

Villacin, Deanna T.

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A review of Philippine government disaster financing for recovery and reconstruction

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Philippine Institute for Development Studies
Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas

A Review of Philippine Government Disaster Financing for Recovery and Reconstruction

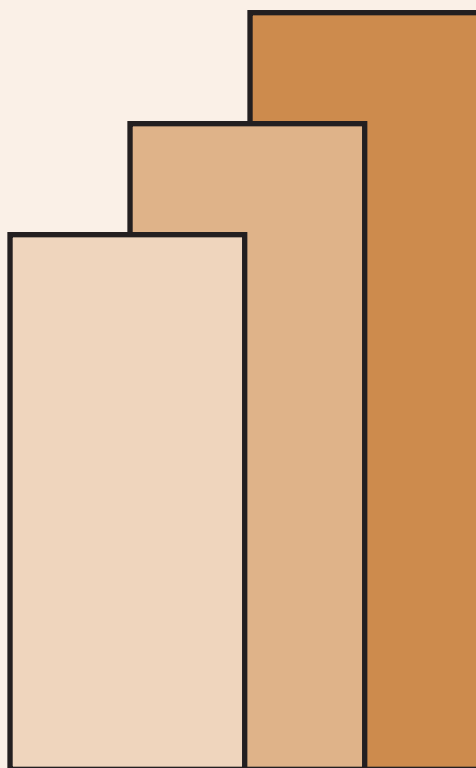
Deanna T. Villacin

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For comments, suggestions or further inquiries please contact:

The **Research Information Department**, Philippine Institute for Development Studies

18th Floor, Three Cyberpod Centris – North Tower, EDSA corner Quezon Avenue, 1100 Quezon City, Philippines

Tel Nos: (63-2) 3721291 and 3721292; E-mail: publications@mail.pids.gov.ph

Or visit our website at <http://www.pids.gov.ph>

A Review of Philippine Government Disaster Financing for Recovery and Reconstruction

Deanna T. Villacin¹

Abstract

The study provides an assessment of the disaster risk financing mechanisms in the Philippines. It looks at the sources and levels of disaster financing specifically for recovery and reconstruction. It also looks at the adequacy and execution of the current disaster risk finance and insurance mechanisms. Case studies are presented showcasing detailed analysis at the sectoral level. The study notes that the government has been mainly relying on budget allocations to fund recovery and reconstruction. The uncertainties in terms of annual budget allocations and the protracted funds flow processes slow down reconstruction/rebuilding thus adversely affecting economic recovery of affected areas. To mitigate the impact of disaster, the government has to improve its overall disaster risk financing and insurance (DRFI) program. DRFI has to be anchored on an adequate, effective (in terms of implementation or execution) and efficient (i.e., cost-efficient and timely) strategy. It requires government to combine the use of various financing and insurance instruments that takes into account risk profile, fiscal position, and market conditions.

Keywords: disaster financing, disaster risk finance and insurance; disaster recovery and reconstruction

¹ Consultant, PIDS. The author acknowledges the contribution of Dr. Marife Ballesteros, PIDS Vice-President in the conceptualization of the research topic and comments on the final draft. The author is also grateful to Ms. Tatum Ramos for excellent research assistance.

List of Acronyms

APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
BEFF	Basic Education Facilities Fund
COA	Commission on Audit
CRRP	Comprehensive Rehabilitation and Recovery Plan
DA	Department of Agriculture
DBM	Department of Budget and Management
DepEd	Department of Education
DILG	Department of the Interior and Local Government
DND	Department of National Defense
DOF	Department of Finance
DOH	Department of Health
DPWH	Department of Public Works and Highways
DRFI	Disaster Risk Financing and Insurance
DRR	Disaster Risk Reduction
DSWD	Department of Social Welfare and Development
ESA	Emergency Shelter Assistance
FONDEN	Fondo de Desastres Naturales
GAA	General Appropriations Act
GFDRR	Global Facility for Disaster Reduction and Recovery
GOCCs	Government-Owned and Controlled Corporations
GoM	Government of Mexico
GoP	Government of the Philippines
GSIS	Government Service Insurance System
JICA	Japan International Cooperation Agency
JMC	Joint Memorandum Circular
LDRRMF	Local Disaster Risk Reduction and Management Fund
LGUs	Local Government Units
NCF	National Calamity Fund
NDRRM	National Disaster Risk Reduction and Management
NDRRMC	National Disaster Risk Reduction and Management Council
NEA	National Electrification Administration
NEDA	National Economic Development Authority
NGAs	National Government Agencies
NIA	National Irrigation Administration
OCD	Office of Civil Defense
OPARR	Office of the Presidential Assistant for Rehabilitation and Recovery
PDNA	Post-Disaster Needs Assessment
PPP	Public-Private Partnerships
QRF	Quick Response Fund
R.A.	Republic Act
V20	Vulnerable Twenty

I. Introduction

The Philippines is one of the most disaster-prone countries in the world and the negative social, economic and financial impacts of disasters have been enormous. One of the major storms in recent years, Typhoon Haiyan (2013), affected 16 million people in 14 provinces with 6,293 lives lost². Government initial estimates of damages and losses was at Php571.1 billion with the private sector bearing around 80 percent of this³. However, it is possible that the Philippines can experience worst disasters than Typhoon Yolanda. For instance, if the track of Typhoon Haiyan traversed Metro Manila instead, damages and losses would have been 2.5 times greater⁴.

Catastrophe risk modeling shows that the country faces annual average losses due to earthquake of Php43.5 billion and Php133.2 billion from tropical cyclone⁵. For combined perils (i.e. earthquake and tropical cyclone), annual average loss is estimated at Php176.6 billion⁶. Given the random nature of the severity and frequency of natural disasters, it is inefficient for the Government (GoP) to budget for a large amount each year to cover itself against disasters as the funds can be alternatively used for other purposes such as infrastructure development or social programs. Based on corporate risk management principles, to efficiently manage its disaster risk financing and insurance (DRFI) needs, it will have to adhere to an underlying DRFI strategy that combines the use of various ex ante and ex post instruments or mechanisms that maximizes cost-efficiency⁷. A crucial and initial element to the design and implementation of the DRFI strategy is a knowledge of the potential financial losses due to catastrophe risks. The GoP will likewise need to enable an environment that can effectively introduce and implement this DRFI strategy.

The ultimate objective of efficiency in DRFI management is to improve financial resilience of the country against natural disasters by minimizing its contingent liabilities. The development objectives are to protect the economic gains of the country and ensure minimal impact especially

² World Bank Global Facility for Disaster Reduction and Recovery (GFDRR). *Typhoon Yolanda Ongoing Recovery: Recovery Framework Case Study*, May 2015 (available from www.gfdrr.org).

³ National Economic Development Authority (NEDA). *Reconstruction Assistance on Yolanda (RAY)*, 2013 (available from www.neda.gov.ph).

⁴ Based on the Philippines Catastrophe Risk Model developed by AIR Worldwide for the Government of the Philippines (GoP) with technical assistance from the World Bank.

⁵ Ibid.

⁶ Ibid.

⁷ World Bank-GFDRR. See *Advancing Disaster Risk Financing and Insurance in ASEAN Member States: Framework and Options for Implementation*, April 2012 (available from www.gfdrr.org)

on the poor and marginalized. The GoP has recently formulated a national DRFI strategy identifying interventions in three levels: national, local and individual. Examples of the various interventions include putting in place DRFI strategies for certain sectors, establishing a catastrophe risk insurance facility for local governments and one for private homeowners and SMEs. Capacity-building to improve DRFI management is also prioritized such as improving risk analytics capability at the government oversight level and DRFI management at the local levels.

The study provides an overview and analysis of the current DRFI environment of the GoP. It looks at the sources and levels of disaster financing analyze the adequacy and efficiency of the current DRFI instruments or mechanisms specifically for recovery and reconstruction. In addition, development of case studies to provide in-depth analysis at the sectoral level is undertaken.

II. Principles of Sovereign Disaster Risk Financing and Insurance

This section provides an overview of the current sovereign DRFI environment versus the ideal situation wherein DRFI management is rooted on key guiding principles and frameworks.

What is sovereign DRFI?

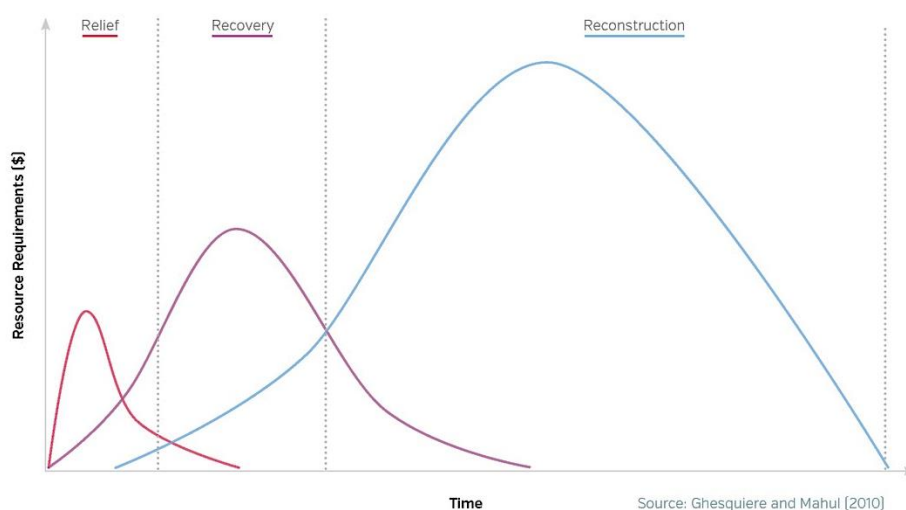
In the light of increasing exposure to large-scale natural disasters, the main objective of sovereign DRFI management is to help mitigate its negative social, economic and fiscal effects by (a) improving financial resilience and (b) minimizing contingent liabilities of governments. At a basic level, this is achieved by increasing financial capacity of governments to meet post-disaster funding requirements using various cost-effective DRFI instruments or mechanisms. However, of critical importance is also an enabling environment wherein these instruments or mechanisms can function efficiently.

The literature on sovereign DRFI management has evolved to put forward certain guiding principles that can provide the underlying basis for governments in crafting their DRFI strategies (eg., see GFDRR (2012), GFDRR-World Bank-Swiss Confederation (2014), GFDRR-World Bank-The Rockefeller Foundation (2016)).

