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An Assessment of the Sectoral and Institutional Implementation of the NDRRMP

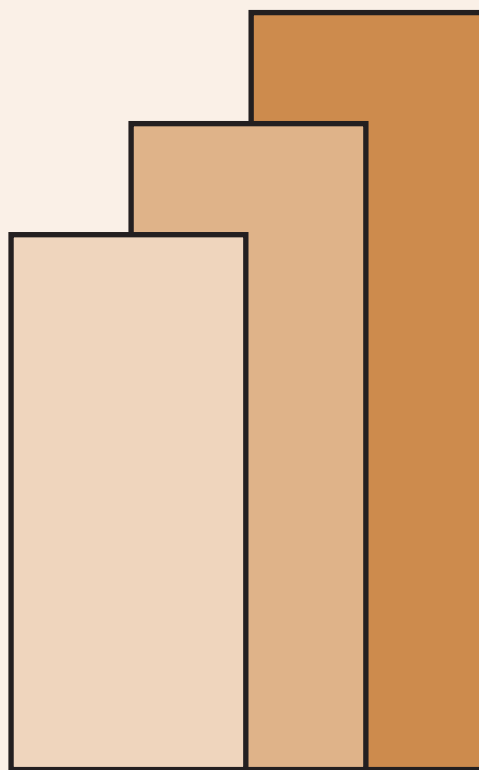
Sonny N. Domingo

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AN ASSESSMENT OF THE SECTORAL AND INSTITUTIONAL IMPLEMENTATION OF THE NATIONAL DISASTER RISK REDUCTION AND MANAGEMENT PLAN (NDRRMP)¹

EXECUTIVE SUMMARY

Republic Act 10121, also known as the Philippine Disaster Risk Reduction and Management Act of 2010, provided for the crafting and implementation the NDRRMP, outlining the activities aimed at managing risks and strengthening institutional arrangements and capacity at the national and subnational levels. Under the core value of safer, adaptive and disaster resilient communities, the NDRRMP sets down the expected outcomes, outputs, key activities, indicators, lead agencies, implementing partners and timelines under each of the four distinct yet mutually reinforcing thematic areas: (1) Disaster Prevention and Mitigation; (2) Disaster Preparedness; (3) Disaster Response; and (4) Disaster Rehabilitation and Recovery.

This study examined the grounding and sectoral translation of the National Disaster Risk Reduction Management Plan (NDRRMP) focusing on the four thematic areas. A process evaluation was pursued by analyzing the sectoral and institutional implementation of the NDRRMP with cognizance of not just the overarching policy framework and thematic pillar structures, but also the institutional issues that are significant in contextualizing the grounding of the law. The methodology is straightforward: process evaluation was used to look into the variation between the NDRRM Plan and its institutional translation. A modified CIPP approach was used to cover context, inputs and processes related to the grounding of the NDRRMP. Pertinent documents were scrutinized in relation to the implementation of the NDRRM Plan. KIIs and FGDs with the key agencies were also conducted.

Findings show that there were remarkable annual increases in Calamity Fund and Quick Response Fund allocations as seen in the yearly GAA. Calamity funds had increased almost nine times from 2009 to 2016. From PHP 4.4B in 2009, the fund registered at PHP 38.9B in 2016. The QRF allocations showed the same trend as appropriations increased from PHP653 Million in 2009 to around PHP 6.2 Billion in 2016. The QRF appropriations not only grew in amount, but also in coverage over the years. From initially covering just 3-4 Departments in 2009, the funds were distributed in eight departments covering 12 sub-agencies. Such is a positive development as it manifests the government's commitment to the tenets of disaster risk management and prioritize people's lives and livelihoods in times of emergencies and disaster events.

For the institutional resources, it was worthy to note that 1) the highest investments on climate change adaptation and mitigation were given to agencies outside the DRRM pillar leads which makes interagency coordination and cooperation critical if a whole of nation approach to disaster risk management is to be pursued; 2) The DPWH (with its various Bureaus) is receiving the lion's share of climate change funding particularly for water sufficiency and sustainable energy; 3) The Climate Change Commission is the only institution with expenditure on financing as tagged by DBM; 4) Among the four DRRM pillar vice-chairs, DOST proved to be the one with the greatest access to a wide range of climate change funding, which includes human security, knowledge capacity building, food security and ecological sustainability; 5) Among the four DRRM pillar vice-chairs, human security got the highest funding which is consistent with the human welfare and resiliency focus of DRRM. This contrasted with the priorities of climate change adaptation which showed water sufficiency and sustainable energy with the highest investment figures; 6) the budgetary divide also highlights the

¹ Report prepared by Sonny N. Domingo, Research Fellow at the Philippine Institute for Development Studies (PIDS). Acknowledgement is due Ms Ma Divina C. Olaguera, Research Analyst II, for the excellent research assistance.

institutional separation between CCA and DRRM; 7) the same climate change expense tagging arrangement between CCC and DBM can be made for DRRM-related spending between NDRRMC/OCD and DBM.

In terms of institutional arrangement, it was mentioned that the division of work or responsibilities within the four pillars, and the weak coordination among institutional stakeholders make it difficult to deliver as one. Moreover, the DILG claimed to only have general supervision and relinquished control over LGUs with the passing of the Local Government Code in 1991. DSWD mentioned that the translation of the provision and requirements of the law is very crucial at the local level. One of the problems is the lack of DRR worker stationed at the municipal level. To strengthen its counterpart in the regional level, DOST used its network properly and suggested that this kind of arrangement should also be done by other central agencies for their counterparts.

Investment on human capital is the key. In terms of succession as a science institution, DOST said that their human resources has increased four times over the last six years because of the continued support of the government. On the other hand, LGUs had difficulty in complying with the manpower provisions under RA10121 as stated by DILG. It is difficult to ground initiatives locally when there are no DRRM officers who are supposedly permanent-full time staff. This problem on lack of permanent personnel also makes capacity building within LGUs more difficult.

Regarding the institutional platform, it was mentioned that the Philippines, as one of those highly vulnerable countries in the world, cannot afford anymore to have a focal disaster agency that only coordinates. It was recommended to have a unified disaster management agency which will be responsible for all phases, not only in terms of coordination but also in ensuring that everything is grounded/implemented. Furthermore, it was opined that sans NDRRMC's and its secretariat's (OCD's) coordinative role, the institutional initiatives under the four thematic pillars proceeded with independence from the NDRRMP.

Key recommendations from this study include addressing equitable distribution of resources by giving priority to the poorest LGUs, developing financing schemes for preparedness, establishing a separate window and audit rules for disaster funding, strict reporting including DRRM funds status, capitalizing on the mainstreaming opportunities afforded by LDRRMCs, and using the same climate change expense tagging arrangement between CCC and DBM for DRRM-related spending between NDRRMC/OCD and DBM. To further strengthen DRRM, it was suggested to ensure a whole-of-society approach and bottom-up participation, strengthen the local counterparts, ensure the utilization of relevant information and technology, development of a unified vulnerability map, address the lack of human resource for DRRM, promote Area of Business Continuity Plans (ABCP) for resiliency, and explore partnerships with universities and private institutions.

Notwithstanding evident weaknesses in grounding and institutional translation, policy support and departmental creativity exhibited by the theme leaders attest to the competence of local executive servants. It was evident that disaster risk management as espoused, had influenced development processes and institutional initiatives within five years from the NDRRMP's launching. Ultimately, strengthening RA10121 through appropriate translation and more apt institutional arrangements will ensure the realization of the full potential of the law.

Table of Contents

1.0 Background of the Study	5
1.1 Disaster Risk Management and Development Policy	5
1.2 Motivations and Objectives of the Study	7
2.0 Framework and Methodology.....	8
2.1 Institutional and Development Policy Perspective	8
2.2 Evaluation Methodology: Process Analysis	9
2.3. Instruments and Data Collection	9
2.3.1. Desk Review	9
2.3.3. Key Informant Interviews (KIIs) and Focus Group Discussions (FGDs)	10
2.3.5. On-Site Observations	10
3.0 Sectoral and Institutional Implementation of the NDRRMP	12
3.1 Resources for DRRM	12
3.1.1 Calamity Fund	12
3.1.2 Quick Response Fund	14
3.1.3 Institutional Funding	16
3.2 NDRRMP Translation	24
3.2.1 Thematic Area 1: Disaster Prevention and Mitigation.....	24
3.2.2 Thematic Area 2: Disaster Preparedness	29
3.2.1 Thematic Area 3: Disaster Response.....	35
3.2.4 Thematic Area 4: Disaster Rehabilitation and Recovery.....	39
4.0 Issues and Insights.....	44
Institutional Arrangements and Responsibilities.....	44
Human Capital and Capacity Building.....	45
DRRM Fund and Audit Rules.....	45
Grounding Science	47
Monitoring and Evaluation	47
Institutional Platform.....	47
5.0 Conclusion and Recommendations.....	48
On DRRM Funding	48
On Institutional issues	49
On policy support	49
On monitoring and evaluation.....	49
On Strengthening DRRM.....	50
6.0 References.....	50

Tables

Table 1. Goals, objectives, and outcomes of each DRRM thematic pillar/area.....	10
Table 2. Calamity and Quick Response Fund Allocations from 2009 to 2016	14
Table 3. Quick Response Fund appropriations from 2009 to 2016	15
Table 4. List of DRRM activities/projects and Funding under DILG, 2010-2016.....	21
Table 7. List of DRRM activities/projects and Funding under DSWD, 2010-2016	23
Table 8. Institutional Initiatives and Accomplishments by Outcome for Thematic Area 1	26
Table 9. Institutional Initiatives and Accomplishments by Outcome for Thematic Area 2	32
Table 10. Institutional Initiatives and Accomplishments by Outcome for Thematic Area 3	37
Table 11. Institutional Initiatives and Accomplishments by Outcome for Thematic Area 4	41

Figures

Figure 1. Hazards in the Philippines.....	5
Figure 2. World risk ranking of the Philippines.....	6
Figure 3. Evolution of disaster risk management policy in the Philippines	7
Figure 4. Thematic pillars of RA10121 and the NDRRMP	8
Figure 5. Conceptual Framework.....	9
Figure 6. Calamity and Quick Response Fund Allocations from 2009 to 2016	14
Figure 7. Quick Response Fund allocations and institutional shares from 2009 to 2016.....	15
Figure 8. Climate Change Expenses with Other Departments.....	17
Figure 9. Institutional Climate Change Expenses of OCD and Four Pillar Leads	18
Figure 10. Adaptation and Mitigation Expenses by category	19
Figure 11. Number of PAPs and Percentage Share of Total Climate Change Expenditures of Four Pillar Leads	19
Figure 12. Number of DRRM-related Programs, Projects, and Activities by Department.....	20
Figure 13. Institutional funding for DRRM activities and projects, 2009-2016	21
Figure 14. Timeline of DILG's strategic response (DILG 2016).....	30

AN ASSESSMENT OF THE SECTORAL AND INSTITUTIONAL IMPLEMENTATION OF THE NATIONAL DISASTER RISK REDUCTION AND MANAGEMENT PLAN (NDRRMP)

Draft Final Report

Abstract

This study examined the grounding and sectoral translation of the National Disaster Risk Reduction Management Plan (NDRRMP), focusing on the thematic areas of disaster prevention and mitigation, preparedness, response, and recovery. Republic Act 10121, also known as the Philippine Disaster Risk Reduction and Management Act of 2010, provided for the crafting and implementation the NDRRMP, outlining the activities aimed at managing risks and strengthening institutional arrangements and capacity at the national and subnational levels. The NDRRMP supposedly outlined the way toward mainstreaming of DRRM and CCA in policy formulation, development planning, budgeting and governance with its 4 priority pillars detailed in 14 objectives, 24 outcomes, 56 outputs, and 93 activities. Notwithstanding evident weaknesses in grounding and institutional translation, policy support and departmental creativity exhibited by the theme leaders attest to the competence of local executive servants. It was evident that disaster risk management as espoused, had influenced development processes and institutional initiatives within five years from the NDRRMP's launching. Ultimately, strengthening RA10121 through appropriate translation and more apt institutional arrangements will ensure the realization of the full potential of the law.

1.0 Background of the Study

1.1 Disaster Risk Management and Development Policy

The Philippines is hazard-prone. Natural geological and hydro meteorological-related occurrences, aggravated by man-induced disaster situations, make the archipelago one of the riskiest places to live in (Figure 1).

The frequency and magnitude of disaster events that the country encounters every year rank it high among the nations with the greatest disaster risk and exposure scores according to the World Risk

Index Report (2014). The UNISDR (2016) placed the Philippines as the 4th most disaster affected country in the world with a total of 130 million affected people over the past 20 years. The World Disaster Report (2014) and Germanwatch (2014) respectively identified the country as the 2nd most affected by weather-related losses and 2nd most disaster-prone among 171 countries (Figure 2).

Aside from the cost on human lives, disasters incur the Philippines massive economic losses. Over the period 2005-2014, the country lost an average of \$1.6 billion every year (International Disaster Database 2016). The World Economic Forum indicated vulnerability to natural disasters as among the leading obstacles to doing business and investing in the country.

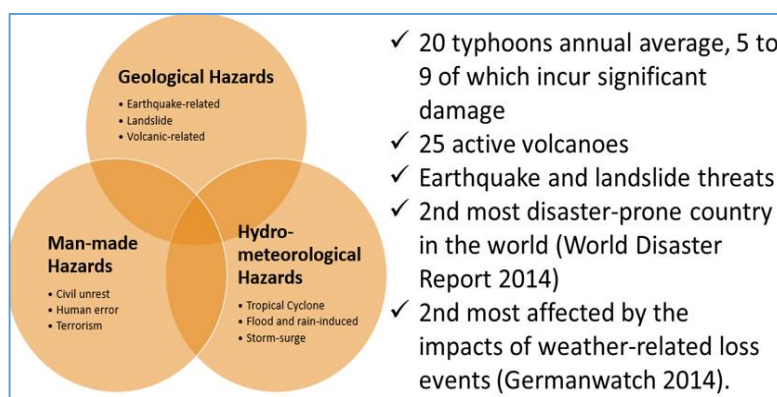


Figure 1. Hazards in the Philippines

Slow economic development, wealth distribution disparities, high population growth, and rapid urbanization are some of the factors that increase vulnerability to disaster events. As such, an effective disaster risk management scheme requires action on several fronts: good governance and institution building, social protection and anti-poverty effort, investment on augmented capacity and resilient infrastructure, and sustainable resource management. Disaster risk management has to be imbedded in development planning, and appropriate development policy has to be instituted to lessen vulnerability to a multitude of hazards and promote national resiliency.

Disaster risk management policy in the Philippines had evolved slowly over the years, picking up in pace only during the second half of the last decade.

In 1978, President Ferdinand Marcos passed into law Presidential Decree No. 1566 also known as “Strengthening the Philippine Disaster Control Capability and Establishing the National Program on Community Disaster Preparedness”. It established the National Disaster Coordinating Council (NDCC) as the highest policy-making body on disaster-related concerns, and institutionalized and strengthened disaster control in the country.

More than a decade later, Republic Act No. 7160 or the Local Government Code (LGC) of 1991 came into force, espousing decentralization and heralding local autonomy to enable the political subdivisions of the state to develop and become self-reliant and more effective partners in the attainment of national goals. Toward this end, applicable local government structures were instituted and local government units were given more powers, authority, responsibilities, and resources.

PD 1566, together with certain provisions in Republic Act No. 7160, became the default policy on DRM until the passing of landmark legislations on climate change and disaster risk reduction and management in 2009 and 2010, respectively. Republic Act 10121 or the Philippine Disaster Risk Reduction and Management Act of 2010, and Republic Act 9792 or the Climate Change Act of 2009 established proactive national framework strategies and plans, and made available the necessary institutional structures and resources required for disaster risk management, and climate change mitigation and adaptation in the country.

From 2005, the country also became a signatory to the Hyogo Framework of Action, a United Nations initiative which presented a global blueprint for disaster risk management to substantially reduce disaster losses by the year 2015. This was succeeded by the Sendai Framework which runs from 2016 to 2030 and aims to provide continuity in global disaster risk reduction cooperation while recognizing the complex dimensions of risk and the presence of global and national platforms (Figure 3).

