healthy food ensured amidst climate change.	Water resources sustainably managed and equitable access ensured.	Enhanced resilience and stability of natural systems and communities.	Reduced risks of the population from climate change and disasters.	Climate-resilient eco-efficient and environment-friendly industries and services developed, promoted and sustained.	Sustainable renewable energy and ecologically efficient technologies adopted as major components of sustainable development.	Enhanced knowledge on and capacity to address climate change.
Immediate Outcomes	Enhanced CC resilience of agriculture & fisheries production & distribution systems Enhanced resilience of agricultural & fishing communities from climate change	Water governance restructured towards integrated water resources management in watersheds and river basins. Sustainability of supplies and access to safe water ensured. Knowledge and capacity for CC adaptation in the water sector enhanced.	Ecosystems protected, rehabilitated, and ecological services restored.	CCA and DRR practiced by all sectors at the national and local levels Health and social sector delivery systems are responsive to climate change. CC-adaptive human settlements and services developed, promoted & adopted.	Climate-smart industries and services promoted, developed and sustained. Sustainable livelihood and jobs created from climate-smart industries and services Green cities and municipalities developed, promoted and sustained.	Nationwide energy efficiency and conservation promoted and implemented Sustainable renewable energy development enhanced Environmentally sustainable transport promoted and adopted Energy systems and infrastructure climate-proofed, rehabilitated and improved.	Knowledge on the science of climate change enhanced. Capacity for CC adaptation and mitigation at the national and local level enhanced. CC knowledge management established and accessible to all sectors at the national and local levels.

Table 1. NCCAP strategic priorities and outcomes (Climate Change Commission, 2012).

As it can be seen from the two examples from the PDP and NCCAP, there is a drive towards a cross-sectoral and cross-scalar approach with the realization that CCA and DRR need to be mainstreamed into development and policy. This has led to the emergence of programs that are focused on increasing coordination and collaboration between diverse actors involved in CCA and DRR. In this vein, the RRSP aims to improve climate processes between National Government Agencies (NGAs), Local Government Units (LGUs), and communities through consensus building and coordination among agencies, cross-sectoral convergence and complementarity of investments, as well as effective mechanisms for planning, budgeting, executing, monitoring and evaluation, and learning.

Overarching DRR/CCA/Resilience M&E framework

The diverse collection of DRR, CCA, and resilience policy instruments would be enhanced by a national-level M&E framework to confirm progress towards national resilience goals. Currently, the Philippines has a national-level M&E framework (the Results-based Monitoring and Evaluation System) for the NCCAP, which in turn links to the PDP.

The NCCAP is premised on a theory of change (ToC) which identifies pillars of intervention and a strategic ‘roadmap’ towards achieving them. Adaptation outcomes

(and indicators) are defined. While the NCCAP is the lead roadmap on climate change within the Philippines, there are a plethora of ongoing public and private efforts and coordination is easier said than done. Efforts to keep track of a diversity of policies, programs, and projects have recently been strengthened by introducing a system to track climate-related expenditures across all government agencies. It does not, however, confirm achievements.

The NCCAP's suite of indicators includes measures for critical outputs, immediate outcomes, and intermediate (key) indicators (see glossary in Annex II for definitions). Indicators are also cross-referenced with PDP results matrices to ensure that they are aligned and that the NCCAP feeds directly into the national performance measurement framework. Monitoring and reporting of ongoing climate change-related projects is the responsibility of implementing agencies, and delivered to the CCC. While there are several gaps and inefficiencies (to be expected for a complex topic such as climate change and resilience), perhaps one of the most critical ones is the extent to which the M&E system is fully capturing achievements at the sub-national level.

While these two important policy pieces are important, there has been a recognition that an increase in national investment was needed. To that end, the Risk Resiliency and Sustainability Program (RRSP) was put forward, to serve as the framework program to guide and increase investments and their results by 1) improving understanding of adaptation and resilience investment needs through identification of climate risks; 2) increased mobilization of adaptation and resilience investments through risk-informed identification of options, planning and financing; and 3) strengthened response to climate risks through efficient and results-oriented execution of adaptation and resilience investments. The goal is to improve the integration of climate processes between NGAs, LGUs and communities by building consensus and coordination (e.g. complementarity of investments, effective mechanisms for planning, budgeting, etc.)—and in the context of this project, particularly in the area of monitoring and evaluation.