First, the timelines of the post-disaster phases, i.e., relief, recovery and reconstruction, are varied, as highlighted in Ghesquiere and Mahul (2010). For instance, the relief phase is usually within days or weeks after a disaster. In contrast, the recovery phase of a disaster is usually within weeks or months after a disaster while the reconstruction phase starts to take place several months after a disaster. For DRFI management, this will imply that financial resources to meet requirements for

the various phases will not be needed at the same time. For the relief phase, funding for rescue, debris removal, food, temporary shelter needs, etc. will not be the largest component of post-disaster needs but it will be needed immediately. For the recovery phase, activities such as providing livelihood opportunities to affected populations, temporary solutions to water, sanitation and food, etc. will need to be funded. These activities will mean greater expenses relative to activities in the relief phase but the funding will not be required until several weeks or months have lapsed. Lastly, for reconstruction efforts, greater resources or investments are needed as well as more detailed planning, however, mobilization of these funding needs will not be needed until a few months after a disaster. The difference in timelines for the various disaster phases will mean seeking to use different DRFI instruments or mechanisms that are compatible with the financing requirements of each phase which provide cost-efficient solutions. (See Figure 1)

Figure 1. Timeframes of post-disaster resource requirements



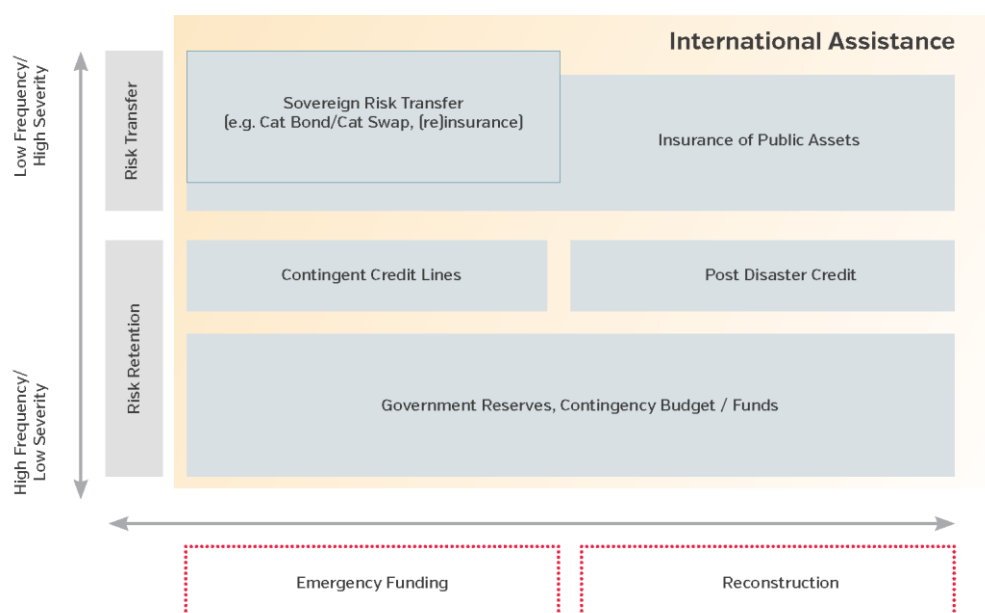
Second, various DRFI instruments or mechanisms are available which can provide funds but the use of each bear different trade-offs. Ghesquiere and Mahul (2010) highlights the various trade-offs that need to be considered: (a) the cost of capital, (b) the rate of disbursement and (c) the amount of funds that each instrument or mechanism can provide. For instance, foreign aid may be cheap capital but disbursement of these funds to the government can take several months. In addition, a government cannot always rely on foreign aid as the amount of donations is uncertain considering evidence of donor fatigue, etc. A major source of post-disaster funds are the reserves or savings of government. Likewise, these funds are cheap capital and disbursement rates can be

very quick as the government has these funds already available, however, the amount of money these can bring are usually quite limited. The use of risk transfer instruments or insurance may be relatively costly but depending on the type of insurance, disbursement rates can be quick (e.g., parametric insurance) or lengthy (e.g., traditional indemnity-based insurance). On the other hand, these instruments can provide large amounts of funds. The availment of external credit can be cheaper than insurance but disbursement rates are usually longer. However, external credit such as reconstruction loans can provide large amounts of funds.

A disaster risk layering framework (see Figure 2 below) encapsulates the considerations discussed above which can help to ensure cost-efficient sovereign DRFI strategies where cheaper sources of funds are utilized first and relatively more expensive sources of funds are utilized for the rare and larger events⁸. Based on corporate risk principles, a disaster risk layering framework simply highlights that ideally, a combination of DRFI instruments or mechanisms are used wherein for smaller but more frequent events, risk retention instruments or mechanisms (e.g., calamity funds) are recommended as these instruments are relatively cheaper. However, for larger but less frequent events, risk transfer instruments/mechanisms (e.g., catastrophe risk insurance) are suggested. At the same time, appropriate instruments should also be utilized to complement the various phases of a disaster (i.e., response, recovery, reconstruction). For instance, during relief or response phase, it is critical to get resources on the ground as quickly as possible. Risk transfer instruments that can provide immediate liquidity such as parametric insurance is efficient as it can produce an injection of cash within two to three weeks. The utilization of insurance proceeds from parametric insurance is usually quite flexible. However, traditional indemnity-based instruments are usually considered more appropriate for the recovery and reconstruction phase as they ideally provide financing to replace or repair specific assets that have been damaged.

⁸ GFDRR-World Bank-The Rockefeller Foundation. *Toward a Regional Approach to Disaster Risk Finance in Asia*, May 2016 (available from www.gfdrr.org).

Figure 2. Risk layering framework



Source: World Bank (2017)

Overall DRFI management, thus, involves formulating a strategy that is based on a risk layering framework. Policymakers would take into consideration, among others, the catastrophe risk profile of the country and, therefore, its DRFI needs, as well as its fiscal and development objectives, the other DRFI instruments or mechanisms available and market conditions. For instance, in a given year, a government may consider to retain a larger portion of its risk (e.g., increase allocation in its national calamity fund) if its fiscal position is quite strong and transfer to the market its risk for only extremely rare events (e.g., purchase insurance coverage for large and rare events).

Another aspect to consider is in terms of defining the DRFI instruments or mechanisms utilized as ex ante or ex post. In-year allocations, medium-term capital budget realignments, tax increases, deficit financing and international assistance are examples of ex post instruments/mechanisms. Annual budget allocations, contingent credit, insurance of public assets, sovereign parametric insurance, catastrophe bonds, and public support of private policy holder insurance are examples of ex ante instruments/mechanisms⁹. Another set of trade-offs need to be taken into account where heavy reliance on ex post mechanisms may contribute to volatility in the fiscal position of

⁹ World Bank-GFDRR, April 2012.

government as well as potentially affect long-term development objectives such as the need to realign budgets away from projects such as new infrastructure to meet reconstruction needs¹⁰.

In recent years, the literature on DRFI management has further evolved to include the importance of efficient delivery channels of funds to beneficiaries.¹¹ Delays in making the necessary funds available can exacerbate conditions on the ground. Designing efficient delivery channels is critical as well as having the enabling environment to allow DRFI mechanisms and delivery channels to function properly. In countries where red tape or stringent policies, processes or laws constrain the effective delivery of funds, even if the mechanism design is appropriate, the lack of an enabling environment will debilitate the intended outcomes.

Moving forward in improving overall DRFI management, to mitigate against increasing contingent liabilities due to natural disasters, policies that define the financial responsibilities of government including cost-sharing rules with sub-nationals can have substantive impact. These policies promote transparency and accountability, thus, minimizing uncertainty and cost in terms of time and resources for planning in ad hoc situations. Also, investments in risk information tools and capacity-building for DRFI management will provide robust decision-making.

III. Sovereign DRFI in the Philippines

This section provides analysis of current GoP DRFI instruments or mechanisms for recovery and reconstruction, citing its strengths and limitations, and identifying the gaps to achieve improved efficiency.

The National Disaster Risk Reduction and Management (NDRRM) Act of 2010 (Republic Act [R.A.] 10121) provides much of the legal basis in terms of DRFI. DRFI is likewise reflected in the NDRRM Framework and the NDRRM Plan. The mandate to lead the DRFI agenda in the country has been given to the Department of Finance (DOF). R.A. 10121 has provisions with respect to the calamity funds, namely, the National Disaster Risk Reduction and Management Fund (NDRRM

¹⁰ Ibid.

¹¹ GFDRR-World Bank-The Rockefeller Foundation, May 2016.

Fund) and the Local Disaster Risk Reduction and Management Fund (LDRRMF). The law likewise has provisions with respect to developing or utilizing risk transfer instruments. A critical aspect of the current law is that it provides a piecemeal and disjointed approach to overall DRFI management. It does not integrate both risk retention and risk transfer instruments as part of an overall DRFI strategy that are utilized depending on its appropriateness with respect to the frequency and severity of a disaster as well as the various phases of the disaster. Instead, the view is more piecemeal and disjointed without linking the use of these instruments under a risk layering framework which can help ensure a more efficient overall DRFI management approach.

However, the GoP in 2015, led by the DOF, has formulated a National DRFI Strategy that is rooted in a risk layering strategy and has identified priority areas in three levels: national, local and individual. The overall objectives of the Strategy is to (a) ensure overall financial resilience in times of disaster at the national, local and individual levels, (b) at the national level, maintain sound fiscal health to meet rehabilitation and reconstruction requirements, (c) at the local level, develop and improve sustainable financing instruments or mechanisms to provide local governments with necessary funds for post-disaster requirements and (d) at the individual level, reduce the impact on the poorest and most vulnerable and prevent them from falling into a cycle of poverty, while also shielding the near-poor from slipping back into poverty. For the priority areas, identified interventions include the following¹²:

- National Level: GoP will improve overall DRFI management through combination of various financial instruments to protect the country against various disaster risks, for instance, acquiring additional contingent credit lines and catastrophe bonds;
- Local Level: GoP will develop mechanisms for LGUs such as the catastrophe risk insurance facility to provide immediate liquidity as well as improving existing traditional insurance products;
- Individual Level: GoP will develop or improve DRFI mechanisms to assist households and SMEs such as the private catastrophe risk insurance pool as well as protect the poor and vulnerable such as microinsurance and emergency cash transfer programs.

Currently, the National DRFI Strategy does not have legal basis but the on-going Sunset Review of R.A. 10121 may be an opportunity to do so.

With regards to adhering to a disaster risk layering framework (see Figure 3 below), in the Philippines there are currently existing DRFI instruments for the various risk layers such as the (a)

¹² Department of Finance. See document on *Strategic Priorities of the Department of Finance in Managing Disaster Risk*.

NDRRM Fund and its sub-national counterpart, the LDRRMF for the lower layers of risk, (b) contingent credit lines for the middle layers of risk and (c) GSIS indemnity-based insurance for the higher layers of risk. Other sources of financing for recovery and reconstruction are budget appropriations, budget realignments (e.g., supplemental budgets, augmentations) and in some cases, reconstruction loans. Donations are also a source of funding but there is no central authority that collates the data so the big picture cannot be determined in terms of its impact.