World Risk Index 2014		
Rank	Country	Risk (%)
1.	Vanuatu	36.50
2.	Philippines	28.25
3.	Tonga	28.23
4.	Guatemala	20.68
5.	Bangladesh	19.37
6.	Solomon Islands	19.18
7.	Costa Rica	17.33
8.	El Salvador	17.12
9.	Cambodia	17.12
10.	Papua New Guinea	16.74
11.	Timor-Leste	16.41
12.	Brunei Darussalam	16.23
13.	Nicaragua	14.87
14.	Mauritius	14.78
15.	Guinea-Bissau	13.75

Figure 2. World risk ranking of the Philippines

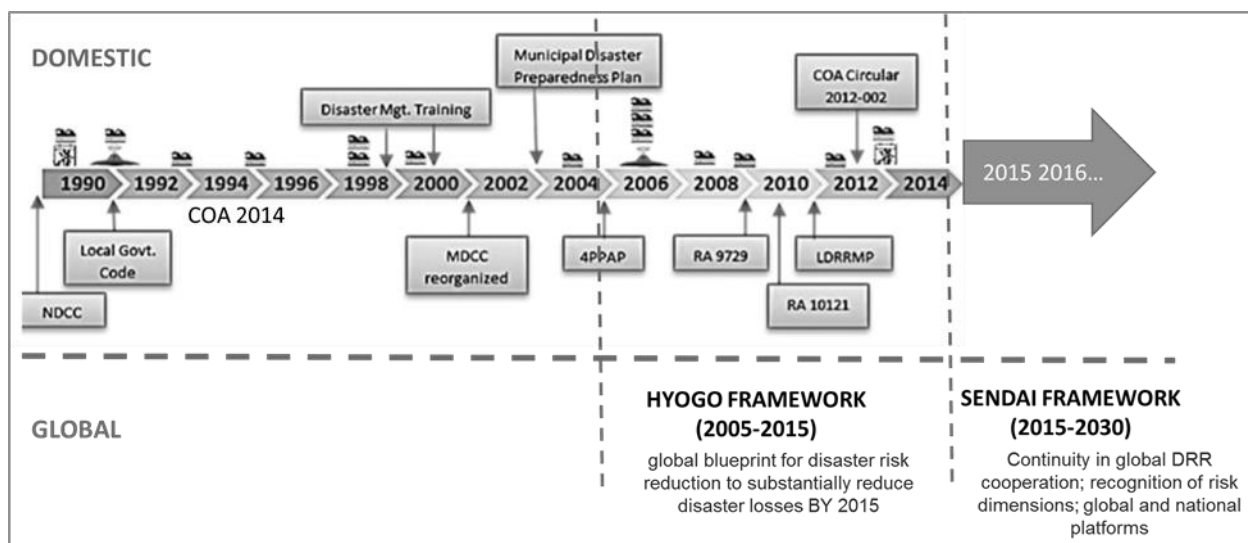


Figure 3. Evolution of disaster risk management policy in the Philippines

1.2 Motivations and Objectives of the Study

This assessment draws from three main motivations.

First, RA10121 instituted the crafting and implementation of a National Disaster Risk Reduction and Management Plan (NDRRMP) which identified strategic targets and activities aimed at managing risks and strengthening institutional arrangements and capacity at the national and subnational levels. The NDRRMP supposedly outlined the way toward mainstreaming of DRRM and CCA in policy formulation, development planning, budgeting and governance with its 4 priority pillars detailed in 14 objectives, 24 outcomes, 56 outputs, and 93 activities. This study looked into the implementation and grounding of RA10121 through the sectoral and institutional implementation the NDRRMP.

The second motivation lies in the context of good governance, institution building and public welfare. Disaster risk management (DRM) concerns everyone as people are exposed to hazards in relative degrees and disaster risk is a reality for every person—from policy and decision makers in government to the general public, private sector and other interest groups. Third, the study can complement or augment a more thorough review of DRM policy in view of potential amendments to the law.

In keeping with the above, and underscoring the importance of policy research as it relates to disaster risk management, the study seeks to review the process of NDRRM Plan implementation and institutional grounding. Specifically, it aims to:

- ☐ Look into how the thematic areas specified in RA10121 are captured in the NDRRM Plan;
- ☐ Assess the implementation of the NDRRM Plan focusing on institutional translation and resource allocation; and
- ☐ Highlight learnings and provide recommendations on moving forward.

2.0 Framework and Methodology

2.1 Institutional and Development Policy Perspective

Through the formulation of the National Disaster Risk Management Framework and the crafting of the National Disaster Risk Reduction Management Plan (NDRRMP), Republic Act 10121 provides a comprehensive, all-hazard, multi-sectoral, inter-agency, and community-based approach to disaster risk management. The NDCC from PD1566 was replaced with the National Disaster Risk Reduction Management Council (NDRRMC) as the overseeing body headed by the Secretary of the Department of National Defense (DND) as Chairperson, and the Office of Civil Defense as secretariat. It authorized the NDRRMC with policy-making, coordination, integration, supervision, monitoring and evaluation functions. The Act also mandated the establishment of Disaster Risk Reduction and Management Offices (DRRMOs) in every province, city and municipality, and a Barangay Disaster Risk Reduction Management Committee (BDRRMC) in barangays.

Under the core value of safer, adaptive and disaster resilient communities, the NDRRMP sets down the expected outcomes, outputs, key activities, indicators, lead agencies, implementing partners and timelines under each of the four distinct yet mutually reinforcing thematic areas: (1) Disaster Prevention and Mitigation; (2) Disaster Preparedness; (3) Disaster Response; and (4) Disaster Rehabilitation and Recovery(Figure 4)².

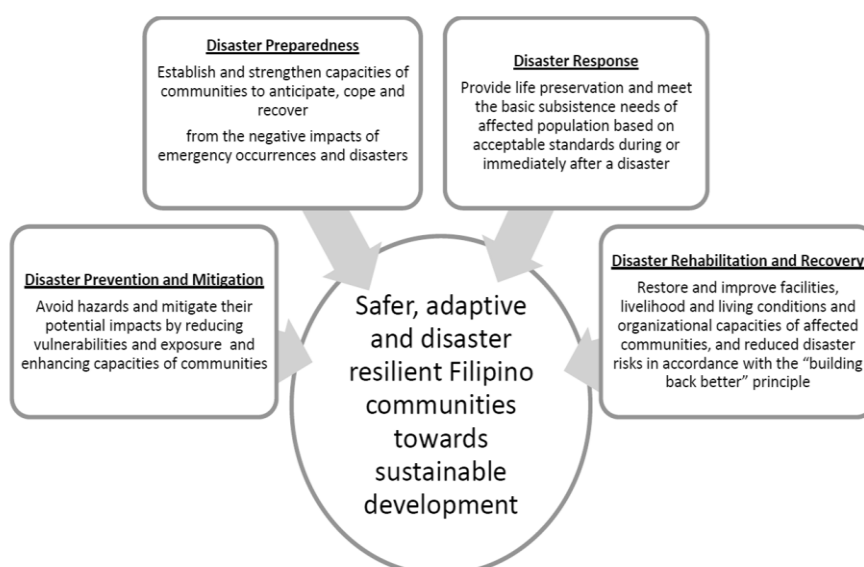


Figure 4. Thematic pillars of RA10121 and the NDRRMP

Various strategies were identified to achieve the desired results under each DRRM thematic pillar:

- Advocacy and Information, Education and Communication (IEC)
- Competency-based capability building
- Contingency Planning
- Education on DRRM and CCA for ALL
- Institutionalization of DRRMCs and LDRRMOs
- Mainstreaming of DRR in ALL plans
- Research, Technology Development and Knowledge Management
- Monitoring, evaluation and learning

² Lifted from the National Disaster Risk Reduction and Management Plan (2011)

- Networking and partnership building between and among stakeholders, media and tiers of government

Agency leads and implementing partner institutions and/or groups were identified in each of the activities under the NDRRMP. Following RA 10121, the overall lead or focal agency for each of the four priority areas are the designated vice-chairpersons of the National DRRM Council.

2.2 Evaluation Methodology: Process Analysis

The study conducted a process evaluation by analyzing the sectoral and institutional implementation of the NDRRMP with cognizance of not just the overarching policy framework and thematic pillar structures, but also the institutional issues that are significant in contextualizing the grounding of the law. As the NDRRMP fulfills the requirement of RA No. 10121, which provides the legal basis for policies, plans and programs essentially comprise the master plan that provides the strategies, organization, tasks of concerned agencies and local government units, and other guidelines in dealing with disasters or emergencies. The methodology is straightforward: process evaluation was used to look into the variation between the NDRRM Plan and its institutional translation (Table 1). A modified CIPP approach was used to cover context, inputs and processes related to the grounding of the NDRRMP (Figure 5).

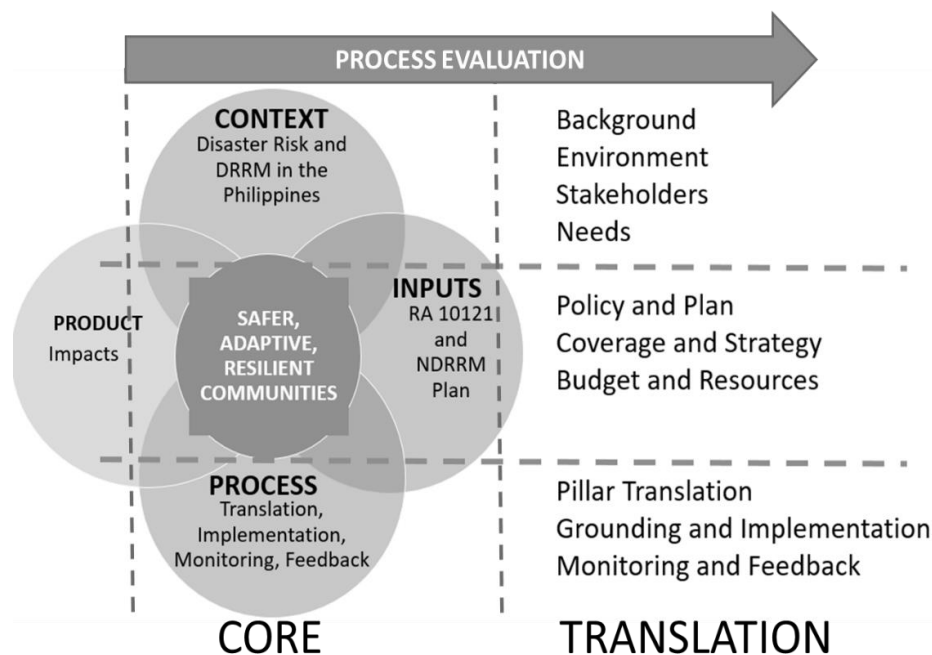


Figure 5. Conceptual Framework

2.3. Instruments and Data Collection

2.3.1. Desk Review

Pertinent documents were scrutinized in relation to the implementation of the NDRRM Plan. Documents from the thematic pillar leads were gathered and reviewed, and cross-referenced against the goals, objectives and outputs indicated in the NDRRMP. Related documents included status reports, project reports, internal policy issuances, and DRR budget allocations. The thematic areas, goals, objectives and outcomes specified in the NDRRMP is presented in the following Figure 4 and Table 1.

2.3.3. Key Informant Interviews (KIs) and Focus Group Discussions (FGDs)

KIs and FGDs covered observations and insights from the staff and officers of the Office of Civil Defence (OCD) as NDRRMC secretariat; the Department of Science and Technology (DOST) as vice chair for disaster prevention and mitigation; the Department of Interior and Local Government (DILG) as vice chair for disaster preparedness; the Department of Social Welfare and Development (DSWD) as vice chair for disaster response, and the National Economic and Development Authority (NEDA) as vice chair for rehabilitation and recovery. KIs also covered local government counterparts particularly the provincial DRRM office of Leyte province and the City DRRM officer of Tacloban City.

2.3.5. On-Site Observations

On-site visit of DRRM offices and incident command centers were also undertaken when circumstances permitted.

Table 1. Goals, objectives, and outcomes of each DRRM thematic pillar/area³

Thematic Area 1:	DISASTER PREVENTION AND MITIGATION
Goal: <i>Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities</i> Objectives: 1. <i>Reduce vulnerability and exposure of communities to all hazards</i> 2. <i>Enhance capacities of communities to reduce their own risks and cope with the impacts of all hazards</i> Overall responsible agency: <i>Department of Science and Technology (DOST)</i>	
Outcome	Lead Agency(ies)
1. DRRM and CCA mainstreamed and integrated in national, sectoral, regional and local development policies, plans and budget	Office of Civil Defense (OCD)
2. DRRM and CCA-sensitive environmental Management	Department of Environment and Natural Resources (DENR)
3. Increased resiliency of infrastructure systems	Department of Public Works and Highways(DPWH)
4. Enhanced and effective community-based scientific DRRM and CCA assessment, mapping, analysis and monitoring	OCD
5. Communities access to effective and applicable disaster risk financing and insurance	Department of Finance (DOF)
6. End-to-end monitoring (monitoring and response), forecasting and early warning systems are established and/or improved	Department of Science and Technology (DOST)
Thematic Area 2:	DISASTER PREPAREDNESS
Goal: <i>Establish and strengthen capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters</i> Objectives: 1. <i>Increase the level of awareness of the community to the threats and impacts of all hazards, risks and vulnerabilities</i> 2. <i>Equip the community with the necessary skills to cope with the negative impacts of a disaster</i>	

³ Lifted from the National Disaster Risk Reduction and Management Plan (2010)

3. <i>Increase the capacity of institutions</i> 4. <i>Develop and implement comprehensive national and local disaster preparedness policies, plans and systems</i> 5. <i>Strengthen partnership among all key players and stakeholders</i>	
Overall responsible agency: <i>Department of Interior and Local Government (DILG)</i>	
Outcome	Lead Agency(ies)
7. Increased level of awareness and enhanced capacity of the community to the threats and impacts of all hazards	Philippine Information Agency (PIA)
8. Communities are equipped with necessary skills and capability to cope with the impacts of disasters	Department of Interior and Local Government (to coordinate) and OCD (to implement)
9. Increased DRRM and CCA capacity of Local DRRM Councils, Offices and Operation Centers at all levels	DILG
10. Developed and implemented comprehensive national and local preparedness and response policies, plans, and systems	DILG and OCD
11. Strengthened partnership and coordination among all key players and stakeholders	DILG
Thematic Area 3:	DISASTER RESPONSE
Goal: <i>Provide life preservation and meet the basic subsistence needs of affected population based on acceptable standards during or immediately after a disaster</i> Objectives: <ol style="list-style-type: none"> <i>Decrease the number of preventable deaths and injuries</i> <i>Provide basic subsistence needs of affected population</i> <i>Immediately restore basic social services</i> 	
Overall responsible agency: <i>Department of Social Welfare and Development (DSWD)</i>	
Outcome	Lead Agency(ies)
12. Well-established disaster response Operations	Department of Social Welfare and Development (DSWD)
13. Adequate and prompt assessment of needs and damages at all levels	Disaster Risk Reduction and Management Councils (DRRMCs), OCD and DSWD
14. Integrated and coordinated Search, Rescue and Retrieval (SRR) capacity	Department of National Defense (DND), DILG, Department of Health (DOH)
15. Safe and timely evacuation of affected Communities	Local government units (LGUs)
16. Temporary shelter needs adequately Addressed	DSWD
17. Basic health services provided to affected population (whether inside or outside evacuation centers)	DOH
18. Psychosocial needs of directly and indirectly affected population addressed	DOH
19. Coordinated, integrated system for early recovery implemented	DSWD
Thematic Area 4:	DISASTER REHABILITATION AND RECOVERY
Goal: <i>Restore and improve facilities, livelihood and living conditions and organizational capacities of affected communities and reduce disaster risks in accordance with the “build back better” principle</i>	

Objectives: <ol style="list-style-type: none"> 1. To restore people's means of livelihood and continuity of economic activities and business 2. To restore shelter and other building/installation 3. To reconstruct infrastructure and other public utilities 4. To assist in the physical and psychological rehabilitation of persons who suffered from the effects of disaster 	
Overall responsible agency: <i>National Economic and Development Authority (NEDA)</i>	
Outcome	Lead Agency(ies)
20. Damages, losses and needs assessed	OCD
21. Economic activities restored, and if possible strengthened or expanded	Agency to be determined based on the affected sectors
22. Houses rebuilt or repaired to be more resilient to hazard events; safer sites for housing	National Housing Authority (NHA)
23. Disaster and climate change-resilient infrastructure constructed/reconstructed	DPWH
24. A psychologically sound, safe and secure citizenry that is protected from the effects of disasters is able to restore to normal functioning after each disaster	DOH and DSWD

3.0 Sectoral and Institutional Implementation of the NDRRMP

Those who crafted the NDRRMP had envisioned the mainstreaming of DRRM into policies and plans at various levels. By design, most of the targets and activities indicated in the document will not have separate funding sources. Rather, they will be mainstreamed into the regular activities of the relevant agencies and offices.

However, the NDRRMP also specified where resources can be tapped for the implementation of DRRM activities both at the national and subnational levels. Sources identified include the General Appropriations Act (GAA); National and Local DRRM Funds; Internal Revenue Allocation (IRA); Priority Development Assistance Fund (PDAF); Donor Funds; Adaptation and Risk Financing, among others. Aside from the fund sources, the NDRRMP was supposed to also tap non-monetary resources available which can help attain the identified targets. This study focused on national government and institution-based funding for DRRM. These include calamity funds and quick response funds, and agency fund allocations as indicated in the annual General Appropriations Act (GAA).

3.1 Resources for DRRM

3.1.1 Calamity Fund

According to the Department of Budget and Management (DBM), the Calamity Fund is a lump sum fund appropriated under the General Appropriations Act (GAA) to cover aid, relief, and rehabilitation services to communities/areas affected by man-made and natural calamities, repair and reconstruction of permanent structures, including capital expenditures for pre-disaster operations, rehabilitation and other related activities.

The NDRRMC, as the highest policy-making, coordinating, and supervising body at the national level for disaster management, gives the President advice on the status of disaster preparedness, prevention, mitigation, and response and rehabilitation operations. It also recommends the

declaration of a state of calamity damaged areas; and endorses proposals to restore normalcy including calamity fund allocation.

The OCD, as the NDRRMC's operating arm and secretariat, coordinates the activities and functions of the various government agencies and instrumentalities, private institutions and civic organizations for the protection and preservation of life and property during emergencies and disaster events. Under RA10121, OCD is also tasked to coordinate, monitor and evaluate the implementation of the NDRRMP.

The approval of the calamity funding by the OP sets into motion the DBM's issuance of a Special Allotment Release Order (SARO) and Notice of Cash Allocation (NCA) directly to the appropriate implementing agency or LGU. While the SARO is released fully, the issuance of cash requirements varies depending on the implementing unit.