Methodological challenges⁴

Adaptation to climate change poses distinctive methodological challenges on the M&E front (Bours et al., 2014a); these are even more pronounced in the case of climate resilience⁵. It may be useful to review our operational definition for resilience and how it is built on a foundation of adaptation (e.g. adaptive capacity), but with greater focus on

⁴ This section draws primarily from Dr. McGinn's previous work with colleagues Dennis Bours, Ayesha Dinshaw, and Patrick Pringle.

⁵ We are applying operational definition of resilience (see Table 1) specifically to climate change (and do recognize that the definition of 'resilience' is contested and the term is used differently - and often imprecisely - by various actors and agencies)

macro-level systems. We then review some of the characteristic M&E for CCA and resilience, and discuss implications for crafting a national-level framework.

One of the challenges with resilience and its implementation in projects and programming, particularly in the context of monitoring and evaluation, relates to the scalar nature of resilience. The concept and the understanding of resilience '*of what, to what*' is directly connected with the scale at which it is being considered. This can pose hurdles for 'measuring resiliency' because resilience could be improved at one scale (e.g. community) but be eroded at another (e.g. individual).

Meanwhile, CCA has less of these scalar challenges since it is generally site, context and impact specific. So while climate change may be a global macro process, adaptation is fundamentally local and highly context-specific. One result of this — which stems more from how climate finance is structured than from how adaptation is understood — is that there is a proliferation of (often) one-off projects which certainly make important contributions to adaptive capacities, but lack a coherent overall strategy. The result might be an assortment of initiatives (e.g. climate proofing a road, increasing a dengue fever prevention campaign, 'upgrading' a village water supply system, and educating local government elected officials about climate change), but not an overall strategy. Moreover, climate change projects may be 'add-ons' when dedicated external funding is available, and 'mainstreaming' often manifests as including fundable CCA initiatives without really changing the overall thrust of development 'business as usual.' Climate resilience, by contrast, draws from CCA but takes a step back to emphasize 'big picture' systems and strategies, and is thus a useful framework for assessing progress at the national level. The methodological challenges for doing so, however, are somewhat daunting.

One ongoing challenge is how to tie together such an eclectic body of programs and policies and identify indicators that work. Some interventions are easier to monitor and evaluate than others: it is a relatively straightforward endeavor to measure rice yields, water purity, or disaster-related deaths. Others—especially involving 'fuzzy' topics (e.g., well-being) and sensitive human behavior are more challenging. Although CCA includes sectors for which there are straightforward metrics (e.g. agriculture), the complex, long-term, and multidimensional nature of CCA makes it exceedingly difficult to consistently measure. Tracking adaptation is notoriously tricky and policymakers and practitioners should be cognizant of the fact that M&E for CCA represents a distinct set of methodological challenges, defying M&E 'business as usual' (UNDP 2007; Brooks et al. 2011; Spearman and McGray 2011; Bours et al., 2014b). These challenges are exaggerated for the case of resilience, precisely because it is an even 'fuzzier' concept and therefore more difficult to measure. Indeed, the World Bank and others which are embracing resilience are struggling on the M&E front (Vandergriff et al., 2016; Williams, 2016).

Challenges that arise when monitoring and evaluating resilience performance include:

- **Defining success:** There is no single or simple end point for either resilience or adaptation, and the process and pathway depends on the context. Moreover, different stakeholders may have divergent viewpoints and priorities (Krause, Schwab, and Birkmann 2015), which need to be respected and navigated.
- **Lack of universal indicators:** There is no common measure, metric, or benchmark for resilience, or universal indicators that apply broadly (nor will there be realistically). This makes it especially difficult for diverse portfolios to aggregate data, or clearly and simply demonstrate what they have achieved. Moreover, systems are inherently complex, with multiple interrelated dimensions.
- **Determining attribution:** Attribution establishes whether there is a causal relationship between an intervention and an outcome. Resilience represents a complex and long-term process, and it can be difficult to make defensible claims that resilience has been somehow built or increased as a result of a specific intervention. It will be better to demonstrate an intervention's *contribution* towards resilience, rather than claiming a level of attribution that cannot be fully justified.

Evaluators also face a counterfactual conundrum, i.e., trying to determine what would have happened in the absence of the intervention. However, there are methodologies emerging to help answer this question (e.g., Dinshaw et al. 2014) but there is no easy way to do this.