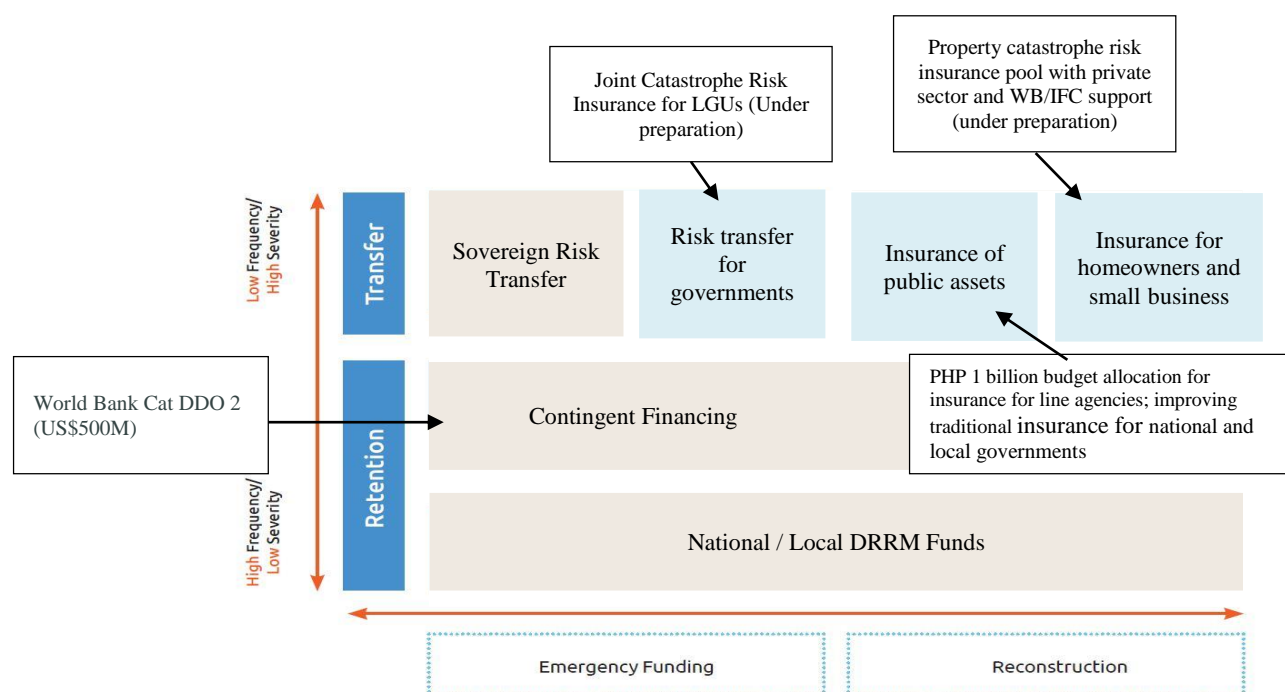
The GoP has currently in place a contingent credit line with the World Bank for US\$500 million which can be triggered upon a declaration of a national state of calamity by the President¹³. In the past, the GoP has utilized contingent credit loans from the World Bank and JICA. The main feature of a contingent credit line or standby credit facility is that it can provide immediate liquidity after a disaster. A DRFI gap that the GoP is currently working on is in establishing mechanisms to provide parametric insurance¹⁴ to the national and local governments in order to have risk coverage especially for the response stage of large-scale events. At the same time, given current bottlenecks in funds flow from national to local governments in times of disaster as well as the length of time of the GSIS claims process, parametric insurance may be used as well for early recovery and emergency reconstruction, if necessary. Similar to a contingent credit facility, parametric insurance can provide immediate liquidity in the aftermath of a disaster.

Other than the gap in the high-risk layers of the emergency funding phase, at present, the GoP is likewise trying to establish new mechanisms or improve on existing mechanisms to respond to the reconstruction phase of a disaster. The Government Service Insurance System (GSIS) has in place insurance products to protect government assets. Dialogue is on-going for the GoP to assist the private sector in establishing a property catastrophe risk insurance pool to help make disaster risk insurance more affordable to homeowners and small-medium-sized businesses.

¹³ The contingent credit facility is through the *Second Disaster Risk Management Development Policy Loan with a Deferred Drawdown Option (CAT-DDO2)*.

¹⁴ Parametric insurance is triggered by conditions that have been agreed upon ex ante, for instance, the occurrence of a Category 5 storm within a certain province. The amount of coverage is also pre-agreed, for instance, Php200 million. For example, once the occurrence of a Category 5 event has been validated within a certain province, the amount of Php200 million shall be paid out to the province.

Figure 3. Disaster Risk Layering in the Philippines



Source: World Bank-DRFI Program (2017)

The issue, however, is not merely the existence of these DRFI instruments or mechanisms but its adequacy, effectiveness and efficiency which will be explored below.

As in most developing countries, the Philippines mainly relies on ex post DRFI instruments such as budget realignments, international assistance, etc. In the recent past, the GoP has slowly been integrating more ex ante mechanisms such as contingent credit lines with development partners such as the World Bank (i.e., US\$500mn catastrophe draw-down option) and JICA (i.e., US\$500mn catastrophe draw-down option). Heavy reliance on ex post DRFI instruments subjects the management of fiscal resources to volatility and uncertainty with potential negative implications not only to the short-term fiscal position of the government but also to long-term economic development (for instance, budget realignments from programmed infrastructure projects to meet short-term post-disaster reconstruction).

In addition, oftentimes Philippine post-disaster recovery and reconstruction is characterized by (a) large funding gaps, (b) ad hoc management and arrangements, as well as (c) protracted periods of implementation of projects. Insufficiency and inefficiency of DRFI instruments or mechanisms as well as constraints or bottlenecks in the flow of funds or budget execution are main factors. For

recovery and reconstruction, the main sources of financing are the NDRRM Fund, the LDRRMF, GSIS indemnity-based insurance and special appropriations for reconstruction.

NDRRM Fund. The NDRRM Fund is the foremost DRFI mechanism of the GoP for financing requirements for recovery and reconstruction. Annual budget appropriations to the NDRRM Fund have been steadily increasing quite significantly in the past years although there has been a large drop in the appropriation from 2016 to 2017. From Php6bn (including quick response fund QRF portion) in 2011 to a high of Php38.9Bn in 2016, the NDRRMF appropriation is currently at Php15.755Bn. However, Table 1 below shows that as of March 2017, there is only Php5.77 billion available for the regular NDRRM Fund. Post-disaster needs assessment from Typhoons Nona, Ferdie, Lawin and Nina in Table 2 show that even if only prioritized or immediate needs of Php21.6 billion is required, the NDRRM Fund balances already falls short at Php5.8 billion. Considering that it is usually in the latter part of the year when typhoon season strikes, supplemental budget or other sources of DRFI will need to be put in place.

Table 1. Status of NDRRM Fund FY 2017
(as of March 10, 2017)

PURPOSE	DISASTER	IMPLEMENTING AGENCY	Rehabilitation & Reconstruction Program (RRP) Fund	Regular NDRRM Fund	TOTAL
Total Appropriations					15,755,000,000
Less: Allocation for QRF					6,000,000,000
Less: Allocation for Insurance					1,000,000,000
Less: Allocation for RRP Fund			1,500,000		1,500,000,000
Total Balance of Regular NDRRM Fund				7,255,000,000	7,255,000,000
Less: NDRRMC Recommendations for OP Approval			28,790,000	1,481,544,245	
Construction of Relocated Daus Municipal Annex Building, Daus, Bohol	Bohol Earthquake (2013)	DPWH Bohol	28,790,000		
Provision of ESA and Cash-for-Work for Typhoon Nina Victims	TY Nina	DSWD		1,481,544,245	
Balance			1,471,210,000	5,773,455,755	7,244,665,755

Source: Office of Civil Defense (OCD)

Table 2. Disaster Expenses and Levels of Financing
(4th Quarter 2016 - 1st Quarter 2017)

TYPHOON	TOTAL FUNDING REQUIREMENTS (Billions)	PRIORITY NEEDS (Billions)	REMAINING NDRRM FUND	AMOUNT
			FY-2016	42,433,826.46
Typhoon Nona (Northern Samar)	14.399	4.711	FY-2017 REGULAR	5,773,455,755.00
Typhoon Ferdie	0.718	0.147	TOTAL	5,815,889,581.46
Typhoon Lawin (CAR)	8.036	4.773		
Typhoon Lawin (REGION I)	1.562	1.509		
Typhoon Lawin (REGION II)	10.431	2.111		
Typhoon Nina (CALABARZON)	1.296	0.852		
Typhoon Nina (MIMAROPA)	4.001	3.495		
Typhoon Nina (BICOL REGION)	37.616	4.038		
TOTAL	78.059	21.636		

Source: OCD

The initial appropriation can be infused with additional funds within the year if needed, however, it will need to go through a process of approvals that may be time consuming and, therefore, affect recovery and reconstruction efforts. One restriction of the NDRRMF to take note is that the annual allocation for the NDRRMF should be used after two years wherein the balance reverts back to the General Fund.

One of the reasons for decreasing the budget allocation for the NDRRM Fund in 2017 was to afford the GoP with better flexibility in the management of fiscal resources as natural disasters are random and underutilization may occur if the budget is not utilized in the case when no major events happen in a particular year or due to protracted processes for fund access. The uncertainty in the levels of funding of the NDRRM Fund may be mitigated through better coordination among relevant agencies such as DOF, Department of Budget and Management (DBM) and the Office of Civil Defense (OCD). OCD has the record of historical losses and DOF has the catastrophe risk model which can help inform or determine the appropriate levels of the NDRRM Fund. However, in other countries, uncertainty is eliminated due to legal provisions that pre-determine the amount of annual funding or contribution to the calamity fund such as the NDRRM Fund. For instance, in Mexico, it is mandated by law that no less than .4 percent of their federal budget is to be allocated for the calamity fund, FONDEN.

Some significant changes to the structure of the NDRRM Fund were brought about when R.A. 10121 (DRRM Law) was enacted in 2010. The main difference between the forerunner of the

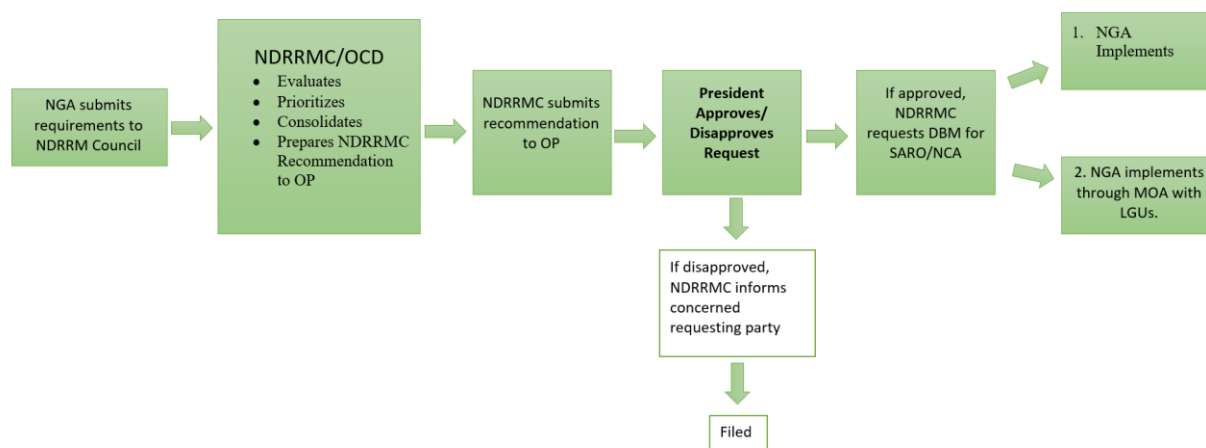
NDRRMF, the National Calamity Fund (NCF), and the NDRRM Fund was the flexibility in the utilization of the fund to include disaster risk reduction purposes (e.g. preparedness and mitigation, etc.). This signaled a paradigm shift in thinking with respect to overall DRRM management which enabled a more wholistic and long-term approach. However, looking into actual disbursements from the Fund, it is still mainly used for relief, recovery and reconstruction as oftentimes, the NDRRM Fund is inadequate to meet post-disaster financing needs much less mitigation efforts. There are linkages that need to be taken into account with disaster risk reduction (DRR) and DRFI. Investments in risk reduction or mitigation can decrease the need for DRFI as risk reduction in the long-run is expected to decrease the damages due to natural disasters. However, residual risk will remain and DRFI can complement DRR efforts by providing financial protection on the residual risk.