Looking at the timeline after landmark legislations were passed in 2009, there were remarkable annual increases in Calamity Fund allocations as seen in the yearly GAA. Although some of the increased funding catered to the magnitude of the previous years' disaster damages (like those of typhoon Yolanda), more funds have been generally appropriated for DRRM over the past eight years. Such is a positive development as it manifests the government's commitment to the tenets of disaster risk management and prioritize people's lives and livelihoods in times of emergencies and disaster events.

Table 2 and Figure 6 present the yearly general appropriations for calamity funding. Prior to 2012, before quick response funds were inserted in specific agency allocations, the QRF comprised approximately thirty percent of the lump sum national calamity fund. As can be seen in the presented figures, calamity funds had increased almost nine times from 2009 to 2016. Granted that PHP 18B of the fund in 2016 was for Yolanda rehabilitation, the fund still represented a five hundred percent increase from the previous allocation. From PHP 4.4B in 2009, the fund registered at PHP 38.9B in 2016. The QRF allocations showed the same trend as appropriations increased from barely half a million in 2009 to around PHP 6.2 Billion in 2016.

It should be noted that much of the calamity funds were utilized for disaster response, recovery and rehabilitation. Funding facility for preparedness, mitigation and prevention have to be augmented as gathered from the interviews.

Table 2. Calamity and Quick Response Fund Allocations from 2009 to 2016

	2016	2015	2014	2013	2012	2011	2010	2009
Calamity Fund	38,895,531,000	14,000,000,000	13,000,000,000	7,500,000,000	7,500,000,000	6,000,000,000	3,750,000,000	4,303,516,293
Original Appropriation	38,895,531,000	14,000,000,000	13,000,000,000	7,500,000,000	7,500,000,000	5,000,000,000	2,000,000,000	2,000,000,000
Augmentation						1,000,000,000	1,750,000,000	2,303,516,293
Quick Response Fund (QRF)	6,215,000,000	6,707,500,000	4,849,766,000	3,695,000,000	2,645,000,000	1,787,986,466	645,000,000	597,500,000

Source: DBM

Note: FY2016 NDRRMF has 18.8B for Yolanda rehab; 2015 has 1B for peoples survival fund; QRF since 2012 were directly released to respective Departments

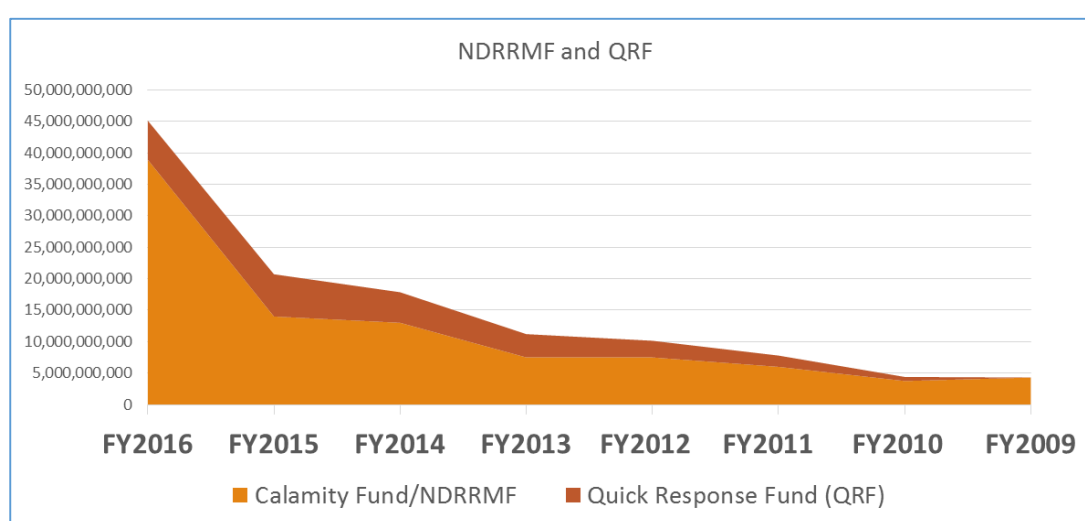


Figure 6. Calamity and Quick Response Fund Allocations from 2009 to 2016

3.1.2 Quick Response Fund

Starting in 2012, stand-by funds have been included in the GAAs of a few line Departments to facilitate access to resources in times of emergencies and disaster events. In the course of five years, the fund allocation has grown and its definition was broadened. The DBM defines QRFs as built-in budgetary allocations that represent pre-disaster or standby funds for agencies in order to immediately assist areas stricken by catastrophes and crises. Five Departments were originally given QRFs through their annual appropriations. As of the year 2016, the following agencies had been allocated QRFs to ensure immediate action in times of calamities:

- Department of Public Works and Highways (DPWH)
- Department of National Defense (DND) – Office of the Secretary (OSEC)/ Office of the Civil Defense (OCD)
- Department of Education (DepEd)
- Department of Social Welfare and Development (DSWD)
- Department of Agriculture (DA)
- Department of Health (DOH)
- Department of Transportation and Communication (DOTC)
- Department of Interior and Local Government (DILG)

Unlike the Calamity Fund, the QRF does not require the recommendation of the NDRRMC or the approval of OP to trigger the use and release of funds. The fund, however, is stringently monitored by the DBM and the Commission on Audit (COA). Fund replenishment is available when the QRF gets depleted with the endorsement of DBM and the approval of the Office of the President.

Table 3 and Figure 7 present the data on QRF appropriations over the years. It is worth noting that the fund not only grew in amount, but also in coverage over the years. From initially covering just 3-4 Departments in 2009, the fund were distributed in eight departments covering 12 sub-agencies. From PHP653 Million in 2009, appropriations have increased almost ten times to PHP 6.2Billion by 2016.

Originally just providing appropriations for DND, OCD, DA and DSWD in 2009, the fund evolved to cover the response operations of DPWH, DepEd, DoH, DOTC and DILG.

Table 3. Quick Response Fund appropriations from 2009 to 2016

Dept/Agency	2016	2015	2014	2013	2012	2011	2010	2009
DND-OSEC	200,000,000	352,500,000.00	352,500,000	352,500,000	352,500,000	295,486,466	127,500,000	127,500,000
DND-OCD	530,000,000	530,000,000.00	530,000,000	530,000,000	530,000,000	593,281,908	190,000,000	230,000,000
DSWD	1,325,000,000	1,325,000,000.00	662,500,000	662,500,000	662,500,000	662,500,000	662,500,000	287,500,000
DPWH	1,300,000,000	1,000,000,000.00	650,000,000	600,000,000	550,000,000			
DA-OSEC	500,000,000	500,000,000.00	500,000,000	500,000,000	500,000,000	1,562,606,000	0	800,000
DA-NIA	500,000,000	500,000,000.00		500,000,000				
DepEd	1,000,000,000	1,000,000,000.00	654,766,000	550,000,000	550,000,000			
DOH	510,000,000	500,000,000.00	500,000,000					
DOTC- PCG	75,000,000							
DILG -BFP	75,000,000							
DILG-PNP	75,000,000							
DOTC-OSEC	125,000,000	1,000,000,000.00	1,000,000,000					
Total	6,215,000,000	6,707,500,000	4,849,766,000	3,695,000,000	3,145,000,000	3,113,874,374	980,000,000	653,000,000

Source: DBM

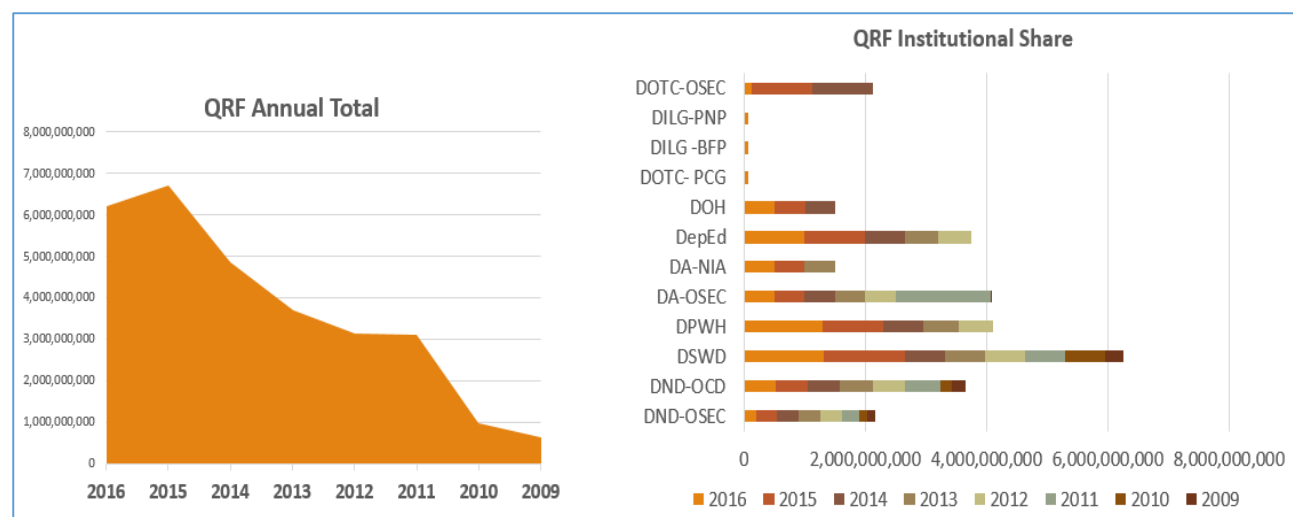


Figure 7. Quick Response Fund allocations and institutional shares from 2009 to 2016

3.1.3 Institutional Funding

As mentioned earlier, most of the targets and activities indicated in the NDRRMP will not have separate funding sources. Rather, they will be mainstreamed into the regular activities of the relevant agencies and offices. This, by design, signals the manifestation effective institutionalization of DRRM within government.

The figures and tables in this section highlight the institutional resources made available for disaster risk reduction and management, and climate change adaptation and mitigation. The figures presented are from the GAAs of the respective institutions, and the climate change expenditure tagging initiative started by DBM with CCC and executive departments in 2015. Some noteworthy observations are as follows:

- The highest investments on climate change adaptation and mitigation were given to agencies outside the DRRM pillar leads. This makes interagency coordination and cooperation critical if a whole of nation approach to disaster risk management is to be pursued.
- Much of the climate change funding were for adaptation expenses. Only a very small portion of public spending were appropriated to mitigation projects and activities.
- The DPWH (with its various Bureaus) is receiving the lion's share of climate change funding particularly for water sufficiency and sustainable energy
- The Climate Change Commission is the only institution with expenditure on financing as tagged by DBM
- Among the four DRRM pillar vice-chairs, DOST proved to be the one with the greatest access to a wide range of climate change adaptation funding, which includes human security, knowledge capacity building, food security and ecological sustainability.
- Among the four DRRM pillar vice-chairs, human security got the highest funding. This is consistent with the human welfare and resiliency focus of DRRM. This contrasted with the priorities of climate change adaptation which showed water sufficiency and sustainable energy with the highest investment figures.
- The budgetary divide also highlights the institutional separation between CCA and DRRM.
- The same climate change expense tagging arrangement between CCC and DBM can be made for DRRM-related spending between NDRRMC/OCD and DBM.

Figures 8 to 12⁴ illustrate and highlight the focus and distribution of climate change expenses/investments within the bureaucracy as reflected in the GAA of executive departments and tagged by DBM as climate change related. It must be noted that climate change initiatives are classified under seven priority areas: Food Security, water sufficiency, ecological and environmental stability, human security, climate smart industries and services, sustainable energy, knowledge and capacity building, and finance. This contrasts to the thematic treatment of DRRM which reflects the four pillars of disaster mitigation, preparedness, response and recovery.

⁴ The amounts reflected in the figures were sourced from the climate change expenditure tagging implemented by CCC and the DBM (2016).

As seen in Figure 8, among all the departments in the bureaucracy, including the four DRRM pillar leads and DND-OCD, the funding DPWH received was highest in magnitude with bulk of the expenses going to programs, activities and projects (PAPs) on water sufficiency and sustainable energy. Relatively smaller amounts of funding were appropriated for ecological and environmental stability, and human and food security under the auspices of DENR, DOST and DA. This bring to fore the need to beef up investments in the other priority areas, including the need for related institutions to increase their sectoral advocacies.

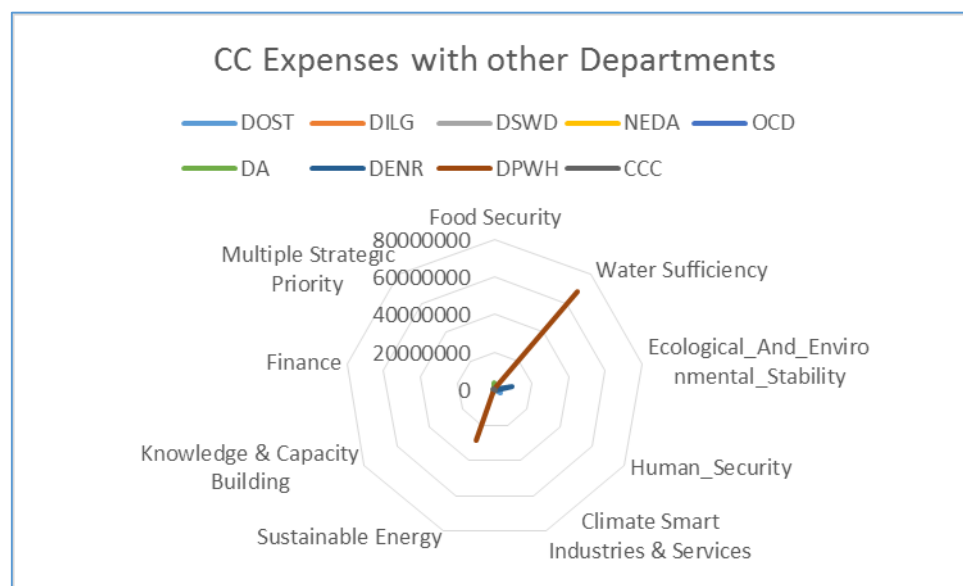


Figure 8. Climate Change Expenses with Other Departments⁵

Figure 9 reflects the DRRM focus of the tagged funds. The fund distribution as shown is leaning toward human security and knowledge and capacity building, where DOST and DSWD reported the most appropriation. The DOST's tagged related expenses were highest compared to those of OCD and the other pillar vice-chairs. This is followed by DSWD's appropriation on human security projects and activities. A small percentage was also allocated for multiple strategic priority. It is worth noting that the figures represented the respective institutional and thematic focus of DRRM and CCA. Human welfare and adaptive capacity is consistent with the focus of DRRM, contrasting with the recent priorities of CCA which leaned toward water sufficiency and sustainable energy.

⁵ Tagged climate change expenditure show focus on water sufficiency and sustainable energy.

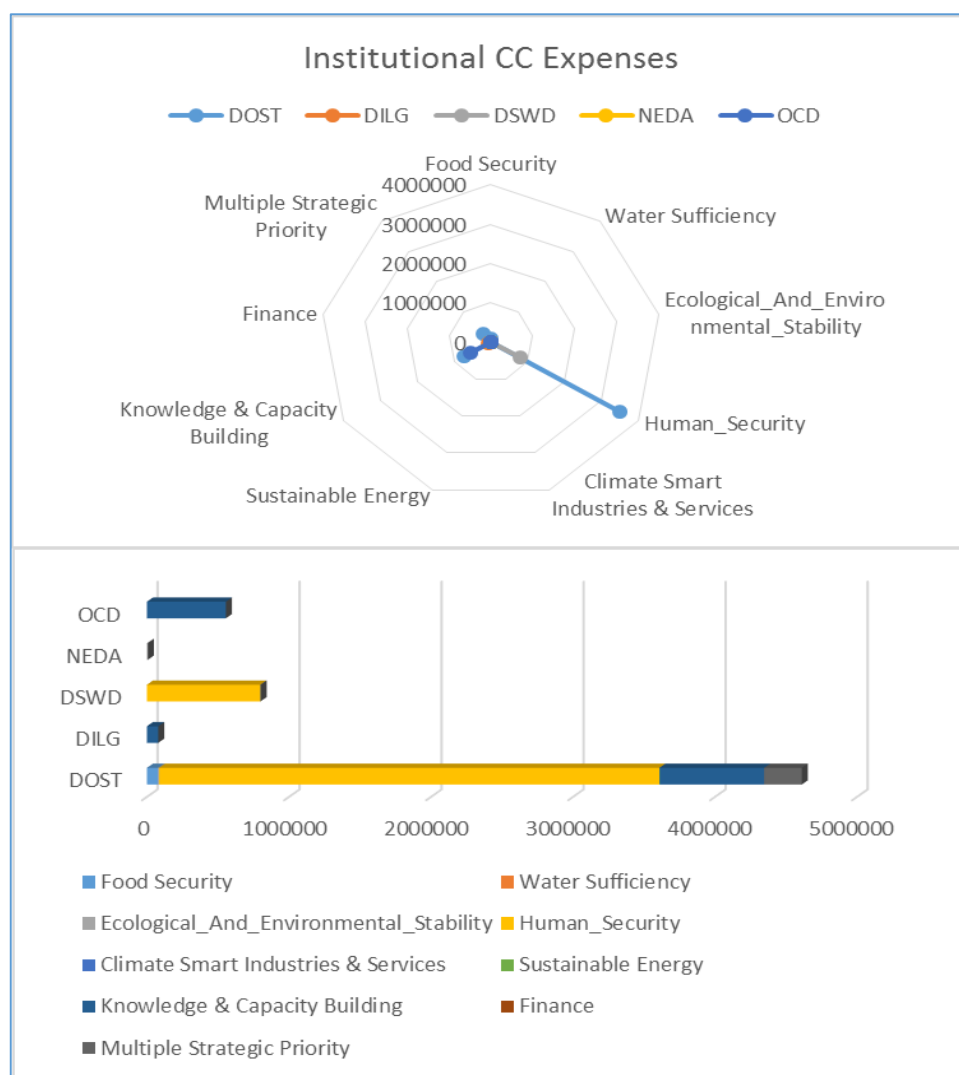


Figure 9. Institutional Climate Change Expenses of OCD and Four Pillar Leads

Figure 10 shows that the classification of climate change expenses fall mainly under the category of climate change adaptation. Budget appropriations for climate change mitigation seemed wanting. The CC adaption appropriations were mostly for water sufficiency, sustainable energy, and ecological and environmental stability, while mitigation expenses included a relatively small amount for sustainable energy. The same observations validate the sentiment aired by pillar leaders that funding for disaster prevention and mitigation needs a second look. Mitigation programs, projects and activities deserve the same attention and resource support as the seemingly more practical and saleable climate change adaptation measures.