- **Identifying baselines, targets, and impacts:** Baseline data provides a benchmark against which to compare program performance. Targets define expectations for outputs, and impacts capture the overall effect of the intervention on larger development aims. Within both CCA and resilience, there may be challenges in defining and measuring all of these, in part because the context itself is often changing. This common dilemma is often referred to as the 'shifting baseline.' In a more straightforward development context, an agency might assess a pre-intervention situation (for example, through a survey on household food security), conduct a program, and then re-administer the survey to compare pre- and post-intervention scores. An improvement in food security could confirm the agency's achievement.

However, climate change may be triggering a *deterioration* in underlying conditions, and systems themselves may be in flux. If desertification is escalating, then the pre-intervention baseline figures do not serve as a valid benchmark to

compare against. Post-intervention assessment may not measure an improvement over the baseline, even if the program has been effective. This can result in *misattribution of failure* simply because targets to improve food security were too ambitious given escalating desertification. In this situation, simply *stabilizing* food security may be a way to build resilience. In other words, 'holding steady' can be an achievement that should not be undervalued.

- **Long time horizons:** Climate change unfolds over the long term - and, thus, so does climate resilience. It is difficult to confidently measure the effect of a short-term and/or localized intervention in response to a long-term, emergent, and immensely complex process. Moreover, some interventions take a long time before their effects can be fully assessed. Examples include ecosystem-based adaptation⁶ that needs to wait for trees to grow, or developing and promoting new agricultural techniques and seeds that are more drought-resistant. M&E should be adequately resourced throughout the course of the program—and perhaps extend after (Dinshaw et al. 2014).

What, then are the implications for a national-level climate resilience framework for the Philippines, and selecting indicators for it? First and foremost it is clear that an indicator-driven M&E approach is simply not going to work: there are no standard benchmarks which can be collected and neatly aggregated, but instead a range of possibilities as diverse as the problems and interventions at hand. Focusing on what the indicators are would be ineffective at best, and almost certainly contribute to conceptual muddle. Instead, we must step back and clarify what we are seeking to achieve at a systems level, and then how to assess progress towards these aims, and also link them to existent M&E frameworks for CCA, DRR/DM, and other relevant aims. This will necessarily be an ongoing, iterative process itself. Secondly, a *suite* of indicators will be required, which encompass different resilience components. Thirdly, striking the right balance amongst components (and their measurements) and identifying the right linkages will be challenging.

⁶ Ecosystem-based adaptation (EBA) refers to “the sustainable management, conservation and restoration of ecosystems to provide services that help people adapt to the adverse effects of climate change” (CBD 2009).

Options for developing a resilience M&E framework for the Philippines⁷

In this section, we outline a pathway towards developing a framework for defining, measuring, and assessing climate resilience in the Philippines, and appropriately linking it to other key instruments, particularly the PDP and the NCCAP. It is a preliminary framework, and is composed of several ‘stepping stones’ which are placed on the table for discussion in this paper and over the coming months. These options will be further fleshed out in our follow-up technical paper. Some will require ongoing effort and resources.

Define resilience. As noted above, there is no standard term or common understanding of what is meant by ‘climate resilience;’ indeed the term is both contested and used inconsistently. We have adopted one operational definition for the purposes of this paper; however we need to explore whether it is the most suitable one. It is essential to clearly define what is meant by ‘resilience’ before forging ahead. Our early communications with key stakeholders and review of core documents has underscored that the term is being used very differently—and often imprecisely—by different people, resulting in considerable conceptual confusion. A common definition is needed to ensure that everyone is on the same page. One of the suggestions put forward by Williams (2016) was to “[a]dopt an operational definition of resilience, while allowing individual programs to use their own (comparable) definitions”. We are concerned, however, that this ‘latitude’ could contribute to confusion and inconsistency.

Articulate a theory of change. Following on a clear articulation of climate resilience in the Philippines context would involve outlining a Theory of Change. As noted above, the NCCAP is premised upon a ToC, but one is lacking for resilience. ToCs are widely recognized as an effective tool to coherently set out a vision and strategy, especially for complex, long-term aims like resilience. ToCs articulate a common vision of change and offer a practical and strategic pathway towards achieving it. As Bours et al (2014b) have written, “[w]hen done well, this approach enables stakeholders to embed an intervention within a larger strategy and broad, transformative analysis...[i]t is flexible and practical insofar as it clearly articulates a vision of meaningful social change, and then systematically maps out specific steps towards achieving it. A ToC is especially well-suited for the design, monitoring, and evaluation of complex, multifaceted, long-term endeavors and ‘wicked problems’ like climate change.”