A critical issue that has been raised with respect to the operation of the NDRRM Fund is fund access accorded to the various national government agencies (NGAs), local government units (LGUs), government-owned and controlled corporations (GOCCs), etc.¹⁵ Two aspects that can be highlighted are: (a) lengthy approval process or release of funds, thereby adversely affecting the implementation of recovery and reconstruction programs and (b) lack of clear criteria or rules in getting approval for funds.

A key bottleneck to the efficient operation of the fund is the oftentimes lengthy process of approval and release of funds to the recipients which, based on interviews, can take from months to years. This situation creates impediments to the recovery and reconstruction process. Figures 4 and 5 below summarizes the process for approval. Each step along the process for approvals and fund releases can create potential points of delay. For instance, lack of knowledge or clarity in the documents required by the submitting entity, the need for validation of the damage and evaluation of the submitted requests, the need to review the National Disaster Risk Reduction and Management Council (NDRRMC) recommendations by the Office of the President, or the process of release of funds from the DBM can all exacerbate the NDRRM Fund operationally.

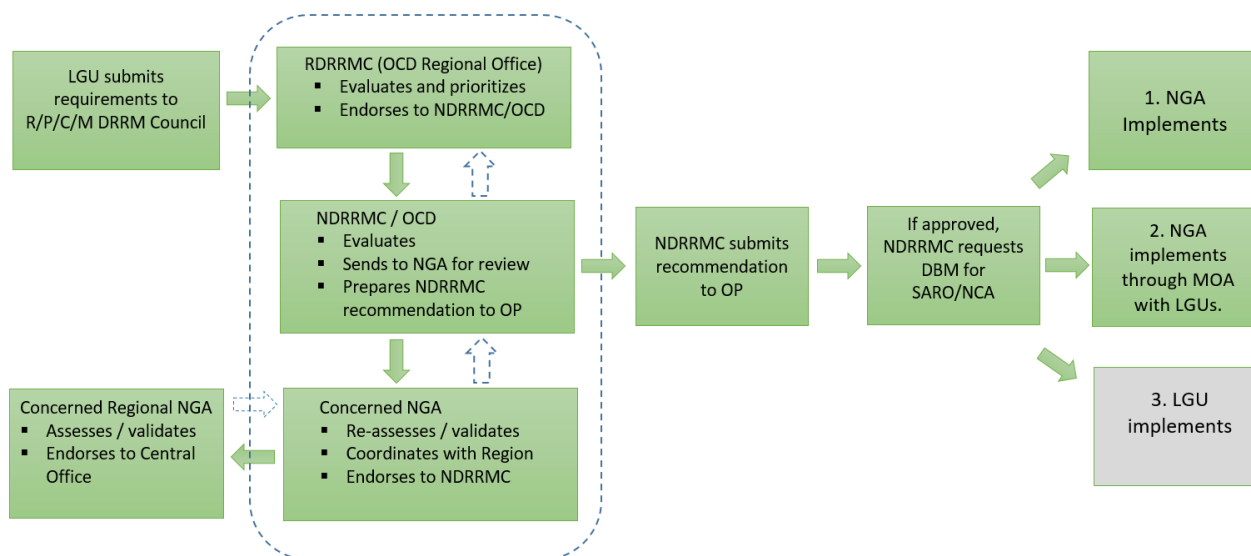
¹⁵ Non-government Organizations (NGOs) can also request for NDRRM Fund allocation.

Figure 4. Process Flow for NDRRM Fund Access for NGAs (NDCC MO #2 s. 1999)



Source. OCD (2016). *Updating the policies, procedures on NDRRM Fund utilization and management*. [powerpoint presentation].

Figure 5. Process Flow for NDRRM Fund Access for LGUs (NDCC MO #2 s. 1999)



Source. OCD (2016). *Updating the policies, procedures on NDRRM Fund utilization and management*. [powerpoint presentation].

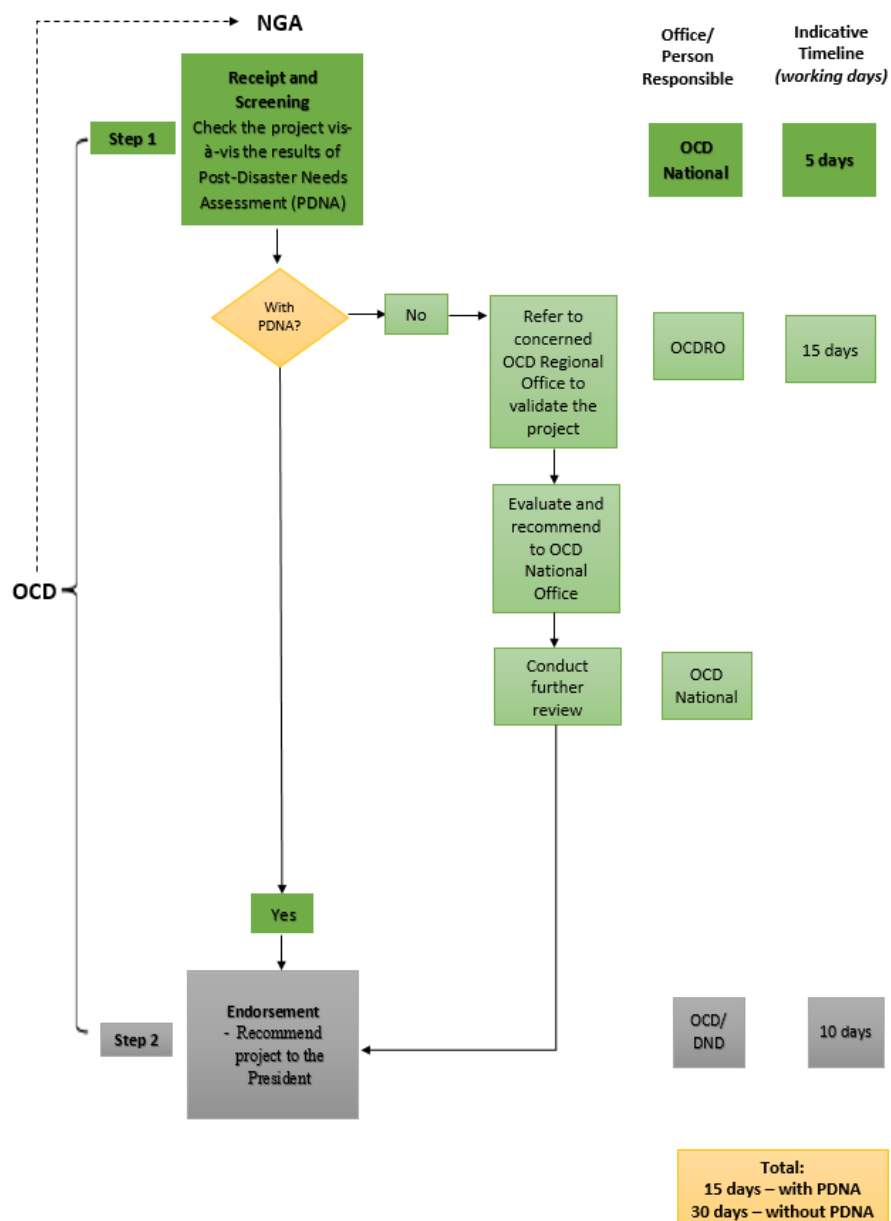
Although there are a few rules that govern fund access, for instance, there should not be any duplicate funding from other sources (e.g., donor grants, insurance proceeds) or line agencies GOCCs and LGUs wanting to access the NDRRM Fund should have exhausted their internal resources first, a significant amount of discretionary power remains. The wording in the 2017 General Appropriations Act (GAA) states “*Release of funds shall be made directly to the implementing agencies in accordance with the approval of the President of the Philippines, who may take into consideration the recommendation of the National Disaster Risk Reduction and Management Council (NDRRMC) for local disasters or the appropriate agency for international crises.*”¹⁶ One of the benefit of clear criteria or rules would be to improve efficiency in the approvals process of the NDRRM Fund. For instance, entities would be able to gauge beforehand if they would be eligible for NDRRM Fund access or can conform to the requirements to meet the criteria in order not to waste time.

The OCD has recently finalized a Joint Memorandum Circular (JMC) that aims to address all the current shortfalls addressed above. Clearer and transparent guidelines for fund access as well as importance to disaster risk mitigation projects is highlighted in the JMC. Included in the JMC is a revised process flow for NDRRM Fund access with the objective of limiting the number of days for funds to be released to the requesting national government agency (NGA) or LGU (see Figures 6 and 7). For agencies, the goal is to complete the process flow for fund access to 15 days with a post-disaster needs assessment report (PDNA) or 30 days if the request is not supported by a PDNA. On the other hand, for LGUs, the aim to complete the process flow for fund access is 60 days. If operationalized, the improvements in terms of process time will be a positive development.

The Quick Response Fund (QRF) portion of the NDRRM Fund is intended to be a stand-by fund for relief and rehabilitation for the purpose of normalizing living conditions of people or areas affected by disasters. It is intended solely for post-disaster financing requirements. An in-depth analysis of the QRF can be found in Domingo (2014). However, there have been recent changes in the administration of the QRF in Fiscal Year 2017 which will impact overall DRFI management.