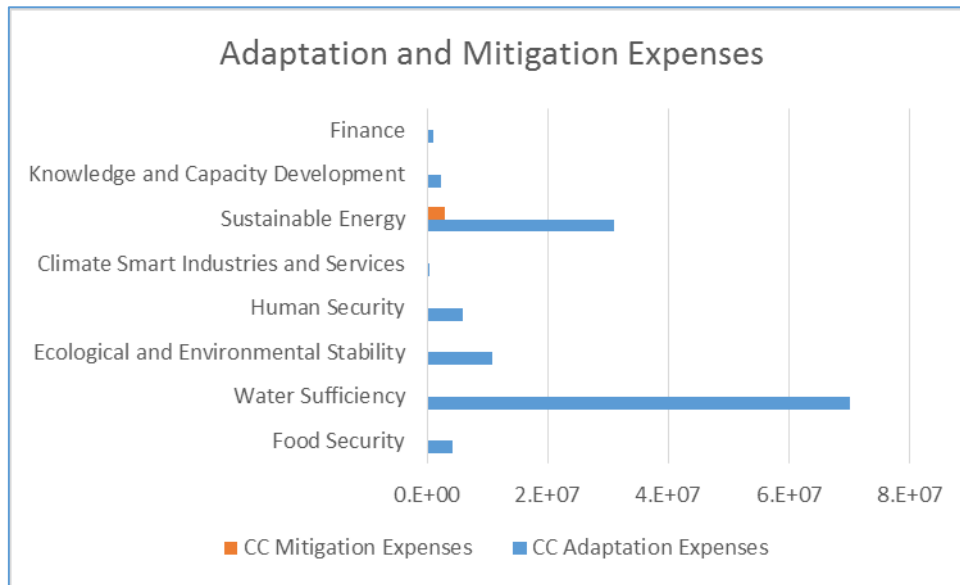


Figure 10. Adaptation and Mitigation Expenses by category

Note: Investment on water sufficiency were mostly by the DPWH, DENR and DA; Sustainable energy is mostly by DPWH

Figures 11 and 12 show the number of programs, activities and projects funded by the different institutions involved in climate change and DRR initiatives. Among the four pillar leads, DOST had the most number of programs, projects, and activities at more than 60 (see Figure 11). The same holds true when the number of PAPs from the other institutions are accounted for (see Figure 12). However, DOST's share in the expense was just shy of 4.0% of the total expenditures. The DPWH, DA and DENR, although with lesser number of PAPs, accounted for the bulk of tagged expenses (see Figures 8 to 9). Granting the discrepancies in the magnitude of investments, the figures still indicate the institutional effectiveness of DOST in obtaining resources and working within the realms of both climate change and DRR initiatives.

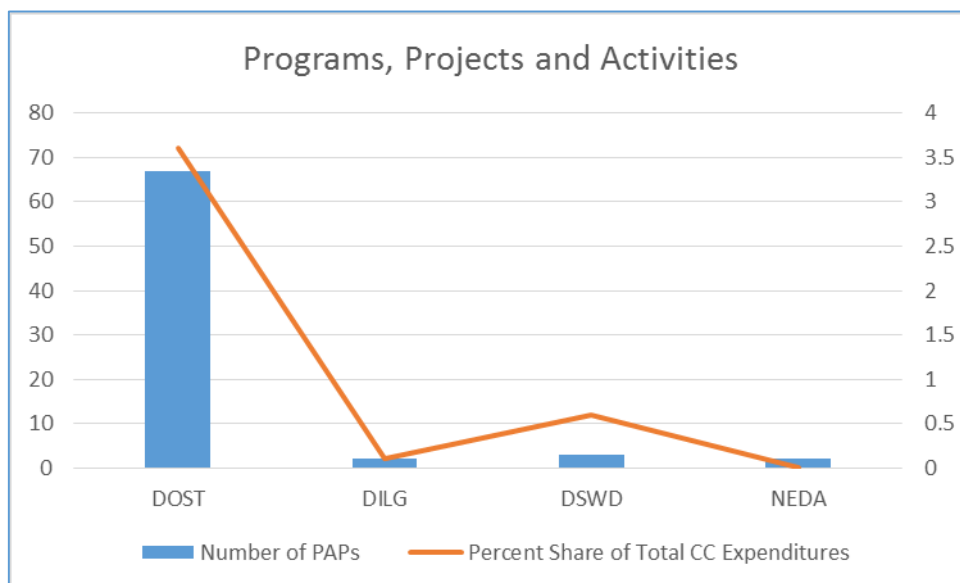


Figure 11. Number of PAPs and Percentage Share of Total Climate Change Expenditures of Four Pillar Leads

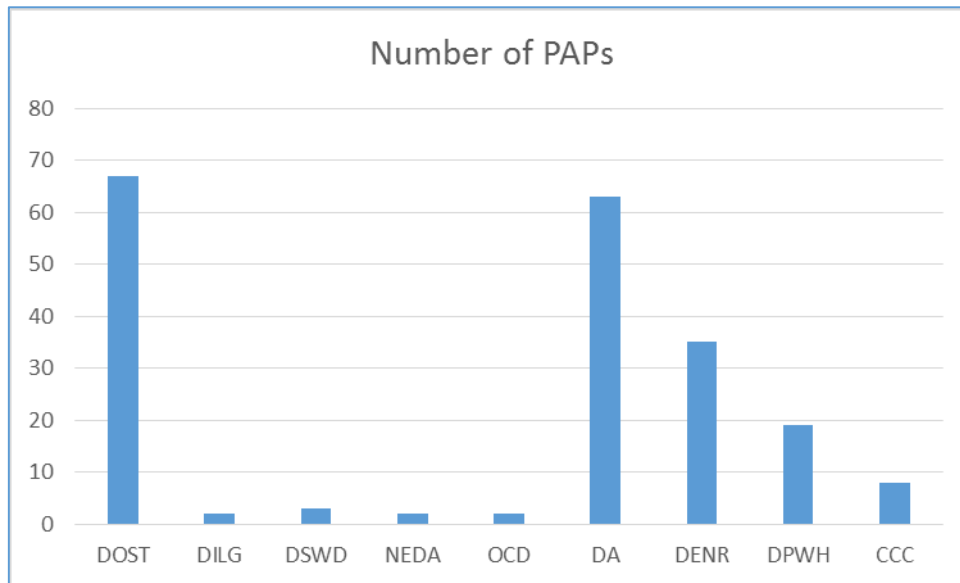


Figure 12. Number of DRRM-related Programs, Projects, and Activities by Department

The figure and tables in the section below highlight the institutional resources made available for disaster risk reduction and management from 2010 to 2016 within DND-OCD and the four pillar leaders.

Figure 13 show the graph of institutional funding for DRRM activities and projects for 2010-2016. It is clear from the graph that a lot has changed in the DRRM institutional landscape from 2010 to 2016, resources-wise.

First, the totality of institutional funding has increased massively from the original levels prior to the implementation of RA10121. Part of this can be explained by the fiscal focus of the previous administration as it transitioned from the Presidency of Gloria Macapagal Arroyo to that of Benigno Aquino III. Significantly stronger typhoons and disaster events also battered the country during the period, necessitating a greater infusion of calamity funds (from Sendong, Pablo, and Yolanda to earthquakes in the Visayas and man-induced events in Mindanao). However, the level of institutional funding increase on its own is commendable, indicating that the milestone legislations in 2009 and 2010 served as catalysts in energizing DRR initiatives.

Second, the period served as a breakout year for DSWD, who as vice chair of the thematic pillar on disaster response, took on more responsibilities and required greater resource complement. Its graphical climb from the bottom of the pack in 2010 to being the clear leading recipient in 2016 speaks massively on the DRR portfolio it had to assimilate over a relatively short period of time.

Third, Figure 13 and Tables 4 to 7 represent a reversal for DOST when comparison is made with the climate change funding presented in the previous figures. Portfolio-wise, DOST engaged in more locally funded and foreign funded PAPs. But the amount of aggregate funding did not measure in magnitude compared to DSWD and DND. This is partly due to the infusion of QRF in the GAA of the two departments which amounted to Billions of pesos. But more than this, it also points to the institutional focus and priorities related to DRR which weighed more on response, preparedness, and rehabilitation and recovery.

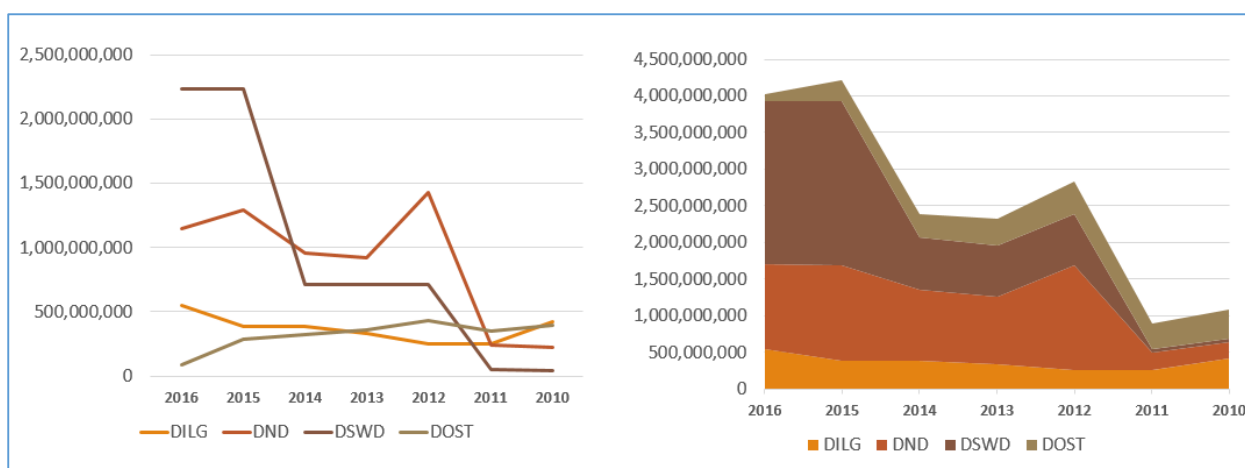


Figure 13. Institutional funding for DRRM activities and projects, 2009-2016

Table 4. List of DRRM activities/projects and Funding under DILG, 2010-2016

Department	Item	2016	2015	2014	2013	2012	2011	2010
DILG	1. Enhancing LGU Capacity on Climate Change Adaptation and Disaster Risk Management Framework	76,000,000	76,000,000	76,000,000	76,000,000	40,000,000	40,000,000	
	2. Emergency Response Network (Patrol 117)	19,792,000	19,683,000	19,577,000	19,571,000	19,411,000	19,411,000	34,316,000
	3. Barangay Security, Emergency and Disaster Preparedness							20,000,000
	4. Rescue and Relief Operations to Barangays Affected by Calamities							200,000,000
	3. Conduct of community work including disaster-preparedness and relief operations, livelihood/cooperatives development, sports development, medical-dental outreach activities, engineering services, socio-cultural development and other related activities which are confidential in nature	300,124,000	292,373,000	292,379,000	240,418,000	193,088,000	191,888,000	165,315,000
	4. Quick Response Fund for BFP and PNP	150,000,000						
TOTAL		545,916,000	388,056,000	387,956,000	335,989,000	252,499,000	251,299,000	419,631,000

Table 5. List of DRRM activities/projects and Funding under DND, 2010-2016

Department	Item	2016	2015	2014	2013	2012	2011	2010
DND	1. Supervision, Coordination and Direction of Disaster (Response) Management - OSEC				2,350,000	2,650,000	7,400,000	5,000,000
	2. Disaster Risk Reduction and Management (DRRM) Services- Domestic disaster response management and operations (QRF) - OSEC	200,000,000	352,500,000	352,500,000				
	3. Disaster Risk Reduction and Management Fund - OCD				64,228,000	645,924,000	68,257,000	63,269,000
	4. Disaster Risk Reduction and Management Policy Services	420,697,000	412,817,000	77,184,000				
	5. Quick Response Fund- OCD	530,000,000	530,000,000	530,000,000	530,000,000	530,000,000		
	6. Disaster Response- Operation and maintenance of units engaged in disaster and relief operations - AFP (Phil Army)				4,000,000	7,811,000	7,016,000	3,185,000
	7. Disaster Response-Disaster response and relief services - AFP (Phil Air Force)				315,894,000	241,713,000	159,684,000	148,911,000
	8. Disaster Response-Vessel/SAR operations/ground mobility - AFP (Phil Navy)				586,000	586,000	586,000	586,000
TOTAL		1,150,697,000	1,295,317,000	959,684,000	917,058,000	1,428,684,000	242,943,000	220,951,000

Table 6. List of DRRM activities/projects and Funding under DOST , 2010-2016 (locally funded and Foreign funded)

Department	Item	2016	2015	2014	2013	2012	2011	2010
	Foreign-Assisted Projects							
DOST	1. Improvement of Flood Forecasting and Warning System in the Pampanga and Agno River Basins - JICA Grant Phase I - Pampanga River Basin, Phase II - Agno River Basin							
	2. Strengthening of Flood Forecasting and Warning System for Dam Operation (FFWSDO) - JICA Grant TCP							
	3. Improvement Flood Forecasting and Warning System for Magat Dam and Downstream Communities (FFWSDO) NoRAD Grant - For 2015; strengthening							
	4. JICA RADAR				40,000,000	44,276,000	42,907,000	52,907,000
	5. Improvement of Capabilities to Cope with Natural Disasters Caused by Climate Change (JICS)			41,251,000	41,251,000	41,251,000	40,000,000	
	6. Establishment of Early Warning and Response System for Disaster Mitigation in Metro Manila (Pasig-Marikina River Basin) KOICA					33,120,000	33,120,000	
	7. Improvement of Flood Forecasting and Warning System in Bicol River Basin (JICS-Crown Agent) (GoJ)		41,250,000					
	8. Establishment of a Pilot Automatic Warning System (AWS) in Cagayan de Oro River Basin (RDMI 2)		1,000,000					
	9. Automation of Flood Early Warning System for Disaster Mitigation in Greater Manila (KOICA 3)		18,600,000					
	10. Project for the Rehabilitation of Metereological Radar System in Guiuan		30,000,000					
	11. Establishment of a Disaster Management Training Center in Aurora							39,358,000
	12. Establishment of the Philippine Disaster Science Center							100,000,000
	TOTAL	88,280,016	285,010,015	319,600,014	360,020,013	434,973,012	352,686,011	399,429,010

Department	Item	2016	2015	2014	2013	2012	2011	2010
DOST	1. Participation in the inter-agency natural disaster prevention and preparedness activities- Support to Operations				1,479,000	581,000	344,000	344,000
	2. Weather modification activities and NATURAL DISASTER REDUCTION including the payment of P25,000 per annum for the flying pay of personnel (on flying status) undertaking aerial flights - Research				9,225,000	4,238,000	3,825,000	3,825,000
	3. Conduct of researches for natural disaster, pursuant to Section 10 of P.D. No. 78, as amended- Research				8,286,000	3,365,000	2,584,000	2,284,000
	4. Scientific and Technological Research and Development on Volcanology, Seismology and Geophysics and Disaster Mitigation - Operations				130,177,000	160,508,000	107,372,000	70,709,000
	5. Enhancement of Earthquake and Volcano Monitoring and Effective Utilization of Disaster Mitigation Information in the Philippines (*for 2015, the amount is already included in the Disaster Mitigation and Management fund)	14,000,000	8,000,000	76,000,000	8,600,000	9,800,000	14,700,000	
	6. Enhancement of Volcano, Earthquake and Tsunami Warning Systems for Disaster Risk Reduction in the Philippines (*for 2015, the amount is already included in the Disaster Mitigation and Management fund)		8,660,000		16,000,000			
	7. Various Research Programs including 1) Disaster Science Management; 2) ICT for cloud computing and software-as-a-service; and (3) Responsible mining technologies				40,000,000	120,000,000		
	8. Telemetered Flood Forecasting and Warning System for 13 out of 18 Major Rivers in the Philippines	9,000,000	12,900,000	15,000,000	65,000,000			
	8. Disaster Mitigation and Management - PhilVocs	47,640,000	37,041,000	54,151,000				
	9. Disaster preparedness and risk reduction services- PhilVocs	17,638,000	11,694,000	10,694,000				
	10. Disaster Mitigation and Management - PAG-ASA		115,850,000	81,251,000				