⁷ Parts of this section have been adapted from Dinshaw & McGinn (2016).

Although sometimes misunderstood as a replacement for the more-familiar logframe, in fact ToCs can, and usually are, complementary. They are a means to map out the 'bigger picture' and then outline a practical and strategic pathway towards achieving that aim. ToCs also better facilitate evaluation research which emphasizes the generation of learning and knowledge (rather than simply accountability).

Logframes can complement this by tightly defining inputs, outputs, and outcomes in a specific, near-term programming cycle, and are especially helpful from an accountability perspective. Since ToCs paint out a larger strategy with a broader brush, they are exceptionally well-suited to coherently tie together a diverse portfolio. A ToC for climate resilience can also more clearly demonstrate how it links but is distinguished from adaptation.

The ToC will identify specific pillars of resilience policy and programming in the Philippines. While this will take a more intensive effort to fully develop, we can confidently expect it to include:

- Poverty reduction
- Ecosystems protection
- Access to quality health care
- Effective disaster prevention, preparedness, and management
- Household-level food security
- Effective mainstreaming of climate change into policy and programming

All of these are prominent components of existent adaptation strategies. The challenge is to focus on a *systems* approach—not simply projects. An *alternative* approach might be to adopt a existent theoretical framework. Please note that because climate resilience is new and multidimensional, there is no standard approach or evidence base to firmly draw from.

Define indicators.

Indicators represent benchmarks to measure an intervention's progress and demonstrate its achievements. Poor selection of indicators often cascades into a series of problems, including misattribution of failure (or success), confusion among stakeholders, and resources wasted in collecting information that is inadequate or difficult to interpret. Indicators serve an essential purpose. Indicators show whether an intervention is on track to its aims, and provide key information that policymakers and practitioners need to

assess the program’s overall health and impact. Indicators are not, however, substitutes for seasoned analysis or thoughtful strategy. Indeed, selection of ‘good’ indicators cannot compensate for flawed or inadequate policy/program designs, nor compensate for uncertainties about what are the aims or outcomes. Too often, there are inflated expectations that choosing indicators somehow does the ‘work’ for strategy or analysis. Indicators only measure—and the ‘fuzzier’ the concept, the more imperfectly any single indicator will do so.

For many sectors—including most of those which are at the core of Philippines’ CCA and DRR policies and programs (e.g., agriculture, water/sanitation, infrastructure)—there are one or more standard indicators which are straightforward, relatively uncontested, and easily measured. Examples might be: crop yield per hectare, liters of potable water, or meters of climate-proofed road. However, this does *not* apply to resilience: there simply is no adaptation metric which can be easily measured, monitored, or compared across time and space. Earlier efforts to identify one or more simple, common CCA indicators have largely been abandoned, and the emerging field of resilience measurement is notably *not* pursuing this pathway.

In the absence of a clear and agreeable resilience metric, we must instead identify a *suite* of indicators which effectively frames and measures the progress towards climate resilience in the Philippines. In this sense, overall approaches to resilience indicators more typically echo those which are applied to ‘fuzzy’ social sector programming like youth empowerment, democratization, gender-based violence, conflict transformation, and media advocacy campaigns.

Much of ‘normal’ M&E emphasizes accountability, i.e., whether an intervention is on track, active, and meeting its targets. Indicators often focus on confirming activities (“outputs”) such as number of health workers trained in disaster mental health, kilometers of sea walls reinforced, % of farmers planting drought-resistant rice seeds, or number of village participatory disaster management plans prepared. These types of indicators are critical for assessing the health of a program and whether money is being well spent. However, we strongly recommend *not* including output indicators in a national resilience framework for the Philippines. Firstly, we are taking a *systems approach* to resilience and this will be diluted by keeping track of an eclectic assembly of projects. Secondly, it simply does not fit. The purpose of a national climate resilience framework is to inform ‘big picture’ analysis. Thirdly, it is a misuse of resources insofar as keeping tabs on a diversity of interventions across the Philippines would be expensive and *not* do the ‘job’ we expect. Lastly, it is redundant. There are already numerous M&E frameworks and efforts at various levels which are tracking climate-relevant expenditures and results.