¹⁶ GAA, 2017, Volume II-B, p. 614

Figure 6. Revised Process Flow for NDRRM Fund Access for NGAs

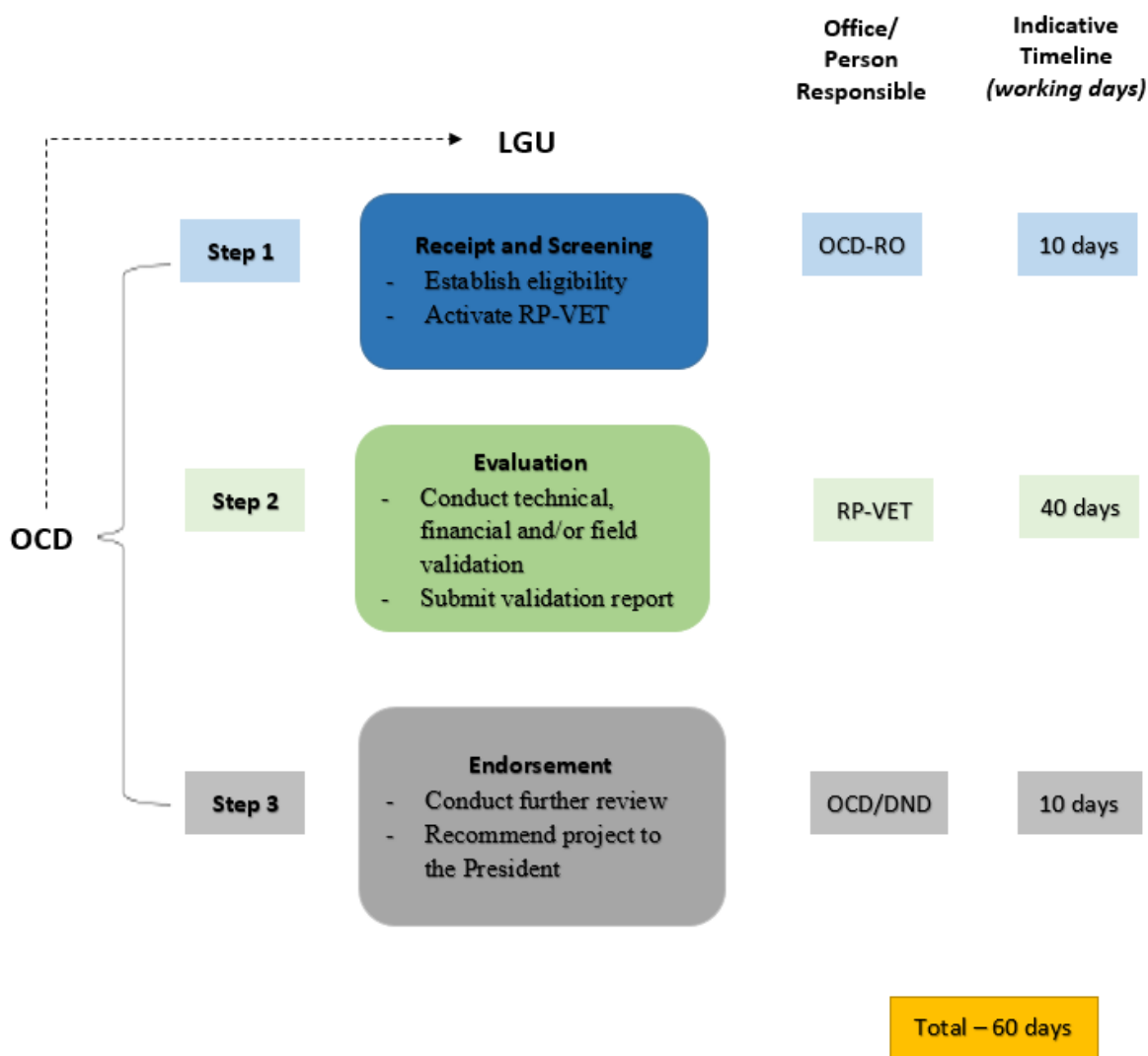


Source. Annex 4, NDRRMC Memorandum No. _s. 2017 <Guidelines on the Administration of the National Disaster Risk Reduction and Management Fund (NDRRM Fund)>.

Note from Source. (1) This has been approved by the Council last 14 March 2017. However, it will be numbered accordingly and rendered effective once it has been signed by the Chairperson of the NDRRMC.

(2) The Office of Civil Defense (OCD) shall regularly provide feedback on the status of request of concerned implementing agency.

Figure 7. Revised Process Flow for NDRRM Fund Access for LGUs



Source. Annex 5, NDRRMC Memorandum No. _s. 2017 <Guidelines on the Administration of the National Disaster Risk Reduction and Management Fund (NDRRM Fund)>.

Note from Source. (1) This has been approved by the Council last 14 March 2017. However, it will be numbered accordingly and rendered effective once it has been signed by the Chairperson of the NDRRMC.

(2) The Office of the Civil Defense (OCD) shall regularly provide feedback on the status of request of concerned LGU.

Since 2012, to expedite the flow of funds from the central office to its regional offices for post-disaster needs, the QRF used to be lodged under the accounts of the respective agencies with QRF appropriation. In the GAA, the QRF of line agencies was reflected under the NDRRMF appropriation. Starting in 2017, however, the arrangement has been changed. The line agencies

have been categorized into first responders and non-first responders. As stated in the 2017 GAA, for first-responder agencies: (a) Department of Social Welfare and Development (DSWD), Department of National Defense (DND), Department of Health (DOH) and National Electrification Administration (NEA) were appropriated QRF for relief and rehabilitation purposes (purpose a) while (b) Department of Public Works and Highways (DPWH), DND – Armed Forces of the Philippines (AFP) and DND – OCD were provided QRF for repair and reconstruction purposes (purpose b). Total appropriation for QRF is Php3Bn. Previously, other line agencies appropriated QRF included Department of Education (DepEd), Department of Agriculture (DA), National Irrigation Administration (NIA), etc. QRF appropriations for first responders will immediately be transferred to the start of the fiscal year. For non-first responders, they will need to submit their requests and undergo the NDRRMC approval process. However, for QRFs, it will not need approval of the President, only the DBM. This recent development in the procedures for the QRF will have an impact especially how non-first responder agencies manage their DRFI requirements. Prior to the new policy on QRF, these agencies were assured of their QRF allocations but will now have to compete with other non-first responder agencies for funding.

The rationale behind the change was to avoid underutilization. The issue was likewise highlighted in Domingo (2014) that states administrative and fund availment processes may have affected the utilization rate of line agencies such as the one-year validity of QRF appropriations enforced beginning Fiscal Year 2013.

For relief operations that usually take a period of 0-3 months after a disaster, immediate cash is critical. However, for reconstruction efforts that normally occur 6 months after a disaster given the need for assessment and planning, it is important that the funds are available to the implementing agencies at that time so as not to contribute to potential delays. At present, the structure of the NDRRM Fund does not seem to consider this timing issue. There is delineation between relief and rehabilitation in contrast to repair and reconstruction but not the time element. Ideally, QRF allocations for purpose (a) and purpose (b) should not be treated the same way as the timing of these financing needs are dissimilar. In particular, the validity of the QRFs which is only one year for both purposes. Repair and especially reconstruction projects, however, usually will need a longer preparatory and implementation period than relief and rehabilitation projects or programs.

Lastly, another key change in the NDRRM Fund appropriation for 2017 is the inclusion of a separate line for reconstruction in the amount of P1 billion, the Rehabilitation and Reconstruction Fund (RRP). The key difference between RRP and the regular fund of the NDRRM Fund is that the validity of the RRP can be more than 2 years.

LDRRMF. R.A. 10121 likewise sought to bring about changes in the treatment of local calamity funds by local governments. First, the 5 percent ceiling from regular income sources to be set aside for the LDRRMF became a minimum although most LGUs still maintain it at exactly 5 percent. Second, LGUs can access the LDRRMF for ex ante investments for DRR (i.e. 70 percent of total LDRRMF appropriation) without the need for a local declaration of a state of emergency¹⁷. The fund is partitioned into the 70 percent mitigation fund and the 30 percent QRF. LGUs can access the QRF upon issuance of a state of calamity by the local Sanggunian and any unspent balance at the end of each fiscal year shall accrue to a special trust fund for five years after which the remaining balance reverts back to the General Fund. Guidelines on the allocation and utilization of the LDRRMF are outlined in JMC 2013-1.

FCG ANZDEC and Primex (2016) describes the legal and administrative environment for the LDRRMF as follows:

- a) There is lack of uniformity in the interpretation by local COA auditors of the utilization of the LDRRMF thus, making LGUs conservative in their approach especially for mitigation investments.
- b) LGUs tend to be dependent on national government especially when large disasters strike even if they still have remaining balances on their LDRRMFs. However, there is inadequacy to meet post-disaster needs only through the LDRRMF. At the same time, the lack of cost-sharing rules between the national government and LGUs makes it difficult to ascertain which costs the GoP and LGUs are responsible for.
- c) The types of spending especially on the mitigation portion of the LDRRMF tend to focus on purchase of equipment and training.
- d) LGUs generally still need capacity-building in overall DRRM which can thus be reflected in the quality of their plans and also in the types of spending in their LDRRMFs.
- e) Absorptive capacity of LGUs is lacking to respond efficiently during times of disaster.
- f) There is a lack of concrete guidelines for emergency procurement which slows down implementation of post-disaster programs, activities and projects.
- g) Commission on Audit findings show that LGUs at times (i) lack compliance in submitting

¹⁷ R.A. 8185 or the Amendatory Act to the Local Government Code of 1991 (R.A. 7160), required that any access of the local calamity fund had to be triggered by a local declaration of a state of emergency. However, R.A. 10121 sought to encourage ex ante DRR investments and simplified access to the 70 percent portion of the LDRRMF for mitigation and drr projects, activities and programs.

documentary requirements such as the LDRRMF Investment Plan, LDRRMF Utilization Report, (ii) do not comply with the minimum requirement to be set aside for the LDRRMF (ie). 5 percent of total expected local income sources), (iii) incorrect utilization of the LDRRMF, (iv) fail to transfer remaining annual balances of the LDRRMF to a trust fund.

GSIS traditional insurance. R.A. 656 mandates all national government agencies, GOCCs and LGUs up to first class municipalities to insure with the GSIS not only their properties but any insurable interest of the government. Even public-private partnerships (PPP) projects can be insured with the GSIS. GSIS offers fire insurance but government can add on catastrophe risk insurance such as earthquake, flood and typhoon. The law mandates that if the private sector can offer lower premiums than GSIS then they can opt to insure with the private sector. However, since GSIS premiums are tax exempt relative to what is offered in the private sector with taxes averaging around 25 percent, GSIS basically maintains its monopoly on the insurance business for government.

GSIS figures for 2016 show total sum insured and total premiums paid are Php1.01 trillion and Php3.7 billion, respectively (see Table 3).

Table 3. GSIS Total Sum Insured and Total Premiums Paid

Region	Total Sum of Total TSI (P)	Total Sum of Total Premium (P)
ARMM	1,397,295,547.40	7,710,011.03
CAR	2,427,076,589.26	23,605,149.42
NCR	875,499,581,533.06	2,842,365,164.51
REGION 01	8,716,115,032.89	71,420,137.48
REGION 02	6,651,276,372.95	45,050,949.84
REGION 03	31,072,352,084.77	128,928,015.19
REGION 04-A	11,569,741,086.31	81,139,182.92
REGION 04-B	706,415,744.47	3,693,655.01
REGION 05	8,877,418,257.68	65,608,136.73
REGION 06	9,883,699,866.70	60,260,797.29
REGION 07	10,530,739,904.84	63,384,740.55
REGION 08	6,027,247,048.21	46,985,568.18
REGION 09	8,698,581,820.77	50,620,729.77
REGION 10	10,861,379,624.13	64,754,122.06
REGION 11	8,280,119,865.94	44,877,333.56

REGION 12	5,056,184,145.47	33,323,129.67
REGION 13	4,851,264,767.70	24,725,108.02
Grand Total	1,011,106,489,292.55	3,658,451,931.23

Source: GSIS

There are two key issues for GSIS insurance: (a) non-coverage of insurance, (b) underinsurance and (c) lengthy claims process.

Non-coverage of insurance is the lack of adherence by government to have their properties insured with the GSIS. Some critical public infrastructure owned by the national government continues to not have insurance coverage such as schools and roads and bridges. There have been improvements in the extent of coverage for public assets. On the national level, for instance, most of the properties under the DITC now have insurance. A marked improvement has been made in terms of risk coverage for LGUs (up to first class municipalities) and national government agencies – from 44.49 percent of NGAs and LGUs insured in 2012 to 97.54 percent in 2015.

In the case of underinsurance, the issue remains that NGAs and LGUs are not insured adequately. There is currently no available data on the extent of underinsurance but below are the strategic mitigations and actions being undertaken:

- (a) COA circular requiring LGUs and NGAs to insure based on replacement values and not on depreciated values is being finalized.
- (b) General inventory of assets is needed.
- (c) Another issue is need for appraised values of assets which is needed for budget and procurement purposes. There continues to be a glut in appraisers. One recommendation is for DOF or DPWH to have list of accredited appraisers that LGUs/NGAs can use and lessen the need for a regular procurement process.