Table 5. List of DRRM activities/projects and Funding under DSWD, 2010-2016

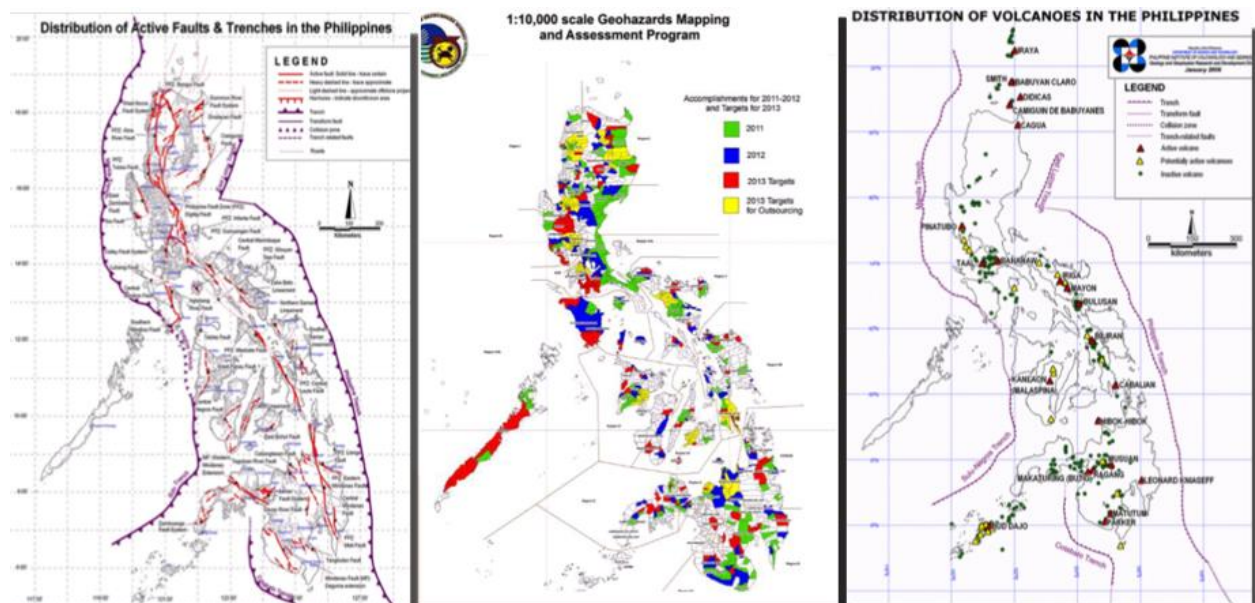
Department	Item	2016	2015	2014	2013	2012	2011	2010
DSWD	1. Assistance to victims of disasters and natural calamities including handling and hauling of commodity donations	912,324,000	913,905,000	52,096,000	48,043,000	48,043,000	48,043,000	45,755,000
		1,325,000,000	1,325,000,000	662,500,000	662,500,000	662,500,000		
	2. Quick Response Fund							
	TOTAL	2,237,324,000	2,238,905,000	714,596,000	710,543,000	710,543,000	48,043,000	45,755,000

3.2 NDRRMP Translation

3.2.1 Thematic Area 1: Disaster Prevention and Mitigation

The Disaster Prevention and Mitigation pillar is Vice-Chaired by the Department of Science and Technology (DOST). Over the past 6 years, the DOST has spent more than 4B pesos for DRR-related programs. During the first quarter of 2016, the DOST launched a harmonized Research & Development (R & D) program which was designed to be followed by the entire country. It is divided into two parts: Poverty alleviation and Industry competitiveness; and Climate Change Adaptation and Disaster Risk Reduction (CCADRR). All programs in CCADRR have an R&D component.

The Nationwide Operational Assessment of Hazards (NOAH) was launched by the DOST in response to an executive call to put in place a responsive program for disaster prevention and mitigation. The focus was on Philippines' warning agencies to be able to provide a 6 hour lead-time warning to vulnerable communities against impending floods and to use advanced technology to enhance current geo-hazard vulnerability maps. NOAH's mission is to undertake disaster R&D, advance the use of cutting edge technologies and recommend innovative information services in government's disaster prevention and mitigation efforts. Presently, there are several component projects under the NOAH program, namely: Hydromet Sensors Development, DREAM-LIDAR 3D Mapping, Flood NET – Flood Information Network, Strategic Communication, Disaster Management using WebGIS, Enhancing Geohazard Mapping through LIDAR and High-resolution Imagery, Doppler System Development, Landslide Sensors Development, Storm Surge Inundation Mapping, and Weather Information Integration for System Enhancement (WISE). NOAH uses an open data format with Android and iOS applications developed internally at DOST.



DREAM Program: The program started as a proposal from the National Mapping and Resource Information Authority (NAMRIA) who wanted to do a topographical graphing of the entire country using IPSAR (satellite data). Ten (10) people were sent to the United Kingdom to study and when they got back, the Disaster Risk and Exposure Assessment for Mitigation (DREAM) Program was established. In a span of 2 years, these people finished all 18 major river systems for Light Detection and Ranging (LiDAR) mapping. They have also partnered with 14 SUCs with one university in-charge for each region. Currently, there are 400 people who are capable of doing flood modelling. Moreover, four rented planes have been going around and finishing up the work on the entire country by June 2017. Most of the provinces have already been mapped. The Advanced Science and Technology

Institute (ASTI) also created automatic rain gauges, automatic water level sensor, and automatic weather stations, etc. The weather stations are already in the process of being transferred to PAGASA.

Early Warning Systems: The deployment of Early Warning Systems with 1000 roll-out is already with PAGASA. Calibration is yet to be done as it needs to comply with the world meteorological organization standards.

For earthquake and landslide: PhilVocs has a project on detecting slow developing earthquakes/landslides and predicting how soon a landslide will happen. A technology drilled 40m deep with water sensor, movement sensor, and sends an SMS containing data directly to a cellphone is being developed. The other one is a micro-tremor measurement devices farmed out by PhilVocs in preparation for the Big One. The Philippine Nuclear Research Institute (PNRI) has worked on radon being an indicator for an earthquake.

Climate X: It predicts the amount of rain in a particular location in the country and is being updated every 15 minutes. Historical data is being used and modelling was done by the National Institute of Geological Sciences (NIGS). An accuracy test conducted by an independent body, IBM, resulted a 78 percent accuracy which is very high.

WISE: The WISE program or Weather Information -integration for System Enhancement does seasonal and decadal climate change modelling. According to DOST, the modelling available abroad is not suitable for tropical country like the Philippines. By tropicalizing the model, Filipino farmers can use it. The other one is a technology for predicting drought in able to advise the farmers. The Philippine Genome Center is now working with the Philippine Coconut Authority, PhilRice in developing new varieties that are climate change and drought resilient (E.g. For rice, sugar, coconut: from 8-10 years to come up with new breed it can now be done in 3-5 years).

Diwata: Diwata passes by the Philippines four times a day for 6 minutes/pass, with a total of 24 minutes each day. The ground receiving station is located at ASTI Quezon City. According to DOST, the group who is managing the DIWATA is also studying drought. A vegetative index to estimate yield is being generated. The ground validation was conducted by the SUC partners to help them adjust or correct the models.

Science Nation Tour: DOST claimed that the common misconception on Science and Technology is that it is difficult to understand. To address this, a former Secretary of DOST conducted a Science Nation Tour wherein he visited all regions in one year to teach the LGUs how to use and understand the maps. It is already planned to do this initiative again once the new administration settles down.

Technologies for Adaptation: A ceramic water filter for evacuation centers with no clean water supply was developed. Another one is the EcoSep; septic tank for evacuation centers with larger capacity (2-3x more) than the normal with no foul odor. DOST has deployed these in the Yolanda-affected areas in Palo, Leyte. Additionally, FNRI-DOST developed an emergency food pack; ready to eat food with a shelf life of one year (e.g. Aroz caldo, rice toppings, etc.) for disaster victims. If not used for disaster, it can also be used for feeding program. DOST said that they have also satisfied the pricing that DSWD required.

Information Dissemination: DOST developed a Reference for Emergency and Disaster (RED) Book, which serves as a handbook collection of information on various natural hazards, early warning signs, etc. It was published and distributed to Barangay Chairmen. As of now, DOST said that they are waiting for DILG to reproduce the hazard maps for storm surge, landslides, and floods that they have already completed.

One of the shortcomings during the Yolanda, as admitted by DOST, was the translation of information. People are not familiar with the terms (e.g. storm surge). The right warnings and data were given correctly but the action and understanding of the information given was lacking. To address this, DOST started to employ social scientists to be able to communicate things better with the people. For example, in telling people that the storm would be “torrential”, the social scientists advised to describe it as “Ondoy-like”.

Other efforts:

For Yolanda rehabilitation, DOST was also assigned by President Aquino to issue a memorandum on declaring which are safe and unsafe areas.

DOST also mentioned the proposal for the establishment of a National Space Agency which is the future for technology like Diwata, with a proposed budget of around 1B per year. More than 20 series of FGDs and roundtable discussions were already conducted. Based from those, everybody was amenable to having it. The only concern is that stakeholders prefer DOST to be the one to put it up instead of the military because of its human resource and capability. DOST has already started to develop the human resource; as they have been sending people to study abroad and will come back as employees of the newly established space agency. It was also added that they are getting sponsorship of a bill for the space agency.

The table below presents institutional initiatives categorized under the different outcomes indicated in the prevention and mitigation pillar of the NDRRMP.

Table 6. Institutional Initiatives and Accomplishments by Outcome for Thematic Area 1

Thematic Area 1: DISASTER PREVENTION AND MITIGATION		
Goal: Avoid hazards and mitigate their potential impacts by reducing vulnerabilities and exposure and enhancing capacities of communities		
Overall responsible agency: Department of Science and Technology (DOST)		
Outcome	Lead Agency	Agency Initiatives and Accomplishments ⁶
1.DRRM and CCA mainstreamed and integrated in national, sectoral, regional and local development policies, plans and budget	OCD	<p>DepEd: Integration and institutionalization of the comprehensive DRRM in Basic Education Framework and Brigada Eskwela; and in the agency’s 5-year strategic plan and its medium term plans for regional and division offices. Issued a Policy on Establishing Coordination and Information Management Protocols. Annual activity of collecting the school hazard data for understanding and determining policy actions. Mapped transected schools near the fault line in the NCR and implemented the disaster-resilient classroom design. Upgraded DRRMO to DRRMS and appointed DRRM plantilla positions for both central office and DepEd Field Offices.</p> <p>DILG: Mainstreamed DRR and CCA in 653 Provincial, City and Municipal Plans to include the Comprehensive Land Use Plan (CLUP) and Comprehensive Development Plan (CDP), policies, and/or ordinances. Allotted P76M for DRR-CCA activities (2015 budget). Institutionalized 1,391 provinces, cities, and municipalities’ (PCMs) local DRRM councils against its target of 1,592 PCMs and 1,557 PCMs’ local DRRM Offices against its target of 1,592 PCMs.</p>

⁶ Culled from the 2014 and 2015 NDRRMC Accomplishment Reports provided by the Office of Civil Defense-NDRRMS

		<p>DSWD: Allotted P19.2B for DRRM programs, projects and activities in the 2015 budget</p> <p>PCW: Philippine Council for Women (PCW) prepared the final version of the GAD checklist for Designing DRRM Projects</p> <p>PHILVOCS: Updating and upgrading the PHILVOCS-Rapid Earthquake Damage Assessment System (REDAS) software which is used in mainstreaming DRR into LGUs, government agencies and private institutions local development planning processes, emergency preparedness and contingency planning. Conducted 14 REDAS trainings (12 LGUs, OCD and the Ayala Group of Companies)</p> <p>HLURB: Provided technical advisory services for the LGUs Shelter Planning. Provided a total of 1,063 technical advisory services, of which 218 were orientation activities, 450 training workshops, and 395 writeshops in 2015.</p>
2. DRRM and CCA-sensitive environmental Management	DENR	<p>DENR: Implemented the National Greening Program (NGP) wherein a total of 313,580,000 seedlings were produced in 334,364 ha against its target of 300,000,000 seedlings and 300,000 ha, respectively. Intensified the forestry law enforcement works and campaign for anti-illegal logging under EO no. 23 series of 2011 with a decrease in the identified illegal logging hotspots to 23. Full swing implementation of the National Forest Protection Program protecting 6.839M ha of forest lands with forest cover and 3.717M ha of protected areas or national parks.</p> <p>HLURB: Mainstreamed CCA-DRR and enhanced the CLUP process using the Ridge-to-Reef/Integrated Watershed Ecosystems Management framework in the 2013-2014 CLUP Guidebook</p>
3. Increased resiliency of infrastructure systems	DPWH	<p>DPWH: Upgraded the National Building Code to include Green Technology and was approved on June 22, 2105. Thirty (30) national owned buildings were assessed and has completed the design of the one-story resilient school building and the two-story multi-purpose building. Updated inventory of infrastructure yearly and assessment of risk and vulnerability for critical infrastructure; 61 SUCs assessed for damages end of 2013. Implementing Structural Resiliency Program in new construction and in the reconstruction of calamity damages infrastructures. Recover road right of way of critical national roads and bridges and upgrade design to ensure flood-free at all times. Identify public facilities as safe Shelter Centers in disaster prone municipalities for resilient design and redundancy to also be used as emergency command center and evacuation facility. Upgraded engineering design standards for flood control, drainage and slope protection works.</p> <p>DepEd: Implemented the disaster resilient school building design, integrated DRRM in Brigada Eskwela and has a Memorandum of Understanding (MoU) with the Bureau of Fire Protection (BFP) to support schools in assessing electrical facilities.</p> <p>HLURB: Mainstreamed CCA-DRR in the new Integrated Model Zoning Ordinance (MZO) for cities and municipalities</p>
4. Enhanced and effective community-based	OCD	<p>DPWH: Conducted a training for vulnerability and risk assessors to ensure that there are enough experts to conduct vulnerability and risk assessment for critical infrastructures along the West Valley Fault. Uploaded all DRRM and CCA products from partner agencies</p>

<p>scientific DRRM and CCA assessment, mapping, analysis and monitoring</p>		<p>in the portal of Learning Resource Materials Development system as part of their commitment in information sharing targets of the NDRRMP</p> <p>DepEd: Institutionalized guidelines on the Annual Conduct of Student-led Risk Assessment and Hazard Mapping in schools, family preparedness and integration of Solid Waste Management questionnaire in the Enhanced Basic Education Information System (EBEIS) and Enhanced School Improvement Plan Manual. Completed 92% GIS mapping of DepEd schools.</p> <p>DILG: Conducted Disaster Preparedness Audit of the 1,591 LGUs nationwide excluding ARMM with special focus on the 422 LGUs that are in the major river basins. Conducted the Environmental Audit in 108 cities as components of the Seal of Good Local Governance (SGLG). Formulated an infrastructure guideline tools, forms, and checklist following the approval of the green building code. In 2105, 13 provinces, 15 cities, and 61 municipalities were trained in infrastructure audit. Enhanced the vulnerability and assessment tools of LGUs through capacity enhancement on Basic Geographic Information System (GIS)- 232 cities/municipalities; Advanced GIS- 1 province, 4 cities and 9 municipalities; formulation of LCCAP- 297 PCMs; Post Disaster Rehabilitation and recovery Management- 14 cities and municipalities; Preparation of CBDRRM Plan-3,873 barangays, Contingency Plan-3,529 barangays; Readiness Profile- 5,716 barangays; Organizing a CBDRRM Structure-4,262 barangays; and Policy on Safe, Unsafe Zones and Enactment of Appropriate Ordinance in the Eastern Seaboard LGUs.</p> <p>DSWD: Dissemination of press releases, articles and interviews on DSWD DRRM efforts. Development of retooling on Logistic Management for Disaster Operations for Proper Management of Warehouse to all DSWD Regional Offices.</p> <p>PHILVOCS: Upgraded its REDAS software. Developed two (2) tools for evaluations the safety and earthquake vulnerability of houses namely: 12-point questionnaire entitled “How safe is My House?” and the software to evaluate safety and earthquake vulnerability of houses. Conducted 14 batches of capacity enhancement activities for LGUs, agencies, and organizations on the use of the REDAS software. Disseminated the evaluation tool for safety and earthquake vulnerability during the seminar workshops conducted in Regions 1-8, 11, NCR, CARAGA, and CAR. Conducted orientation on landslide monitoring to 17 communities hosting landslide sensors. Completed the Valley Fault System Atlas consisting of 33 maps covering Metro Manila, Laguna, Cavite, Rizal and Bulacan and distributed 163 hard copies; 1,506 compact disc format; and has been accessed and downloaded 99,606 times form the PHILVOCS website.</p> <p>PAGASA: Developed as assessment of Climate Change Impacts and Mapping to vulnerability to Food Insecurity under Climate Change to Strengthen Household Food Security with Livelihood’s Adaptation Approaches (AMICAF); Climate-Smart Knowledge Database, forecasts products; Knowledge Sharing and the Provision of other related services to Increase Climate-Resilience of Tilapia Farmers;</p>
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		developed adaptive capacities of vulnerable communities and ecosystems for resiliency to threats, shocks, disasters and climate change; strengthened institutional capacities for the LGUs, concerned NGAs, academic institutions, and CSOs to manage disaster and climate changes risks; updated flood hazard and risk maps and development of a Hydraulic Model for the Marikina River Systems; automated the flood early warning system for Disaster Mitigation.
5. Communities access to effective and applicable disaster risk financing and insurance	DOF	<p>DOF: Adopted the Disaster Risk Financing and Insurance (DRFI) Strategy which provides comprehensive framework for the implementation of financial protection solutions against natural disasters at the national, local, and individual levels. It has commenced preparations for the implementation of two (2) DRFI Strategy to include the Local Disaster Resilience Insurance Fund (LDRIF) with 10 LGUs participating and the DRFI strategy mainstreaming in two line agencies.</p> <p>OCD-NDRRMC, DILG, DBM, and DOF: Drafted a Joint Memorandum Circular (JMC) for the establishment and institutionalization of DRFI solutions in LGUs and NGAs. Under the JMC, acquisition of DRFI solutions for disaster recovery, reconstruction, and rehabilitation is mandatory for all NGAs, provinces, cities, and 1st to 3rd class municipalities; for 4th to 6th class municipalities it is optional and subject to availability of funds.</p>
6. End-to-end monitoring (monitoring and response), forecasting and early warning systems are established and/or improved	DOST	<p>PAGASA: Developed, upgraded and institutionalized EWS information sharing and communication system between LGUs, communities and national government through capacity enhancement of the PRSD personnel. Prepared multi-hazard maps; established community based EWS particularly Severe Wind Impact and Exposure Database; upgraded and updated existing storm surge models, inundation maps of all coastal areas of the Philippines; and listed drought-vulnerable areas. Improved Flood forecasting and Warning System for Magat Dam, Davao, Buayon-Malungon, Tagoloan Rivers; and installed 500 hydro-meteorological devices and 500 warning stations with online user interface capability. Generated projection of future climate in 2010, 2050, and 2100; established Climate Field School as training and demonstration center for farmers and fishermen; and developed drought-vulnerability map and drought index.</p>

3.2.2 Thematic Area 2: Disaster Preparedness

The Disaster Preparedness pillar is Vice-Chaired by the Department of the Interior and Local Government (DILG). The NDRRMP, as described by the DILG, is a management plan that defines and outlines the responsibilities of each agencies. It is a useful guide for the institutional members of the second pillar. As the Vice-chair and lead agency for preparedness, the DILG crafted the National Disaster Preparedness Plan (NDPP) which served as a basis in translating the NDRRMP into an operational plan for disaster preparedness.