We propose that the incoming Philippines Climate Resilience M&E Framework maintain a firm focus on the big picture, and be designed to inform macro-level planning and policymaking in the Philippines - while remaining firmly linked to existing, relevant policies and M&E frameworks. To this end, we recommend identifying a suite of indicators for each of the following categories:

1. **Impact Indicators.** These will include general development indicators that are especially relevant to or sensitive to climate resilience. Examples might include rural to urban migration rates, measures of household food security, and annual disaster loss and damage. These would enable analysts to paint a portrait of climate resilience and assess progress over time. However, these indicators have multiple influences, and it would not be possible to confidently attribute changes to a specific policy intervention. Instead, they frame analysis of the resilience context.
2. **Outcome Indicators.** Outcome indicators would be selected from the most key, performance indicators taken from resilience-relevant policies (e.g., the PDP and NCCAP). These indicators will enable policymakers to track progress of their own identified priorities; changes in outcomes can more confidently be attributed to the Philippines' own policy instruments.
3. **Process Indicators.** Climate change is an emerging phenomenon that will manifest over the long term. The long time horizons stretch far beyond a normal policy or program cycle. While we cannot assess the impact of an intervention in the future, we can identify processes that lead us along a promising pathway measure benchmarks along the way. For climate resilience, this would include measures of how effectively institutions themselves are mainstreaming climate concerns into policy making, planning, and programming. In the coming months, we will partner with stakeholders to explore ways to do this effectively, but it will probably involve devising a scorecard to assess mainstreaming, institutional strengthening, and good governance. Measuring this scorecard will probably require dedicated resources, and it will be challenging to apply across the diversity of institutions across the Philippines. We look forward to in-depth discussions with stakeholders about how to best approach this, and whether there are any existing datasets that might be utilized.

Final thoughts

The goal of M&E is to promote learning, reflection and improvement of evolving strategies, contribute to an emerging global evidence base, and reduce risk of maladaptation. If M&E is prioritised as a key element of project design, then those investing in CCA efforts are more likely to be able to identify and respond to emerging or unintended problems or risks. To that end, we expect to build an M&E framework that promotes learning, reflection, and improvement of evolving strategies—and, equally important, contribute to the aims of the RRSP, i.e. to build climate resilience by increasing investment and results.

This briefing note has laid out an overview of the existent ‘state of knowledge’ for Philippines in the context of CCA, DRR and Resilience, including the evolution of policy and institutional arrangements of these three areas (via the PDP, NCCAP and RRSP). We have also outlined some challenges and concerns going forward, many of which we hope to address in ensuing meetings and continued dialogue with key stakeholders (e.g. members from the technical Working Group for the RRSP development and its M&E sub-committee).

Lastly, it should be kept in mind that climate change effects are mediated by global, long-term dynamics; strategies meanwhile should be framed in a way that responds to real-time, tangible needs and challenges which prioritizes both adaptation aims and development co-benefits. At the end of the day, both adaptation and resilience need to be people-centered, taking into account different meanings, values, and priorities, while identifying pathways towards achieving development aims.

Annex I

Detailed Policy Context and Institutional Arrangements

The disaster risk management (DRM) network dates back to the 1970s and is well established in the Philippines with representation across scales. While it was originally established to strengthen disaster response, its focus shifted to DRM with the adoption of the 'Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters' (AIPA, 2011). The frame of DRM recognizes not only DRR, but also the importance of mainstreaming DRR into development to reduce the impact of disasters on infrastructure, property, and lives.

At the national level, the DRM network is overseen by the National Disaster Risk Reduction Management Council (NDRRMC). The NDRRMC was established through the Philippine Disaster Risk Reduction and Management Act (PDRRMA, Republic Act No. 10121), and constitutes the heads of the Department of the Interior and Local Government (DILG), Department of Social Welfare and Development (DSWD), Department of Science and Technology (DOST), and the National Economic Development Authority (NEDA) and chaired by the head of Department of National Defense (DND). Each of these departments' DRR planning and preparation responsibilities are transmitted to the regional and local level.