In terms of claims handling, this has been a deterrent for agencies and local governments to insure with the GSIS. Anecdotal evidence shows that agencies and local governments feel that due to the monopoly being exercised by GSIS, this does not give them the incentive to pay-out when a claim is made or extreme length of time and tediousness of the claims process. Some mitigating actions or directions currently being made are:

- (a) Expected improvement in turnaround time due to newly instituted process where intra-GSIS communication with respect to claims is now top-down and not bottom-up.

(b) Issue on lack of documentation still remains which causes delays so information dissemination needed to agencies and LGUs to familiarize them with the claims process.

(c) If claim is not compensable, client seeks reconsideration which can be a lengthy issue; may be caused due to lack of understanding by client of details of its insurance policy so information dissemination and capacity-building is required for LGUs and agencies to understand the details of their policies.

Other general issues and directions currently being undertaken:

(a) DILG to talk to LGUs to comply with RA 656.

(b) Continuation of educational caravans to help information dissemination.

(c) Monitoring of LGUs not complying with RA 656, especially for LGUs up to first class municipalities that continue to insure with private sector.

(d) Review comparative premium rates of GSIS relative to private sector, as well as, turnaround times especially in claims handling.

There are on-going initiatives in GSIS to address its core issues such as a technical assistance from JICA to improve traditional insurance beginning with strengthening risk information on public assets. This will in turn help price the risk properly and is expected to result in premium savings as uncertainty is minimized. Also, an inter-agency technical working group is to be formed to provide policy recommendations to improve insurance of public assets. Lastly, through technical assistance from the World Bank-UK-DFID, institutionalization of parametric insurance within GSIS is being undertaken.

However, given the issues and constraints discussed above, the GoP remains the funder of first and last resort for post-disaster recovery and reconstruction. At present, there is no existing policy on post-disaster financing in terms of the financial responsibilities of government and ad hoc arrangements prevail. There are no cost-sharing rules between the national government and local governments. Likewise, there are no defined limits as to what the GoP is liable for with respect to the damages and losses sustained by the private sector, especially the poor.

In addition, given the constraints in insurance of public assets, as well as, general weakness of the domestic insurance industry, reliance on risk retention mechanisms prevails. Lastly, although there are initiatives to expand the menu of DRFI instruments or mechanisms especially risk transfer solutions that can help increase financial capacity of the GoP (e.g., establishment of a catastrophe risk insurance pool for LGUs and the private sector, improving traditional insurance, etc.), these

initiatives cannot be easily adopted in the current legal and institutional environment. For instance, the procurement law constrains GSIS from approaching the international reinsurance market directly which would lower its cost and the savings passed on to its clients. Issues on COA interpretation on emergency procurement guidelines or utilization of LDRRMF funds provides disincentives to LGUs to take more responsibility of the financing requirements of their locales.

Limitations and weaknesses discussed in the main DRFI mechanisms imply that the GoP continues to be the funder of first and last resort given the lack of efficiency and adequacy of the LDRRMF as well as insufficient insurance coverage. In addition, lack of DRFI instruments or mechanisms to protect other sectors of society such as the homeowners, small-medium sized enterprises, farmers and the poor also imply additional contingent liabilities for the government. Once again, increasing financial capacity of the GoP to meet post-disaster requirements as well as mitigate its contingent liabilities will require it to expand its use of other DRFI instruments such as risk transfer products.

IV. Sectoral Case Study of Post Disaster Spending

This section provides details on post-disaster spending of key sectors that oftentimes comprise the largest component of reconstruction efforts.

A. Roads and Bridges

The core asset base under the DPWH encompasses 30,673 kilometers of paved national primary and secondary roads with an estimated replacement cost of Php680.57 billion and 7,860 bridges (maintained by the national government under the Bridge Management System) with an estimated replacement cost of Php326.79 billion¹⁸. Annual average loss for roads and bridges are estimated to be at Php1.4 billion each and together comprise the largest component of GOP total annual average loss at 18 percent each¹⁹. Of the total annual average loss for both roads and bridges, 59 percent is in 14 provinces and Metro Manila²⁰.

¹⁸ Based on the Philippines Catastrophe Risk Model developed by AIR-Worldwide for the GoP with technical support from GFDRR-World Bank.

¹⁹ Ibid.

²⁰ Ibid.

DPWH has the mandate for repair and reconstruction due to natural disasters. Beginning 2017, all reconstruction projects have been transferred to DPWH including school buildings. Clarification on the role of DPWH in the case of repairs is still being sought. From historical experience and from data based on the catastrophe risk model, the main issue for DPWH with respect to DRFI management has been one of inadequate funding which has impeded full rehabilitation from a disaster in the case when reconstruction projects have not been approved or fully funded. Lack of funding has likewise resulted in delays in implementation of approved projects or necessitated accrual to agency backlog of program of works. As was the case in Typhoon Pablo, damages and recommended funding assessments in Table 4 below show that for the main infrastructure under DPWH responsibility, i.e., roads, bridges and flood control or sea wall structures, damages were assessed at Php3.8 billion while recommended funding was proposed at Php4.4 billion. However, only Php1.036 billion was approved and released to DPWH.

Table 4. Typhoon Pablo Damages and Recommended Funding for Recovery/Reconstruction Assessment

Sector	Davao Oriental		Compostela Valley		Davao Oriental & Compostela Valley	
	Damages	Recommended Funding for Recovery/ Reconstruction	Damages	Recommended Funding for Recovery/ Reconstruction	Damages	Recommended Funding for Recovery/ Reconstruction
Roads	61,892,810.64	84,866,013.30	480,703,532.00	540,033,803.60	542,596,342.64	624,899,816.90
Bridges	275,100,000.00	353,450,000.00	407,211,800.00	468,293,570.00	682,311,800.00	821,743,570.00
Flood Control/ Sea Wall	209,109,440.00	261,386,800.00	2,367,608,695.65	2,722,750,000.00	2,576,718,135.65	2,984,136,800.00
TOTAL	546,102,250.64	699,702,813.30	3,255,524,027.65	3,731,077,373.60	3,801,626,278.29	4,430,780,186.90

Source: OCD

The sources of financing for DPWH are mainly its QRF allocation and immediate response fund (IRF). Roads and bridges are not covered by insurance with DPWH citing budget constraints; only the Bureau of Equipment has insurance coverage for its assets. The lack of insurance coverage for public assets under DPWH implies that the government fully retains the risk. The IRF is an amount set aside by the agency which is around 5% of their MOOE for the purpose of meeting funding needs for emergencies in general, and not only calamities. The source of financing will depend on the cost of the damage. If the budget required is small, the agency usually absorbs the cost, either through its QRF or IRF. If the cost is large, however, the agency requests from the NDRRMC or if it cannot access the NDRRM Fund, then it is included in the budget of the following year. In previous years, other sources of financing included a one-time JICA reconstruction loan during Typhoon Ondoy.

Table 5 below illustrates the various sources of financing of DPWH for Typhoon Yolanda. The budget of around Php4.7 billion for Typhoon Yolanda was what was reflected in terms of sectoral funding requirements in the Yolanda Comprehensive Rehabilitation and Recovery Plan (CRRP). The table shows that two main sources of funds are the NDRRM Fund and agency budget in the amounts of Php2.3 billion and Php1.7 billion, respectively. Under the NDRRM Fund, a special rehabilitation and reconstruction program (RA 10633, FY 2014) and the regular appropriation of the NDRRM Fund were the sources of financing. Under agency budget, sources of funds included the QRF, supplemental appropriations and the provision under RA 10633 that was lodged directly under the DPWH. Around Php2.6 billion was funded in 2014 and Php1.7 billion in 2015 which are the years when DPWH received the bulk of its funding. As of end October 2016, out of a total funding of Php4.7 billion, around Php4.4bn has already been obligated and around Php3.6bn has been disbursed.

Table 5. DPWH Source of Funds, Typhoon Yolanda (as of October 31, 2016)

Funding Source	Funding Year					Cumulative Obligation ²	Cumulative Disbursement ²
	2013	2014	2015	2016 ¹	TOTAL		
1) NDRRM Fund (Calamity Fund)	-	915.81	1,360.84	58.8	2,335.44	2,146.40	1,706.60
Rehabilitation and Reconstruction Program (RRP), FY 2014 GAA, RA 10633	-	-	1,234.23	-	1,234.23	1,164.81	835.15
NDRRM Fund (Calamity Fund), FY 2013 GAA, RA 10352 Continuing Appropriations	-	698.14	-	-	698.14	654.28	639.72
NDRRM Fund (Calamity Fund), FY 2014 GAA, RA 10633	-	217.66	-	-	217.66	207.16	190.28
NDRRM Fund (Calamity Fund), FY 2015 GAA, RA 10651	-	-	126.61	46.45	173.06	120.15	41.45
NDRRM Fund (Calamity Fund), FY 2015 GAA, RA 10651 Continuing Appropriations	-	-	-	12.35	12.35	-	-
2) Agency Budget	254.45	1,402.78	-	-	1,657.22	1,567.94	1,485.87
Supplemental Appropriations FY 2013 GAA, RA 10634	-	1,228.50	-	-	1,228.50	1,161.00	1,086.39
DPWH Quick Response Fund FY 2013	254.45	-	-	-	254.45	241.41	241.1
DPWH Quick Response Fund FY 2014	-	110.14	-	-	110.14	103.39	101.67

DPWH FY 2014 GAA, RA 10633 Various Infrastructure Projects (VILP), Maintenance and Repair of Infrastructure Facilities and Other Related Activities - Routine Maintenance of National Roads and Bridges & Engineering and Administrative Overhead Expenses (EAOE) *	-	64.14	-	-	64.14	62.14	56.71
3) Other Government Sources	-	318.47	338.71	6.3	663.47	609.51	434.11
DPWH Infrastructure Program FY 2014 GAA, RA 10633 & FY 2015 GAA, RA 10651 **	-	280.4	330.66	-	611.06	558.39	384.17
MVUC (Road Board) Special Road Support Fund & MVUC Automatic Appropriation RA 8794 Fund 153 Special Road Safety Fund FY 2015 and 2016 ***	-	38.07	8.05	6.3	52.42	51.12	49.95
Total	254.45	2,637.05	1,699.54	65.1	4,656.14	4,323.85	3,626.59

Source: Department of Public Works and Highways

Notes from Source. *Some rehabilitation works were funded through available DPWH fund sources (i.e. not requested in Calamity Fund)

**Some road sections damaged by Typhoon Yolanda were part of proposed projects under DPWH Infrastructure Program (i.e. not requested in Calamity Fund)

***Damaged road safety devices and signages were part of Implementing Offices' proposed projects in MVUC Fund (i.e. not requested in Calamity Fund)