A manual called “LISTO” enumerates the things to do or progressive actions depending on the intensity of a typhoon or disaster and serves as basis for monitoring. For training and capacity building, an attached agency called the Local Government Academy (LGA) is in-charge. Currently, DILG is trying to

convince as many universities in the country to take disaster preparedness seriously and also, to ask them for assistance. Various intra and inter-departmental policy were also implemented by DILG. Figure 14 shows the timelines of these internal circulars and other strategic initiatives.

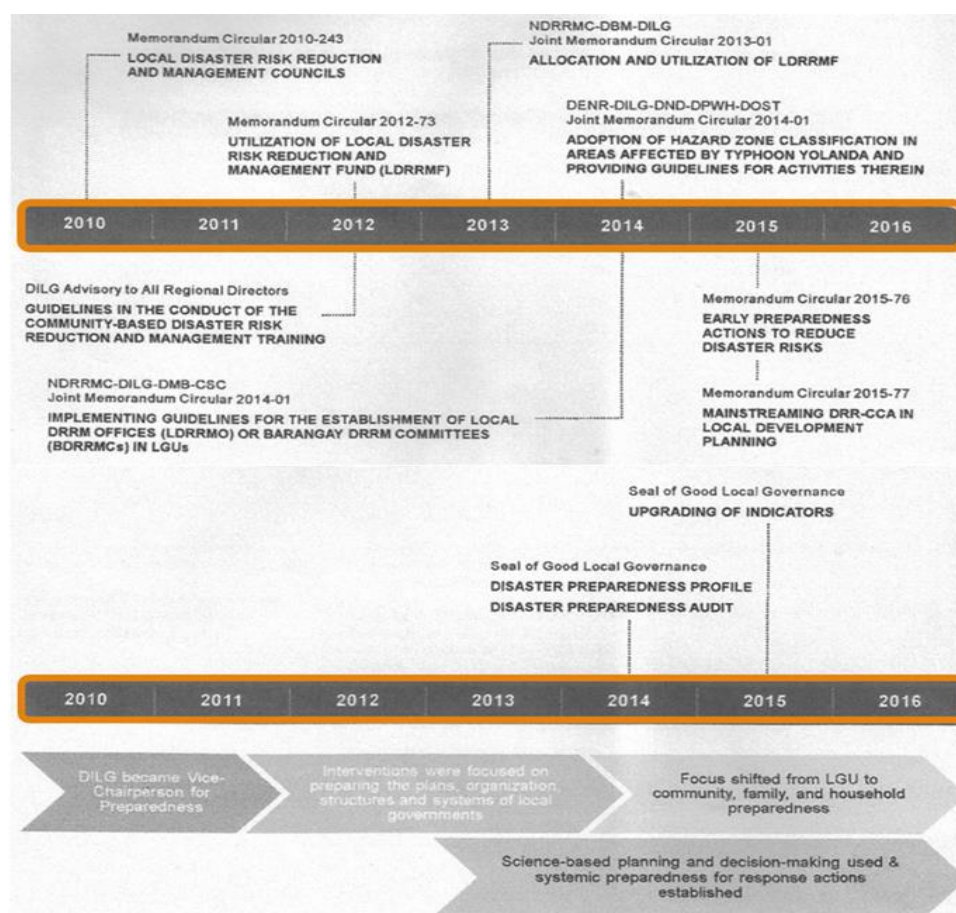


Figure 14. Timeline of DILG's strategic response (DILG 2016)

Aside from having the principal role in preparedness, DILG is also present during response phase through Bureau of Fire Protection (BFP) which is in-charge of the management of the dead.

One of the major issues for DRRM is the audit rules. DILG described the audit rules that we currently as too standardized; make no exception for crisis and emergency times. DILG once assembled the DRRMOs and auditors and COA received tons of complaints. It was suggested to have a separate window for disaster funding.

DILG claimed that LGUs had difficulty in complying with submissions and other activities because they lack human resource. The DRRM officers, by law, should be permanent and full-time appointees, but many are only designates (Municipal Agriculturist, Engineer, etc.) with other works and priorities. This further complicates capacity building within LGUs.

DILG mentioned that the "by-phase" release of the budget from DBM is an issue. In allocating funds, it was stressed that DBM has to understand that managing preparedness means dealing with a thousand plus cities, municipalities, and provinces. Moreover, the assistance extends up to the land use, development plan, and along the way, provision of capacity building and technical assistance.

DBM included the fund in the agency budgets. In doing so, the agencies are being subjected to their budget ceilings. Within that ceiling, agencies compete with the rest of their projects; and disaster is not their priority. DILG stressed that there should be a programmatic way of doing it and to look at it as a whole. Additionally, there should be a financing scheme for preparedness; not only Calamity Funds for recovery. According to DILG, given with only 1/16th (first phase) of what was initially requested would actually affect the whole program.

The salary of DRRMOs is charged on Personal Budget (PS) Budget which should not be the case. It is a rule that salaries should not exceed 45% of the total budget. Paying a Division Chief Level personnel (SG 24) may cause the municipalities to exceed the ceiling. LGUs wanted it to be exempted but there is no law that allows such and it is not acceptable to COA.

Shortage of budget is also a major problem for smaller towns. For a typical 4-6 class town with an IRA of 100M, Quick Response Fund (QRF) would only amount to PHP1.5M.

DILG added that the practical grounding of scientific information is not enough and there is a need to bridge science and behavior. Ensuring the utilization of the data and translation to behaviors on the ground can be enhanced by partnering with institutional stakeholders and community-based organizations. Dealing with around 1,400 towns is difficult because of the different societal behaviors and local government culture.

Moreover, DILG said that they only provide general supervision and do not have the control over the LGUs. There are several experiences when local chief executives do not believe or follow them. There should be no room for debate or non-compliance when talking about safety and people's lives.

The table below presents institutional initiatives categorized under the different outcomes indicated in the disaster preparedness pillar of the NDRRMP.

Table 7. Institutional Initiatives and Accomplishments by Outcome for Thematic Area 2

Thematic Area 2:		DISASTER PREPAREDNESS
Goal: Establish and strengthen capacities of communities to anticipate, cope and recover from the negative impacts of emergency occurrences and disasters		
Overall responsible agency: Department of Interior and Local Government (DILG)		
Outcome (NDRRMP)	Lead Agency(ies)	Agency Initiatives and Accomplishments ⁷
7. Increased level of awareness and enhanced capacity of the community to the threats and impacts of all hazards	PIA	<p>DILG: Developed the National Disaster Preparedness Plan (NDPP) with Operation Listo (Oplan Listo) as an integral component. Basic orientation on DRRM-CCA Laws. <i>Iba Na Ang Panahon</i> Education Campaign-Science for Safer Communities in 17 Regions with DOST and OCD. IEC Materials on <i>Pampamilyang Gabay sa Panahon Ng Kalamidad</i>. Knowledge Exchange Forum on DRR-CCA (126 LGU officials from 26 LGUs).</p> <p>DepEd: Development of “What Happens in Disaster!”- a children’s storybook regarding the lessons and stories of survivors of different kind of disasters which aims to increase students’ awareness to threats and impacts of disaster and the necessary ways on how to deal with the same.</p> <p>OCD: Crafted the Community-based Disaster Risk Reduction and Management Basic Instructor’s Guide (BIG) - a minimum standard guidebook in the conduct of the DRRM in communities and grassroots. CBDRRM is a priority training program under the NDRRM Education and Training Programme (NDRRMETP) and the Civil Defense Education and Training Programme (CDETP).</p> <p>PHILVOCS: Included “Volcano, Earthquake, and Tsunami Disaster Risk Reduction Program” as one of the strategic initiatives of the PHILVOCS Strategic Plan 2012-2016.</p>
8. Communities are equipped with necessary skills and capability to cope with the impacts of disasters	DILG (to coordinate) and OCD (to implement)	<p>DILG: Spearheaded the crafting of the Guidelines for the Management of the Dead and Missing (approved by NDRRMC on 13 May 2016). Conducted capacity development activities for disaster risk managers and key decision makers to ensure that DRRM is taken into consideration and mainstreamed in decision making processes.</p> <p>DepEd: Development of Training Manual on Psychosocial Intervention for Secondary Students and their conduct of Nationwide DRRM Conference which was participated by regional and division DRRM Focal Person. Integration of DRRM-CCA into the K-12 Curriculum which is envisioned to increase student’s awareness and engaging them to put forward ideas which can contribute for a more disaster prepared nation. Conducted a nationwide DRRM Orientation and</p>

		<p>Planning Workshop participated by regional and vision DRRM focal persons.</p> <p>DA: Conducted trainings on Damage and Loss Assessment. Increased awareness of farmers through DRRM and Climate proofing; Conducted Climate Field School, Training on Risk Reduction and Management.</p> <p>OCD: Conducted Community Based Disaster Risk Reduction Management (CBDRRM) Basic Instructor's Guide Training of Trainers.</p>
9. Increased DRRM and CCA capacity of Local DRRM Councils, Offices and Operation Centers at all levels	DILG	<p>DepEd: Institutionalized Guidelines on Coordination and Information Management Protocols. Appointed DRRM plantilla positions for their DepEd Field Offices and organized DRRM Teams in field offices and schools. Creation of DepEd DRRM Office through DepEd Order No. 50 s 2011.</p> <p>NGOs: Involvement as partners of the Education Clusters under the National Disaster Response Plan (NDRP)</p> <p>DILG: Reported that 1,404 PCMs already have DRRM Plan while 1,557 PCMs have established functional LDRRM Offices. Conduct of Infrastructure Audit workshops in 334 LGUs. Conducted training on GIS for Climate and Disaster and Vulnerability Reduction to 52 provinces, 43 cities, 433 municipalities and 376 barangays. Conducted training on Understanding the Multi-hazard Maps, their Usage and Application in Local Development Planning for LGUs. Conducted training on Flood/Swift Water First Responder.</p> <p>DSWD: Conducting assessment and validation of forty (40) provinces as regards the functionality of Local Social Welfare Development Offices (LSWDOs).</p> <p>PHIC: The Philippine Health Insurance Corporation (PHIC) approved and implemented the PhilHealth Disaster and Emergency Preparedness Management Plan (PEMP) and reconstituted their Corporal and Regional Disaster Coordinating Committees through Corporate Disaster Coordinating Committee (CDCC) resolution no. 09-001s.2015.</p> <p>NAPC: The National Anti-Poverty Commission-Victims of Disasters and Calamities (NAPC-VDC) developed their local DRRM Plan and assisted Fisher Folk Organizations of Palawan to formulate their own Barangay DRRM Plans.</p>

⁷ Culled from the 2014 and 2015 NDRRMC Accomplishment Reports provided by the Office of Civil Defense-NDRRMS

<p>10. Developed and implemented comprehensive national and local preparedness and response policies, plans, and systems</p>	<p>DILG and OCD</p>	<p>DSWD: Funded the Training of Trainers on Family Evacuation Preparedness and Camp Coordination and Camp Management. Held a weekly inventory of its stockpiles and standby funds in its 17 DSWD Regional Offices.</p> <p>DepEd: Reiterated its disaster preparedness measures to schools as stipulated in DepEd Order no. 83 s. 2011 through issuance of DepEd Memo on disaster preparedness. Improved their Rapid Assessment of Damages Report (RADaR) forms and mechanics to guarantee efficiency in reporting.</p> <p>DA: Activated the DA-Disaster Quick Response Center. Ensured communications and EWS are in place. Conducted situation assessment. Coordinated response operations and resources mobilization.</p> <p>AFP: Conducted HADR workshop to enhance/revise the AFP HADR CONPLAN “Pagyanig”. Conducted three (3) communication exercises with other concerned agencies during NDRRMC Nationwide Simultaneous Earthquake Drill. Drafted an Operational Guidelines for SRR Cluster. Conducted Tactical Exercise without Troops (TEWT) adopting the scenario of 7.2 magnitude earthquake with the West Valley Fault as generator.</p> <p>DPWH: Conducted Incident Command System (ICS) Training in 16 DPWH Regional and District DRR Teams. Conducted inventory of its vehicles and equipment in 16 DPWH Regional Offices.</p> <p>OCD: Spearheaded the crafting and approval of guidelines and NDRRMC Memorandum Circulars. Drafted guidelines for endorsement of the next Administration to include 1) Enhanced Guidelines on the Philippine International Humanitarian Assistance; 2) Policy on Donated Funds; 3) Draft Guidelines on the OCD-NFA Requisition and Issuance of Rice Assistance; 4) Draft Guidelines on the Incident Command System; and 5) Draft National Disaster Response Plan for Human-Induced Hazards.</p>
<p>11. Strengthened partnership and coordination among all key players and stakeholders</p>	<p>DILG</p>	<p>DSWD: Maintenance of its directory for external and internal partners and stakeholders.</p> <p>OCD: Engaged in various Memorandum of Agreements (MoA) and Memorandum of Understanding (MoU) with various stakeholders.</p> <p>DepEd: Updating of its education cluster partners database and its directory of all regional and division Key Officials and DRRM Focal Persons</p>

		<p>NAPC: Formulation of coordination mechanisms and guidelines for partnership arrangements in the contingency plan</p> <p>DILG: CSO-managed/co-managed DRRM trainings and projects, modules/guidebooks/manuals.</p>
Other Preparedness Accomplishments:		<p>OCD: Spearheaded the conduct of the Sunset Review of RA 10121 with the view of enhancing the law to cope up with the so-called “new normal”.</p> <p>DRRNetPhil and CDP: Conducted various roundtable discussions and summits with the end goal of coming up with a Position Paper vis-à-vis RA 1012. Organized “Tindog Tayo 2016: A Presidential Forum” to have a view on the respective presidential candidate’s platform on DRR-CCA.</p>

3.2.1 Thematic Area 3: Disaster Response

The Disaster Response pillar is Vice-Chaired by the Department of Social Welfare and Development (DSWD). The NDRRMP under RA10121 has guided the DSWD in augmenting its organizational structure for DRRM, establishing clearer internal processes, and interfacing more effectively with other institutions.

The Disaster Response Assistance and Management Bureau (DReAMB) of DSWD evolved from one of the Protective Management Bureau of the department. In 2012, DSWD Memorandum Circular (MC) No. 1 series of 2012 was issued and placed the disaster-related response portfolio to the Risk Reduction and Management Program, augmenting its tasks and scope in the process. In that same year, said issuance was amended through DSWD MC No. 25 series of 2012 to internally create the Disaster Risk Reduction and Response Operations Office (DRRROO), as a separate and distinct office handling the Warehouse Management and Donation Facilitation Division and the Disaster Risk Reduction and Management Division. The Disaster Response Operations Monitoring and Information Center (DROMIC) was placed under the supervision of Assistant Secretary of the Office of the Secretary and expanded the functions of disaster operations monitoring and reports. A re-clustering of internal structures at DSWD in 2015 led to the inception of DReAMB and the eventual merging of the DRRROO and DROMIC.

The NDRRMP also triggered the crafting of the National Disaster Response Plan (NDRP), which is beneficial in clarifying roles and responsibilities in times of disaster events. It determines when the national government can assume augmentative role in disaster operations or when it needs to take on an assumptive role as direct provider of support. RA10121 and the NDRRMP give the department authority over the other agencies during times of emergency response. With the guidance of the operational strategy of the NDRP, DSWD claimed that they can call all agencies immediately, put them on standby, call for deployment or ask the military to conduct preemptive rescue and response.