The Philippines' DRM network is quite decentralized; sub-national bodies have significant autonomy over what DRM activities they want to pursue. At the local level, Local Government Units (LGUs) have created Local Disaster Risk Reduction Management Offices (LDRRMO) that are responsible for planning and implementing programs on DRR, preparedness and response. A mandated allocation of 5% of local revenues into the Local Disaster Risk Reduction Management Fund (LDRRMF) supports these activities. Seventy percent of this fund is allocated for prevention, mitigation, preparedness, response, rehabilitation and recovery. The remaining 30% is allocated to emergency response.

The CCA network came about in the 2000s with the realization that CCA could complement and strengthen DRR goals and initiatives. The Climate Change Act of 2009 (or Republic Act No. 9729) is the most instrumental CCA policy in the Philippines. It established the Climate Change Commission (CCC), an autonomous body attached to the Office of the President which is responsible for coordinating, monitoring and evaluating government programs focused on climate mitigation and adaptation and ensuring that climate change is mainstreamed into policy and development through a cross-cutting, cross sector, integrated approach. It is important to note that there are no designated local or regional, sub-national level government bodies that deal explicitly with CCA.

The CCA network and its activities are funded using the People's Survival Fund (PSF). This is a special fund allocated by the CCC for financing local adaptation programs and projects and serving as guarantee for risk insurance needs of farmers, agricultural workers and other stakeholders. PHP 1 billion (21,989,090 USD) was allocated through the General Appropriations Act as the opening balance of the PSF in 2015. The fund became accessible on October 28, 2015. It is mandated that the balance of the PSF be maintained at a minimum of PHP 1 billion annually. The balance may be augmented by donations, endowments, grants, and contributions.

There have been attempts to integrate CCA and DRR policies and institutions over recent years. The National Framework Strategy on Climate Change (NFSCC, CCC 2010) outlines goals and guidelines for national planning, research, development, extension, and monitoring around climate-related activities. It also offers five strategic priorities to address CCA through a DRR lens. They are:

- Adoption of a responsive policy framework to serve as an enabling environment for reducing losses from natural disasters, including climate change-related risks.
- Use of the best available and practical tools and technologies from the social and natural sciences as decision aids and support systems to stakeholders in preventing, reducing and managing disaster risks.
- Enhancement of institutional and technical capacity to facilitate the paradigm shift from disaster response to disaster preparedness and mitigation.
- Enhancement of national monitoring, forecasting and hazard warning systems; and improve effectiveness of early warning systems available to communities.
- Mainstreaming of climate and disaster risk-based planning in national and local development and land use planning through the application of disaster risk assessment and by further supporting capacity development, including the preparation/ gathering and dissemination of appropriate data and maps necessary for national, regional, provincial and city/municipal planning.

The NFSCC was eventually reformulated as the National Climate Change Action Plan (NCCAP) which focused on the following thematic outlines: food security, water sufficiency, ecosystem and environmental stability, human security, climate-smart industries and services, sustainable energy, and knowledge and capacity development. Cross cutting concerns include: gender and development, technology transfer, research and development, and information, education, communication (IEC) and capacity building.

The National Disaster Risk Reduction Management Plan (NDRRMP) leverages the Philippine Development Plan (PDP) 2011-2028 in which DRR and CCA are identified as major, cross-cutting issues. Almost all government agencies are involved in implementing the NDRRMP. In particular, the Housing and Land Use Regulatory Board (HLURB) is mandated to ensure that land use plans are DRR and CCA sensitive. The NDRRMP for

2011-2028 was approved in 2012. At a local level, LGUs are expected to ensure that Local Climate Action Plans (LCCAP) and Local Disaster Risk Reduction Management Plans (LDRRMP) were complementary and to improve the provision of climate and hazard risk information to LGUs (AIPA, 2011).

Annex II

Glossary of key terms

Impact Indicators – measure the long-term effect of programme interventions

Maladaptation – in the context of climate change, it is when an intervention/project/programme ends up supporting initiatives or outcomes that are actually harmful or contribute to compromising adaptation

Output Indicators – measure the change related directly to the activities undertaken within the programme

Outcome Indicators – measure change that is demonstrated as a result of the programme interventions in the medium-to-longer term

Process Indicators – are used to monitor the number and types of activities carried out (e.g. number of people trained; number and type of materials produced and disseminated)

Results Indicators – are used to evaluate whether or not the activity achieved the intended objectives or results; these can be developed at the output, outcome and impact levels.

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