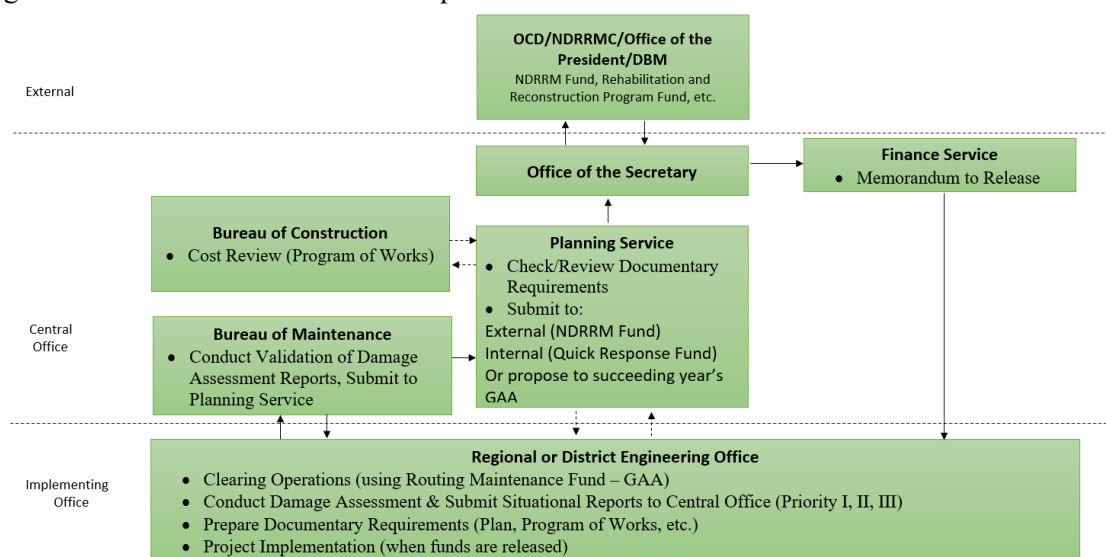
¹ As of October 31, 2016

² As of October 15, 2016 report from Regional & District Engineering Offices

In addition to inadequate funding, delays in processing of budget requests and budget execution issues have also been raised. Figure 8 shows the process for DPWH in accessing the NDRRM Fund. The entire process from submission of request to release of budget can take more than one year, on average. On budget execution, project implementation can be hampered by procurement issues and lack of absorptive capacity especially at the local level. With respect to procurement issues, clarity on emergency procurement guidelines is needed as the current guidelines are subject to different interpretations by the local representatives of the Commission on Audit (COA). On absorptive capacity, massive disasters such as Typhoon Yolanda can debilitate the agency's regional offices in terms of materials and equipment available and skilled personnel, thus, delaying the capacity to implement reconstruction projects. For example, during Typhoon Yolanda, the

agency experienced severe constraints as the regional office was damaged in addition to equipment and vehicles.

Figure 8. DPWH Process for Fund Request from NDRRM Fund



Source. Department of Public Works and Highways

Note from Source. See Department Order No. 15, series of 2015 and GAA Special Provisions (for Quick Response Fund)

B. School Buildings

DRFI management of school buildings sector under DepEd is likewise plagued by the same issues faced by the roads and bridges sector discussed in the previous section: (a) inadequacy of current DRFI mechanisms or instruments to fund potential financial losses due to disasters, (b) delays in processing of intra-governmental transfers and (c) lack of DRFI instruments or mechanisms that can efficiently address the various phases of a disaster for varying degrees of severities, mainly relying on national government funding as source of financing as well as ex post financing instruments for severe events.

The total asset base of school buildings is estimated to consist of 47,000 units at a replacement cost of around Php300 billion²¹. Based on the catastrophe risk model, average annual losses are estimated to be at Php941 million and probable maximum losses at Php1.46 billion and Php2.74

²¹ Based on the Philippines Catastrophe Risk Model developed by AIR-Worldwide for the GoP with technical support from GFDRR-World Bank.

billion for events with an annual probability of occurring at 10 percent and 3.3 percent, respectively²². Public schools represent around 12 percent of total annual average losses of all government assets and are mainly concentrated in the following regions in descending order based on average annual losses: Bicol, Eastern Visayas, Cagayan Valley, Central Luzon, Ilocos region and Calabarzon²³.

As in the case of DPWH, Typhoon Pablo initial damage assessment and recommended funding were at Php1.039 billion and Php1.306 billion, respectively. However, the budget that was approved and released was only Php326.3 billion to the DepEd and CHED. In the case of Typhoon Yolanda, however, the funding requirement of Php8.3 billion was approved.

Currently, the main sources of financing for repairs and reconstruction of school buildings due to disasters are mainly the (a) Quick Response Fund (QRF), (b) Basic Education Facilities Fund (BEFF) and the (c) New Construction and Repairs Fund wherein the latter two accounts are part of the internal agency regular budget. The QRF can be replenished in case it is depleted within the fiscal year. Another avenue of financing the agency post-disaster requirements are donors (ie. Private sector, NGOs, etc.), however, there is no institutionalized mechanism for monitoring the fund flows from donors. In some cases, the lack of coordination and monitoring with respect to donations have become problematic. In several instances, school building reconstruction projects under the list of programmed works under the agency turn out to be already completed when donors coordinate directly with the local government units where the reconstruction sites are located. School buildings are likewise not covered by indemnity-based insurance as roads and bridges. Based on discussions with the DepEd staff, total amount of donations relative to national government spending is minimal.

There has been a ten-fold increase in the DepEd QRF allocation in the period 2007-2016 as shown in Table 6. This reflects the increased occurrence of more frequent and severe disasters in the past decade. Oftentimes, supplemental budgets within the year are provided to meet the requirements of DepEd. Given the figures from the catastrophe risk model, it is apparent that current DRFI flows are inadequate to meet the needs of medium to severe events although it is enough to cover potential average annual losses.

²² Ibid.

²³ Ibid.

Table 6. DEPARTMENT OF EDUCATION
Historical Budgets for QRF – 2007-2016
(in thousand pesos)

Fiscal Year	Personnel Services	Other Expenditures	Capital Outlays	Total
2007		20,000	80,000	100,000
2008		50,000	250,000	300,000
2009		50,000	550,000	600,000
2010		50,000	600,000	650,000
2011		50,000	430,000	480,000
2012			550,000	550,000
2013			550,000	550,000
2014			654,766	654,766
2015			1,000,000	1,000,000
2016			1,000,000	1,000,000

Source: Department of Education

The QRF has been the main source of financing for post-disaster recovery and reconstruction efforts of the DepEd. The utilization of the QRF within the DepEd makes the title of the fund a misnomer and in fact, has caused misunderstandings in the classification of the QRF for the DepEd. The DepEd QRF is utilized for repair and reconstruction of school buildings and not necessarily for response activities²⁴. In the past, there was a fund in the GSIS only for payouts towards claims from the DepEd on damages to school buildings which was replenished annually by the national government. However, due to delays in claims processing, the fund was transferred from GSIS to the DepEd which became the DepEd QRF. In the 2012 GAA, the DepEd QRF was transferred under the NDRRM Fund but the QRF amount was automatically lodged in the agency so net effect in terms of QRF access was insignificant. However, as mentioned above, for fiscal year 2017, the QRF amount for DepEd has been grouped with the QRFs of other “non-first responder agencies”, thus, creating uncertainty to fund access and to the process of fund access as DepEd will now need to compete for funds with other agencies for the QRF and may experience relatively lengthy delays in downloading of funds relative to previous years. The effect on implementation of recovery and reconstruction activities will not be known until a few months after when projects for Typhoons Lawin and Nina enter into the project pipeline. If the DepEd QRF was titled as a reconstruction fund in the first place instead of a response fund, it would have

²⁴ QRF use in DepEd is both for natural and man-made disasters, however, majority of expenditures are placed towards repairs and reconstruction due to natural disasters.

been clearer what the initial intention was for the utilization of the fund. Under the law, only the DPWH can implement projects funded from the New Construction and Repairs Fund whereas the DepEd is not restricted to implement projects funded from the QRF and BEFF. However, starting 2017, the DPWH has been mandated to implement all infrastructure projects for reconstruction but there is lack of clarity in the case of repairs.

C. *Housing*

Recovery and reconstruction of the shelter sector has been an integral and large component of post-disaster government spending. To highlight public spending in the sector, for Typhoon Pablo (2012), out of a total Php10.5 billion budget approximately Php4.2 billion was allocated to the Department of Social Welfare and Development (DSWD) for in city housing projects at around Php100,000 per housing unit and Php4.1 billion allocated to the National Housing Authority (NHA) for resettlement projects for landslide affected areas²⁵ at around Php275,000 per housing unit. On the other hand, for Typhoon Yolanda (2013), for 205,128 housing units, a budget of Php75.7 billion out of a total Php171 billion was provided through NHA (see Table 7). Relative to other sectors, post-disaster shelter government assistance is not as well-defined considering it is mainly a private good. Nevertheless, a large proportion of recovery and reconstruction budgets have been channeled towards the shelter sector.

Table 7. Typhoon Yolanda Resettlement Cluster Budget

AGENCY	TOTAL NEEDS (in PhP)
NHA 24,981 Permanent Houses (in LGU Land at PhP 282,800/unit)	7,064,620,000.00
NHA 180,147 Permanent Houses (in Private Land at PhP 292,900/unit)	52,765,060,000.00
NHA Community Facilities – (537) School Buildings	13,425,000,000.00
NHA (with DPWH) Community Facilities – (202) Multi-Purpose Covered Court	2,424,000,000.00
Total	75,678,680,000.0

Source: Typhoon Yolanda CRRP (2014)

²⁵ Department of Budget and Management, December 2014.

One aspect to highlight in terms of post-disaster shelter assistance is that it utilizes ad hoc arrangements. For Typhoon Pablo, in city housing projects were coursed through the DSWD. The DSWD in turn signed a memorandum of agreement with the provincial governments of Davao Oriental and Compostela Valley to implement the projects. For resettlement projects, the NHA was the main implementing agency. On the other hand, for Typhoon Yolanda, all housing projects were coursed through the NHA. DSWD provided only emergency shelter assistance (ESA) during Typhoon Yolanda in the form of vouchers worth Php30,000 for totally damaged houses and Php10,000 for partially damaged houses. In terms of institutional arrangements, the cluster approach to planning and implementation for Typhoons Pablo and Yolanda was put in place. For Typhoon Pablo, the Department of the Interior and Local Government (DILG) was chosen as lead for the resettlement cluster under Task Force Pablo. For Typhoon Yolanda, it was the NHA who took the lead role for the resettlement cluster, organized under the Office of the Presidential Assistant for Rehabilitation and Recovery (OPARR)²⁶. Therefore, with respect to planning and implementation for post-disaster shelter recovery and reconstruction, there has been no formal long-term institutionalization of arrangements and processes which may affect the speed and progress of the shelter sector in responding to post-disaster needs.

In general, program outcomes for the sector have not been encouraging. For Typhoon Pablo, all budget allocations have been released by 4th Quarter 2013. The housing projects implemented by DSWD in partnership with the provincial governments have mainly been completed. On the other hand, Table 8 shows the status of resettlement projects under the NHA. As of September 2016, out of a total 17,480 target units to be constructed on various resettlement sites, 15,979 units have already been completed but only 5,891 units have been awarded and 3,696 units are occupied. In an assessment workshop for Typhoon Pablo held in October 2016, additional issues cited were the following²⁷:

- a) Overall poor quality of housing units and unsuitable sites of resettlement projects
- b) Lack of basic and support facilities at resettlement/relocation sites of NHA and DSWD especially if housing site is far from place of work or schools

²⁶ Cordero (2014), *A Tale of Two Disasters: Typhoon Yolanda and Typhoon Pablo, Post-disaster Rehabilitation and Recovery (Housing and Resettlement Plan)*

²⁷ Presentation of Grace L. Magalona, Typhoon Pablo Rehabilitation Plan Assessment Workshop, October 2016

- c) Weak coordination among NHA, LGU counterparts and end-users during project planning and implementation

Table 8. Status of Resettlement Program for Typhoon Pablo (as of September 2016)

Province	Project Cost (Bn)	Target	On-going/Not yet started	Completed	Awarded	Occupied
Compostela Valley	3320.40	14,261	291	13,970	5,418	3,495
Davao Oriental	764.18	3,219	1,210	2,009	473	201
TOTAL	4,084.58	17,480	1,501	15,979	5,891	3,696

Source: Presentation of Engr. Carolina R. Angel, Typhoon Pablo Rehabilitation Plan Assessment Workshop, October 2016

For Typhoon Yolanda, the latest updates from the National Economic Development Authority (NEDA) reflects that out of the 205,000 units required, around 30,000 units have been completed. A closer look at the progress report of the resettlement cluster for Region 8 (as of December 2016) shows that out of 44,570 units to be constructed, only 7,296 units have been completed at a rate of 16.4 percent and 4,339 units are occupied (see Table 9). In a coordination meeting on Typhoon Yolanda held last December 2016, some of the prevailing issues cited that affected the Region 8 resettlement cluster were similar to the Typhoon Pablo experience, for instance, issues with basic and support facilities (e.g., delays and quality of water supply delivery) and distance from place of work.