NDRP for Hydro-Met: For the DSWD-led Disaster Response pillar, the NDRP for hydro-meteorological hazards was already approved. But it has to be enhanced with the PDRA (pre-disaster risk assessment) to be able to look into the potential areas and populations to be affected, and assess requirements

for response and early recovery. The PDRA has yet to be formalized in a document covering its procedures, objectives, agency delegations, and standards.

NDRP for Earthquake and Tsunamis: The second plan for the response that DSWD wanted to finalize is the NDRP for earthquake and tsunamis. DSWD claimed that they are already on the final stage and only needs output from two remaining agencies (DepEd and DFA for International Humanitarian Assistance) before finalizing procedures, protocols guidelines on particular concerns.

NDRP for Consequence Management for Terroristic Related Activities: The third plan that DSWD crafted very recently and yet to be finalized is the NDRP for Consequence Management for Terroristic Related Activities. RA 10121 and Local Government Code refer to LGUs as the primary responder, but two councils in the government are managing terrorism concerns: the National Peace and Order Council looks into the Intel and operation; while a body created under the OP which involves the cabinet's security cluster manages safety and security. The NDRRMC through the Response pillar manages the response component. The DSWD, by default arrangement, manages consequences on the ground and still leads sans the security and safety side of operations. The response cluster operating through the LGUs as the counterpart of DSWD is also activated.

Sector-specific projects: In terms of translation, DSWD said that it was done by targeting specific vulnerable sectors. For women and children, women-friendly and child-friendly spaces are set up within the area of evacuation centers. The same effort is attempted with persons with disabilities (PWDs) and senior citizens. Problems persist as local government units have different capacities to provide such services, not only due to resource limitations, but also because of the lack of will, interest, and/or knowhow.

LISTAHANAN: Not all LGUs have profiles of their respective communities which look Looking into the most vulnerable sectors. Focusing on social vulnerabilities, the DSWD came up with LISTAHANAN, a national household targeting survey that contains a forecast on population, indicating the number of poor families, poor households, compositions; elderly, child, etc. Predictive analytics using this data help in estimating the preparation and distribution of relief goods or food packs.

SRR: In times of disaster, the Search, Rescue and Retrieval (SRR) is immediately activated by DSWD. Even though the management of the dead/missing should not be activated yet, DSWD put them on standby and already look for arrangements, locally available resources, etc.

IHA: The United Nations (UN) recommends the formation of 9 humanitarian clusters when managing disasters. The Philippines instituted 3 additional clusters: the International Humanitarian Assistance (IHA) cluster is managed by DFA, the Management of the Dead and the Missing is overseen by DILG-BFP, and the Law and Order cluster is managed by the PNP and the military. The IHA was created because of what happened during the aftermath of typhoons Sendong, Pablo, and Yolanda where hundreds of countries sent representatives and material assistance. The IHA is only activated when a prior assessment of damages and requirements points to the need for augmented coordination with LGUs, embassies and international donors. Coordination becomes problematic when dealing with hundreds of team deployments and large volumes of relief supplies.

The table below presents institutional initiatives categorized under the different outcomes indicated in the disaster response pillar of the NDRRMP.

Table 8. Institutional Initiatives and Accomplishments by Outcome for Thematic Area 3

Thematic Area 3:		DISASTER RESPONSE
Goal: Provide life preservation and meet the basic subsistence needs of affected population based on acceptable standards during or immediately after a disaster		
Overall responsible agency: Department of Social Welfare and Development (DSWD)		
Outcome	Lead Agency(ies)	Agency Initiatives and Accomplishments ⁸
12. Well-established disaster response Operations	DSWD	<p>OCD: Issued NDRRMC Memorandum Circular on Implementing Guidelines on the use of Incident Command System (ICS) as an on-scene Disaster Response and Management Mechanism under the PDRRMS. Developed and disseminated a total of 3,801 advisories and reports, monitored 22 disaster response, and produced about 14 Disaster Final Reports through the NDRRM Operations Center (NDRRMOC) and complemented by the efforts of DTI, DPWH, and PIA through issuance of advisories and warning to their stakeholders.</p> <p>DPWH: Conducted ICS training for 9 DPWH regional offices and 90 District Offices in 2012-2014. Issued Instruction to secure the school building and other public buildings before the onset of a typhoon. Provided 520 trucks and heavy equipment and 1,220 personnel for clearing operations and relief distribution after Ty Yolanda.</p> <p>DepEd: Issued weather advisories to DepEd field offices through Infoboard, text blast, SMS, emails, and facsimile.</p> <p>DSWD: Activated their field offices and warehouses/hubs which are able to provide relief assistance.</p> <p>AFP and PNP: Provision of transportation services to deliver the relief items to communities.</p> <p>PCG: Monitored a total of 2,002 incidents and conducted a total of 2,000 SAR operations from January 2012 to November 2014. Construction of SAR Base Roxas. Participated in the procurement of Disaster Response Equipment worth P521,664,500.</p>
13. Adequate and prompt assessment of needs and damages at all levels	DRRMCs, OCD, DSWD	<p>DSWD, DepEd, DSWD, and OCD: Deployed personnel for the conduct of Rapid Damage Assessment and Needs Analysis (RDANA) during various disaster operations which serves as the</p>

⁸ Culled from the 2014 and 2015 NDRRMC Accomplishment Reports provided by the Office of Civil Defense-NDRRMS

		basis for the provision of immediate needs of affected and helps the government agencies to strategize and prioritize the provision of relief items and deployment of assets.
14. Integrated and coordinated Search, Rescue and Retrieval (SRR) capacity	DND, DILG, DOH	DILG and OCD: Spearheaded the conduct or workshops for the formulation of the Rules and Regulations Governing the Implementation of the Management of the Dead and the Missing (MDM) NBI: NBI-Medico Legal Division formed four (4) Disaster Victim Identification (DVI) Teams to join the RDANA team to be deployed in the disaster area for pre-operational phase.
15. Safe and timely evacuation of affected Communities	LGUs	DSWD: Implemented guidelines/procedures in accordance to evacuation procedures. Monitored implementation of Memorandum Circular No. 6 s.2015 on the Guidelines in the Institutionalization of Women Friendly Space in camp Coordination and Camp Management. DepEd: Enhanced coordination with the LGUs and prepared schools for possible use as evacuation centers. DepEd, DSWD, DILG, DOH: Implemented a Joint Memorandum Circular No. 1 re Guidelines on Evacuation Center Coordination Management (ECCM) which cover all activities before, during, and after evacuation of families affected by natural and human-induced disaster.
16. Temporary shelter needs adequately Addressed	DSWD	DPWH: Provided a standard design for temporary shelters and also provided technical assistance in the conduct of a feasibility study and assessment of shelter sites identified by the LGUs. Constructed 273 bunkhouses in Region 8 after the onslaught of TY Yolanda. Set the Minimum Performance Standards and Specifications (MPSS) for one-story school building and multi-purpose building. DSWD: Established eight (8) Pilot Evacuation Centers cum Multipurpose Buildings in Regions I, II, III, IV-A, V, VI, VIII, and CARAGA with dedicated spaces for livestock, poultry, and pets near evacuation center.
17. Basic health services provided to affected population (whether inside or outside evacuation centers)	DOH	None
18. Psychosocial needs of directly and indirectly affected population addressed	DOH	DOH and DSWD: Ensured that psychosocial services has been provided to affected families especially those displaced in evacuation centers. DSWD conducted play and art activities for children in evacuation centers. DepEd: Mobilized external partners for the provision of psychosocial support.

19. Coordinated, integrated system for early recovery implemented	DSWD	<p>DSWD: Offered financial assistance and implements Cash-For-Work for affected families to help them find resources that will aid them in getting back to normalcy.</p> <p>DFA: Conducted International Humanitarian Assistance Cluster (IHAC) Meetings and started the workshop for the formulation of IHAC Guidelines to institutionalize the policies and protocols of the IHAC.</p> <p>PhilHealth: Extended Access to Health Care Benefits for Typhoon Victims and 3-month PhilHealth coverage under ILO's sustainable Livelihood Recovery Program</p> <p>OPAPP: Provided boats and nets as livelihood project for affected fisher folks</p> <p>DepEd: Conducted detailed damage assessment of schools by DepEd engineers. Endorsed consolidated RADARs to concerned offices for appropriate action. Immediate presumption of classes to track students. Mobilized donations through social media. Uploaded K-12 learning materials for easier access and reproduction. Pooling of volunteers for the provision of PPS.</p> <p>DPWH: Conducted clearing operations for all national roads immediately after a disaster. Deployment of DRRM members as part of the inter-agency PDNA Team for TY Sendong, Pablo, and Yolanda. Constructed 5 temporary bridges in Bohol damaged by the 7.2 earthquake in 2013.</p>
Other accomplishments:		<p>MMDA: Provided humanitarian assistance to Nepal when it was hit by a 7.8 magnitude earthquake. Conducted clearing and relief operations in Northern Luzon areas that was affected by Typhoon Ineng. Deployed a rescue and recovery team to areas in Northern Luzon which have been affected by Typhoon Lando. Conducted humanitarian and clearing operations in Calapan, Oriental Mindoro after Typhoon Nona hit the area.</p>

3.2.4 Thematic Area 4: Disaster Rehabilitation and Recovery

The National Economic and Development Authority (NEDA), as the Vice-Chair of the fourth pillar, is tasked to spearhead all national initiatives for disaster Rehabilitation and Recovery. Prior to this designation, NEDA was actually more involved in mitigation and mainstreaming DRR into planning processes. It was initially thought that they would be assigned as a member of the mitigation cluster given their institutional functions. The responsibilities as the Vice-Chair for rehabilitation and recovery were heavy on grounding and implementation, but NEDA was chosen to lead because of its planning and investment programming mandate.

When asked if NEDA is taking full responsibility of the vice-chairmanship for Rehabilitation and Recovery, it was said that basing on what they have done dealt more with the preparation for rehabilitation and recovery and not with actual implementation. Monitoring activities were increased because of Yolanda, but rehabilitation activities like the resettlement of the affected communities were with other agencies like the National Housing Authority (NHA).

NEDA said that there are things that are not specified in the National Disaster Risk Reduction and Management Plan (NDRRMP) that were undertaken because out of necessity. One of these was the crafting of the Reconstruction Assistance on Yolanda (RAY). A quick assessment of the damage and losses as well as immediate estimation of budget requirements were necessary for the passing of supplemental budget.

NEDA also worked on the Comprehensive Rehabilitation and Recovery Plan (CRRP), which endorsed projects for priority funding. NEDA does not endorse any project funding if it is not indicated on the CRRP. The plan was useful as it identified projects that will be given DBM funding. Those that were not in the CRRP can only be funded using excess funds.

In terms of translating the NDRRMP into doable projects and activities, other agencies have substantial initiatives which may not be consciously based on the plan. Many of the projects and activities fall within the respective mandates of the agencies, they would have been done regardless of the provisions in the NDRRMP. Some DRRM initiatives were also beyond those mentioned in the plan.

NEDA mentioned that they have been attending the activities for the sunset review of RA 10121. The outputs were submitted to OCD and there already is a revised draft but the final output is not finalized yet. Series of workshops and consultations in national and regional were already conducted but claims that there are still hanging issues. The outgoing Technical Management Group of the council already endorsed it to the current NDRRMC, particularly to the Chair. However, it still needs to be reviewed by the present council and the Congress for the amendment of the law.

NEDA only submitted reports to OCD for the years 2014 and 2015. There was no report for 2012 and 2013 because OCD only started to ask for accomplishment reports from agencies in 2014 as part of their initial activities in preparation for the sunset review. OCD was looking for the accomplishments of each agency based on the roles in the template of NDRRMP.

It was observed that in terms of content, there were some differences in rehabilitation and recovery efforts before and after RA 10121. Programs and projects have grown bigger and the head of the OCD regional offices (mostly retired Generals in the past) are now civilians and career servants. The DRM protocols have also changed since with the designation of called Vice-Chairs for the four thematic DRR pillars.

The table below presents institutional initiatives categorized under the different outcomes indicated in the disaster rehabilitation and recovery pillar of the NDRRMP.

Table 9. Institutional Initiatives and Accomplishments by Outcome for Thematic Area 4

Thematic Area 4:		DISASTER REHABILITATION AND RECOVERY
Goal: Restore and improve facilities, livelihood and living conditions and organizational capacities of affected communities and reduce disaster risks in accordance with the “build back better” principle		
Overall responsible agency: National Economic and Development Authority (NEDA)		
Outcome	Lead Agency(ies)	Agency Initiatives and Accomplishments ⁹
20. Damages, losses and needs assessed	OCD	<p>DND-OCD: Consolidated the Recovery and Rehabilitation Plans of the regions affected by TY Ruby and TY Lando. Developed guidelines for the facilitation of the Emergency Shelter Assistance for the TY Ruby affected families. Participation and conduct of Post-Disaster Needs Assessment (PDNA). Participated in the activities relative to the conduct of PDNA for TS Sendong (2011), TY Pablo (2012), Central Visayas Earthquake (Bohol 2013), Zamboanga Siege (2013), TY Yolanda (2013), and TD Agaton (2014).</p> <p>DepEd: Deployed their DRRM staffs and engineers to schools with reported major and totally damaged classrooms based on the Rapid Assessment of Damages Report (RADaR) for detailed assessment.</p> <p>DPWH: Joined in the conduct of PDNA for TY Yolanda</p> <p>NEDA: Led the preparation of Strategic Action Plans (SAPs) for areas affected by TY Juan (2010), TY Pedring/Quiel (2011), TS Sendong (2011), Southwest Monsoon/TY Haikui (2012), Central Visayas Earthquake (Negros Oriental, 2012), and TY Pablo (2012). Monitors the implementation of programs, projects, and activities (PPAs) under the regional RRP for Typhoons Ruby/Seniang, Ineng and Lando/Nona. Convenes the RDRRMC Committee on Rehabilitation and Recovery to discuss initial damage report as well as early recovery initiatives and conduct of workshops for the crafting of the rehabilitation and recovery program. NEDA is in the process of building a database on non-government support to the government’s rehabilitation program for Yolanda affected areas. Conducts coordination meetings with relevant agencies to discuss interventions and financial requirements to assist areas affected by El Nino. Participated in desk and field evaluation of National and Regional Gawad KALASAG finalists for the Provincial DRRM</p>

⁹ Culled from the 2014 and 2015 NDRRMC Accomplishment Reports provided by the Office of Civil Defense-NDRRMS

		Category and was part of the Philippine Delegation to the 3 rd WCDRR held in March 2015 in Sendai, Japan.
21. Economic activities restored, and if possible strengthened or expanded	Agency to be determined based on the affected sectors	<p>DTI: Provided trainings and livelihood starter kits to 4,397 beneficiaries through the Livelihood Seeding Programs (LSP). Provided trainings and shared service facilities to cooperators through the Shared Service Facility (SSF) Project. Provided loans to micro, small and medium entrepreneurs in regions 4, 5, 6, 7, 8, 13, and NCR. Established 106 Negosyo Centers and continues to operate nationwide.</p> <p>DOLE: Provided emergency employment to 18,357 beneficiaries who were affected by natural calamities in 2015. A total of 2,806 workers affected by natural calamities have their livelihood restored through the provision of livelihood projects amounting to P16.985M.</p> <p>OPAPP: Provided Boat and Nets Livelihood Project to those affected areas of Typhoon Yolanda.</p>
22. Houses rebuilt or repaired to be more resilient to hazard events; safer sites for housing	NHA	<p>NHA: Provided shelter units through Core/Modified Shelter Assistance (C/MSAP) program to 2,672 families affected by major cyclones. It also organized the beneficiaries into Neighborhood Association for Shelter Assistance (NASA). Provided Cash For Work (CFW) assistance to 906,294 persons engaged along disaster mitigation, preparedness, response and rehabilitation projects and activities amounting to P2.03B. Provided Emergency Shelter Assistance (ESA) for 1,015,737 typhoon Yolanda-affected families with damaged houses costing P18.78B.</p> <p>DPWH: Assisted the DILG in the determination of the feasibility and suitability of relocation sites. Upgraded the structural design standards for disaster resiliency for school buildings and other public infrastructures to withstand 250 kph wind velocity. Trained and engaged some of the male survivors of TY Yolanda to help in the construction of bunkhouses in Tacloban.</p>
23. Disaster and climate change-resilient infrastructure constructed/reconstructed	DPWH	<p>DPWH: Undertakes the necessary rehabilitation or repair of damaged infrastructure. Prepared the Minimum Performance Standards Specification (MPSS) for Public Buildings as guide in preparing design requirements for rehabilitation and reconstruction of damaged LGU infrastructures and facilities. Established the Project Monitoring System (PMS) for the monitoring of all infrastructure projects including</p>

		<p>rehabilitation projects for damaged infrastructure.</p> <p>DepEd: Implemented disaster-resilient school design from 2014 onwards. It also started building disaster-resilient classrooms starting the year 2015.</p>
24. A psychologically sound, safe and secure citizenry that is protected from the effects of disasters is able to restore to normal functioning after each disaster	DOH and DSWD	<p>DOH and DSWD: Provided Family Development Sessions and Psychosocial Support activities such as Play and Art Therapy for families and children affected by natural and human-induced disasters. Conducted Training of Trainers on Mental Health and Psychosocial Support during Emergencies for DSWD Central and Field Offices.</p>
Other accomplishments:		<p>NEDA: Spearheaded the formulation of Rehabilitation and Recovery Plans (RRPs) for areas affected by major disasters. Extended assistance in the formulation of the CRRP including the review of the LGU rehabilitation plans for their respective regions. Used the Regionalized Toddler Disaster Impact Simulator to estimate the impact of damages and losses to GDP and GRDPs from the major disasters which served as inputs in the GDP and GRDP growth forecasting. Conducts periodic monitoring of the status of rehabilitation programs/projects in their respective regions through the Regional Project Monitoring Committee (RMPC).</p> <p>NAPC: Constituted a new set of VDC Sectoral Council and set priority agenda for a 3-year term Jan 2015-Jan 2018 based on mandate of RA 8425 or the Social Reform and Poverty Alleviation Act and its IRR or AO 21 s.2011.</p> <p>PhilHealth: Institutionalized pre-disaster planning and preparedness, disaster response and recovery as well as to effectively coordinate efforts and resources in accordance with the objectives of RA 10121.</p> <p>DBM: Released calamity-related funds in support of directives from the President as provided under the provisions of the NDRRM Fund.</p>

4.0 Issues and Insights

Issues can be dissected and significant insights highlighted by looking deeper into institutional arrangements and applicable platforms; knowledge and science application; regional and local cooperation; human capital and capacity building; accounting and administrative processes; and monitoring and evaluation options.

Institutional Arrangements and Responsibilities

- Institutional assignments have to be revisited and regularly reviewed. The division of work or responsibilities within the four pillars, and the weak coordination among institutional stakeholders make it difficult to integrate and deliver optimal results.
- Local government compliance to the tenets of DRRM is critical. The DILG only has general supervision over LGUs as they have relinquished control with the passing of the Local Government Code in 1991. However, RA 10121, given an opinion from DOJ, can be used to elicit compliance as local officials can be removed the office due to gross negligence. Although local autonomy has to be respected, there must be no room for non-compliance especially in the face of impending disasters.
- The NDRRMP is very comprehensive and covers issues related to climate change, yet it is seen in a totally different light compared to the Climate Change Action Plan. Documents and actions should complement each other. Founded on two separate legislations, the laws' institutional dimension has to be examined as the NDRRMP focused more on operations while the CCAP focused on the framework for climate change. This institutional divide has to be addressed especially since both legislations have community welfare and resiliency as core.
- Among the DRRM pillar vice chairs, DOST stands out as a key player in both DRRM and climate change initiatives. This may be because the line between climate change interventions and DRRM when it comes to prevention and mitigation, and adaptation and preparedness are indistinct in many ways. Mitigation and adaptation initiatives in CC initiatives can be considered as mitigation, prevention, and preparedness activities in DRRM. This also explains why the DOST's spectrum of activities transcend both arenas of CC and DRR.
- DOST recommended taking advantage of counterparts and partners at the regional and local levels to strengthen networks and institutional presence. Frontline institutions, including local governments, and their personnel should be able to function proficiently and with minimal supervision, consistent with the spirit of local autonomy espoused under the local government code. Accountability and ownership of action should be the norm, and limitation in resources should not be a deterrent to preparedness and good performance.
- DSWD mentioned that translation of the provision and requirements of the law is very crucial at the local level. One of the problems mentioned was the lack of DRR workers stationed in some municipalities. Many LGUs had difficulty in complying with the manpower provisions under RA10121 as attested to by DILG. It is difficult to ground initiatives locally when the DRRM officers who are supposedly permanent-full time staff, are not there yet or occupied with other responsibilities. There are full time PDRRMOs, but problems persist with the MDRRMOs particularly for the class 4-6 municipalities/towns. Many MDRRMOs are only designates, as they also functioned as Municipal Agriculturists, Municipal Engineers, and or some other local officer.

Human Capital and Capacity Building

- The lack of permanent personnel makes capacity building within LGUs more difficult. Building up capacity among local workers will progress slowly if task assignments are arbitrary. Lack of or inadequate number of dedicated personnel at the local level also compromises the government's drive to raise awareness among people about the risks and vulnerabilities that they are confronted with. It would be good to have approved plantilla items for DRRMOs as provided for by law, but the smaller LGUs are expectedly at the mercy of fiscal issues. One concern is the possibility that Personnel Services cap could be exceeded (as salaries might exceed 45% of the total budget particularly if an officer at Division Chief Level, SG 24, will be hired). Such an excess, without exception, will not pass COA audit.
- Investment on human capital is key. In terms of institutional succession as DOST, a science organization with specialized requirements, said that their human resources had increased four times over the last six years because of the continued support from the government. They have increased scholar intake from 1,250 in 2009 up to 5,990 in 2015. A Career Incentive Program was also made available to personnel for their personal and professional benefit. In the end, highly competent and marketable professionals will stay in relatively lower paying positions because of care, institutional loyalty and love of country. Well directed investments on people/ human capital would lead to far greater returns.
- DOST suggested the need for a venue to share knowledge and experiences, not just locally but also with other APEC economies, regional neighbors and the UN countries. It was mentioned that APEC countries have commended the relative success of the country's DRRM initiatives during international conferences. DOST, for example have received multiple international awards for their work: NOAH has 14 awards, 9 of which are international. Other countries also have strong initiatives and relevant experiences they can impart. There must be a venue for productive discourse where expertise and experiences, and even resources can be shared. This is important in promoting institutional cooperation and capacity augmentation.
- There is the Local Government Academy, which is in-charge of training on governance and DRR. The Philippine Public Safety College has also launched a masteral course on crisis and disaster risk management for government officers. The DILG has also been trying to partner with as many universities as possible for technical augmentation.
- OCD and other institutional partners have been sending people abroad to attend trainings in both local and international venues (on disaster management, forecasting, search rescue and retrieval, etc.), but there were little attempts to impart learnings to other agencies (particularly on technical matters). DSWD suggested that OCD should prioritize attending trainings on coordination, leadership, partnership, or the type that would bring stakeholders together. Others requiring technical expertise should target trainings with added value. There must be a culture of sharing among DRR institutions in order to promote mutual progression.

DRRM Fund and Audit Rules

- A separate window for managing and auditing disaster funding is necessary. Audit rules, as described by a pillar lead, are currently too standardized, allowing only limited maneuvering

during times of crisis and emergency. COA received a lot of comments and complaints when DILG once assembled a meeting between the DRRMOs and auditors. A similar but bigger venue for interface and discourse may help clear issues and come up with appropriate solutions.

- Procurement processes as they relate to DRRM should be very clear and explicit. NEDA identified procurement as a major issue in DRRM. Problems in the customs also arise when the donations are already around but not allowed to enter. Although steps in the procurement process in times of disaster are provided for, the COA still often finds fault during post-audits. This means that either the processes are too difficult to comply with, or they do not have a good fit with the requirements of DRRM.
- A pre-procurement system may allow for faster disaster response and rehabilitation work. An example is how Japan franchised its stretches of highways with contractors working on specific sections. The rigorous procurement process in the Philippines may lend to more fund control at the detriment of expediency.
- Fund realignment is difficult in smaller towns, particularly for the typical 4-6 class towns. An IRA of 100M only translates to PHP5M of local DRRM funding, PHP1.5M of which is the QRF. The amount is insufficient if an LGU has to deal with 5 to 18 typhoons a year (like in Quezon and Bicol). Adopting a protocol called pre-emptive evacuation costs a lot in terms of mobilization and upkeep of evacuees.
- Processes should be designed to facilitate fund access. The DILG intimated that the Peoples Survival Fund is not fully being used. That's 2B lying somewhere as the processing at the CCC is really rigorous (given also that the chair is the President). There was no clear guidelines for a year, but now that the guidelines are in place, they are too difficult to comply with.
- The crafted institutional operational plans are the basis for asking budget from DBM, but there should be a more programmatic way of doing this. Putting funds in the agency budgets subject them to their budget ceilings. All agencies have budget ceilings, within which DRR competes with the rest of the projects of the departments.
- Resource-wise, DSWD has had no problems during the past five years. They have an annual allocation in the GAA in 2016 amounting to 1.3B and they could request the DBM anytime to augment new releases. DSWD mentioned that the issue lies within the member agencies supporting the response pillar that do not have regular funds to support DRRM. The DOTC and DFA have experienced this in the past (DOTC has since received QRF appropriation). The same issue exists within the other thematic pillars. Only a handful of Departments are provided with QRFs and specific DRR funding, yet proactivity and resiliency expectations are high for each one of them.
- There are alarming reports that the calamity fund under the 2017 general appropriations act is being cut in favor of other projects within government. The country's recent history suggests that this may not be a wise decision. The DSWD stated that a potential problem may arise in 2017 when the proposed budgetary releases for QRF will be again centralized with the DBM. This would add a bureaucratic layer as funds will not be automatically released to QRF beneficiaries. The intention to control budget releases to different agencies on a needs-based arrangement may potentially defeat the purpose of having a quick response fund.

Grounding Science

- Except for the Typhoon Yolanda and Pablo incidents, the number of casualties over the years have been declining. DILG claimed that this is true as far as rain and flood events are concerned. Landslides are more difficult to handle as our warning system for it is not yet perfected. Although the methodology of MGB is improving to the extent that they are talking to PAG-ASA. PAG-ASA measures the volume of rain and saturation, etc. Certain places in the country are susceptible to landslide due to continuous rain. MGB now transmits that into a warning system that we try to pass to the ground; which is laborious.
- Data and scientific knowhow have to be processed and translated to appropriate behaviors on the ground. The practical grounding of scientific information in the country needs to be enhanced. Consciousness/awareness among people can be promoted through appropriate communication and by working with NGOs and other community-based interest groups.

Monitoring and Evaluation

- A thematic pillar vice-chair believes that the OCD as the secretariat of NDRRMC have been doing their job on monitoring and coordinating. However, the three other pillar leads intimated weaknesses on this aspect. Regardless of the conflicting views, the fact there were dissensions necessitate a serious look into the matter. Institutional stakeholders must be assured of central and pillar leadership support for them to also commit to various DRR initiatives.
- RA10121 relegates the task of monitoring and evaluation, as well as coordinative functions to the NDRRMC secretariat. However, some institutions are simply in a better strategic and resource position to assume certain responsibilities. An example is an issue between the DILG and OCD about who should be reviewing and recommending appropriate plans for local governments when it comes to hazards. OCD has the mandate under the law, but such requires lot of work and resources which DILG has manifest capacity. The same realities exist with other DRR partners.
- Tapping local partners, particularly the universities, may be a good option in augmenting capacity for monitoring and evaluation.

Institutional Platform

- DILG commented that the Philippines, as one of those highly vulnerable countries in the world, cannot continue to have a focal disaster agency that only has coordinative functions. DRRM-related tasks and responsibilities are effectively passed on to the different departments which are occupied with different primary mandates. It may be time to look at other institutional arrangements for dealing more committedly with DRRM as it perennially suffers from competition with other departmental missions.
- DSWD recommended to have a unified disaster management agency which will be responsible for all phases of DRR, not only in terms of coordination but also in ensuring that everything is grounded/implemented. Indonesia is a good example on having separate authority on disaster management. They established a commission for the recovery; accountable and responsible for the recovery. It was given support, authority, and clear mandates.

- Institutional transition to a new administration is always a critical concern. The OCD has had four Administrators over the past 4 years (Gen Ramos to Gen Del Rosario to Adm Pama and now, Gen Jalad). Before plantilla positions were approved, staffing issues also hounded the Office with many of its staff appointed as contractuales and project personnel. Such are causes for concern since the OCD plays a critical role as the secretariat and executive arm of NDRRMC. Whoever sits at its helm would benefit from a sense of operational continuity and institutional history.
- It was opined that sans OCD's coordinative role in identifying DRR programs projects and activities, the institutional initiatives under the four thematic pillars proceeded with relative independence from the NDRRMP. But it was apparent that disaster risk management as espoused, had influenced development processes and institutional initiatives within five years from the NDRRMP's launching. Questions on institutional authority, facilitative arrangements, and applicable platforms need to be answered.
- NEDA observed that the NDRRMP has not received the same treatment as the Philippine Development Plan (PDP) where translation to projects and programs can be funded and implemented. It suggested to look at how the NDRRMP related to the overall thematic areas of the DRRM framework: what was realistic about it, what innovations were done that are not in the plan, and how the NDRRMC operated with the institutional stakeholders. Given its supposed central function, the NDRRMP should be contextualized within the broader perspective of DRRM.

5.0 Conclusion and Recommendations

The NDRRMP supposedly outlined the way toward mainstreaming of DRRM and CCA in policy formulation, development planning, budgeting and governance with its 4 priority pillars detailed in 14 objectives, 24 outcomes, 56 outputs, and 93 activities.

Notwithstanding evident weaknesses in grounding and institutional translation, policy support and departmental creativity exhibited by the thematic leaders attested to the competence of local executive servants.

It was apparent that disaster risk management as espoused, had influenced development processes and institutional initiatives within five years from the NDRRMP's launching. However, the NDRRMP's guiding role in directing institutional DRRM initiatives becomes questionable without manifest leadership from NDRRMC and OCD at the top, and the thematic pillar leads from the wings. Sans the NDRRMC's and its secretariat's (OCD's) coordinative role, the institutional initiatives under the four thematic pillars proceeded with independence from the NDRRMP (albeit a noteworthy fit between the plan and existing initiatives). The DRRM leadership must actively promote institutional consciousness on the tenets and advocacies embodied within the NDRRMP rather than just rely on institutional convenience for agency-initiated deliverables.

Ultimately, ensuring the realization of the full potential of RA10121 or the national Disaster Risk Reduction and Management Act requires appropriate sectoral and institutional translation of the NDRRMP; reflecting more refined institutional arrangements, policy support, and feedback mechanisms. Enumerated below are key recommendations from the study:

On DRRM Funding

- RA 10121, particularly the NDRRMP, is substantive; resources for its grounding were

relatively apt compared to where it took off, but a more equitable distribution of DRRM resources should be looked into. Giving priority to the poorest LGUs should be examined as the current LDRRMF is too skewed against poor LGUs

- Financing schemes for preparedness and mitigation should be explored. Current financing options are only for recovery, risk transfer and risk sharing
- The same climate change expense tagging arrangement between CCC and DBM can be made between NDRRMC/OCD and DBM for DRRM-related spending. In a similar light, DRRM may be able to take advantage of available climate change funding, and vice versa, as both funds are driven by the same core values.

On Institutional issues

- Institutional leadership and initiative are key not only for the current level of accomplishment, but also for future successes in DRRM.
- Although the current institutional arrangements are convenient and workable, the NDRRMC through its secretariat and implementing arm OCD has to assume its leadership mandate as expressed in the law. Questions have to be addressed as to whether the OCD can function as high level institution that can lead, coordinate and monitor the implementation of RA10121 and the NDRRMP, or would there be a need for the creation of a new institutional platform.
- Institutional assignments and arrangements should be reviewed, anchoring on current and future DRRM demands, as well as realities in the bureaucratic framework. Institutional strengths should find their respective niches the scheme of things. One such example is NEDA's pronouncement that its greatest strength lies in programmatic mitigation, and not in ground-level rehabilitation and reconstruction (this was referred to by NEDA and seconded by the other pillar vice-chairs). The greatest returns would come from the greatest institutional fit—everything considered, a more action-based institution like DILG and DPWH may be more appropriate for the role.

On policy support

- The full potential of RA10121 can only be realized through its practical translation: the NDRRMP and its local and sectoral grounding
- Policy support within the pillar leads is a testament to the creativity and competence of local executive servants
- There should be a separate window and set of audit rules for disaster funding. Policy inconsistency has to be weeded out as proactivity takes precedence over administrative control.

On monitoring and evaluation

- The implementation of any monitoring and evaluation mechanism should be true to the checklist of NDRRMP activities and outputs.
- Strict reporting of DRRM resources, including the status of calamity funds, QRFs and institutional funding have to be instituted to facilitate action, planning and possible resource

augmentation.

- The mandated sunset review of RA10121 must look into the translation and grounding of the NDRRMP as well as the institutional mechanisms for its delivery.
- The DRRM leadership must convene more often and capitalize on the mainstreaming opportunities afforded by LDRRMCs. This also covers the regional meetings chaired by the OCD where DRR plans are presented and approved.
- The same climate change expense tagging arrangement between CCC and DBM can be made for DRRM-related spending between NDRRMC/OCD and DBM.

On Strengthening DRRM

- A whole-of-society approach and bottom-up participation should be ensured in the execution and delivery of RA10121 and its NDRMMP.
- DRRM stakeholder institutions must be made more aware of the details of RA10121 and the NDRRM Plan, together with the avenues for funding, complementation and collaborative work.
- Local counterparts should be strengthened and capacitated as they play the most crucial role in times of disaster.
- DRRM science and behavior should be bridged, ensuring the utilization of applicable information and technology interventions.
- NDRRM institutional stakeholders should ensure seamless graduation especially during political transitions. This is true for OCD which has had 4 administrators in the past 4 years, as well as the institutional members of the NDRRMC. The same applies to local governments where apolitical appointments of permanent DRRM officers is necessary.
- A unified vulnerability map should be developed; not only covering the physical features but also the social aspect of vulnerability/ disaster risk.
- The lack of human resource for DRRM should be addressed. There should be a permanent and full-time DRRM staff as provided for by RA10121 particularly in the provincial and municipal DRRM offices.
- Tap universities and partner with private institutions in capacity building and implementation of other DRRM initiatives
- Promote Area of Business Continuity Plans (ABCP) for resiliency

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