Table 9. Progress Report on Resettlement Cluster for Typhoon Yolanda (as of December 2016)

Province	No. of Resettlement Sites	Building Construction							Occupancy	
		Houses to be Constructed	Not Started	Yet	Ongoing Houses	Completed Houses			Not Yet Occupied	Occupied
		Units	Units	%	Units	%	Units	%	Units	Units
Tacloban City	19	14,433	3,135	21.7	5,137	35.6	6161	42.7	2,722	3,373
Leyte	28	12,714	3,019	23.7	5,651	44.4	914	7.2	51	863
Southern Leyte	1	130	130	100		0		0		
Eastern Samar	14	4,149	2,202	53.1	1,726	41.6	221	5.3	118	103
Samar	10	7,236	5,573	77	1,663	23	0	0		
Biliran	12	5,908	4,827	81.7	1,081	18.3	0	0		
Grand Totals	84	44,570	18,886	42.4	15,258	34.2	7,296	16.40%	2,891	4,339

Source: Presentation by NEDA VIII, Coordination Meeting (December 2016)

Relative to other sectors, receiving insufficient funding for post-disaster requirements is usually not the case for the shelter sector. The main issues revolve around the following: (a) flow of funds from the national government to NHA, (b) centralized procurement, (c) procurement of land, (d)

getting the necessary permits, clearances, certifications and licenses for housing projects, (e) resettlement projects do not integrate a holistic approach such as including utilities, livelihood needs, etc. into the decision matrix, (f) quality of the outputs, and (g) lack of coordination among agencies, LGUs and stakeholders.

For Typhoons Pablo and Yolanda, the budget allocations for resettlement programs were based on the respective Comprehensive Rehabilitation and Recovery Plans of each disaster. In the case of Typhoon Yolanda, the resettlement program has been fully budgeted in the GAAs. However, delays in releases from the national government impedes the implementation progress of the resettlement projects. Internal process constraints within NHA also can contribute to lengthy delays in implementation especially with a centralized procurement system. NHA may not be able to hasten the procurement process for contractors due to lack of personnel considering the requirements of the procurement law. At minimum, the procurement process usually takes three months.

The procurement of land has often been cited as the main bottleneck in project implementation. Cordero (2014) highlights key issues with respect to land availability: (a) lack of suitable lands for housing projects as some localities are situated in areas deemed danger zones and (b) lack of titled lands as the need to procure privately-owned land is oftentimes necessary.

Program objectives have not been met not only in terms of implementation delays but in terms of quality of the outputs, lack of basic and support structures and systems in resettlement sites and lack of coordination and consultation among various stakeholders.

There have been contributions from NGOs at the city or municipal level. LGUs cite that best practices can be learned from these projects but scale-up still needs to be done. In New Bataan, Compostela Valley, the Red Cross and Holcim have contributed 420 housing units which is approximately 10% of total housing units constructed under the Typhoon Pablo CRRP. In Tacloban, 1,386 units as of January 2017 have been constructed by NGOs in partnership with the city out of a total 6,273 housing units or around 22% of total housing units constructed.

V. Case Study: Government post disaster financing response in Typhoon Pablo and Typhoon Yolanda

Two recent disasters, Typhoons Pablo (2012) and Yolanda (2013), highlight the “new normal” that the country is expected to continue to face in the future. The devastating effects due to natural

disasters necessitate improvements in government response, a critical aspect of which is in DRFI management for recovery and reconstruction. In 2012, Typhoon Pablo “Bopha” affected Mindanao, an area normally with low exposure to tropical cyclones. It was the most powerful tropical cyclone to make landfall in Mindanao in almost three decades. In the aftermath of the disaster, there were 1,179 casualties, 955,232 persons affected and damages estimated at Php43.8 billion in the provinces of Compostela Valley, Davao Oriental and Davao del Norte²⁸. In the following year, Typhoon Yolanda was the strongest tropical cyclone to make landfall, which affected 14 provinces and 171 cities and municipalities. The massive effects of Typhoon Yolanda were the following: 6,300 reported casualties, 1,472,251 families affected and displaced and damages and losses estimated at Php571.1 billion²⁹.

A comparative case study cannot necessarily be made between the two disasters as the magnitude alone of Typhoon Yolanda far outweighs that of Typhoon Pablo. However, there are some insights to be gained from government response to both disasters.

A. Typhoon Pablo “Bopha”

In the aftermath of Typhoon Pablo, a post-disaster needs assessment (PDNA) was conducted to provide estimates of damages and losses due to the typhoon. Estimates show that Compostela Valley suffered the most in terms of damages and losses with a total of Php27.4 billion of which Php19.3 billion was in the livelihood sector. Table 10 below provides a summary of the cost estimates from Davao Oriental, Compostela Valley and Davao del Norte PDNAs.

Table 10: Typhoon Pablo Damages and Losses

Sector	Davao Oriental	Compostela Valley	Total Cost in PhP (Comval and DvoOr)	Davao del Norte	Total Cost in PhP (3 Provinces)
Infrastructure	4,166,813,356	4,637,295,926	8,804,109,282	683,899,662	9,488,008,944
Livelihood	6,683,692,681	19,288,427,802	25,972,120,483	2,810,058,132	28,782,178,615
Social	261,080,720	347,062,420	608,143,140	84,369,620	692,512,760
Settlement	1,691,017,900	3,152,430,260	4,843,448,160		4,843,448,160

²⁸ Regional Development Council XI, October 2016 Update Reports

²⁹ GFDRR-World Bank, May 2015.

TOTAL	12,802,604,657	27,425,216,408	40,227,821,065	3,578,327,414	43,806,148,479
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Source: Presentation by EMP Mario M. Realista, Typhoon Pablo Rehabilitation Plan Assessment Workshop, October 2016

To facilitate the process of recovery and reconstruction, Task Force Pablo was created in December 2012 to prepare a CRRP. The Task Force structure consisted of the Executive Committee with five clusters underneath it: (a) infrastructure (chaired by DPWH), (b) resettlement (chaired by DILG), (c) social services (chaired by DSWD), (d) livelihood (chaired by DTI) and (e) support (chaired by DBM). Overall chair for Task Force Pablo was the Cabinet Secretary³⁰. To formalize the institutional arrangement, the Office of the President issued Memorandum Circular No. 53 “enjoining all departments, agencies, and instrumentalities of the national government and local government units (LGUs) to actively support the full implementation of the Task Force Pablo rehabilitation plans and programs.”³¹ The report mainly focused on government PPAs for reconstruction and rehabilitation and did not highlight the initiatives of the private sector, NGOs, development partners and LGUs³².

Of the initial estimate of Php43.8 billion total financing requirements, only around Php10.4 billion was approved and fully released by end of Fiscal Year 2014 (see Table 11 below). The bulk of the Php10.4 billion was released by 2013 to DSWD, DILG and NHA in the amount of Php8.5 billion. The remaining balance of Php1.9 billion was released the following year. Unprogrammed funds was the source for the releases in 2013 while a supplemental appropriation was allocated for the 2014 releases.

Table 11. Typhoon Pablo Rehabilitation Plan – Budgetary Requirements, Releases and Balances as of 31 December 2014 (in Pesos)

Cluster	Department/LGU	Financial Requirements as Approved by the President ^{1/}	Releases		
			SARO NO.	Date	Amount
Livelihood Cluster	Department of Agriculture	302,859,830			
	DA-Osec (Region		SARO-BMB-E-14-	11-Jun-14	112,243,500 ^{4/}

³⁰ Cabinet secretary at the time of Typhoon Pablo was Rene Almendras.

³¹ Memorandum Circular No. 53, s. 2013.

³² Cordero (2014).

	XI)		0007310		
	DA-BFAR		SARO-BMB-E-14-0007311	11-Jun-14	34,811,850 ^{4/}
	DOF/BTr/PCA		SARO-BMB-F-14-0016817	27-Oct-14	155,804,480 ^{4/}
	Department of Social Welfare and Development	211,000,000	SARO-BMB-B-13-0018929	30-Oct-13	211,000,000 ^{3/}
	Department of Trade and Industry	10,800,000	SARO-BMB-A-14-0006058	27-May-14	10,800,000 ^{4/}
	Department of Labor and Employment	1,550,000	SARO-BMB-B-14-0005934	23-May-14	1,550,000 ^{4/}
	TOTAL LIVELIHOOD CLUSTER	526,209,830			526,209,830
Social Cluster	Department of Social Welfare and Development	4,194,000,000	SARO-BMB-B-13-0017598	10-Oct-13	4,194,000,000 ^{3/}
	Department of Education	47,250,000	SARO-BMB-B-14-0005935	23-May-14	47,250,000 ^{4/}
	Department of Health	120,813,404	SARO-BMB-B-14-0005936	23-May-14	120,813,404 ^{4/}
	TOTAL - SOCIAL CLUSTER	4,362,063,404			4,362,063,404
Infrastructure Cluster	Department of Public Works and Highways	1,035,985,507 ^{2/}	SARO-BMB-A-14-0006024	26-May-14	1,035,985,507 ^{4/}
	Commission on Higher Education	25,500,000	SARO-BMB-B-14-0005938	23-May-14	25,500,000 ^{4/}
	Department of Health	34,850,000	SARO-BMB-B-14-0005350	09-Oct-14	34,850,000 ^{4/}
	Department of Education	300,800,000	SARO-BMB-B-14-0005935	23-May-14	300,800,000 ^{4/}
	TOTAL INFRASTRUCTURE CLUSTER	1,397,135,507			1,397,135,507
Resettlement Cluster	National Housing Authority	4,084,600,000	SARO-BMB-F-13-0017659	09-Oct-13	4,084,600,000 ^{3/}
	Department of the Interior and Local Government	51,800,000	SARO-BMB-D-13-0020996	04-Dec-13	51,800,000 ^{3/}
	TOTAL RESETTLEMENT CLUSTER	4,136,400,000			4,136,400,000
Total Budgetary Requirements		10,421,808,741			10,421,808,741

Source. Department of Budget and Management

Notes from Source. ^{1/} Based on directives of the President dated September 26, 2013 and May 9, 2014

^{2/} Covers the following LGU requirements:

ComVal - 691,170,921

Davao Or - 344,814,586

TOTAL - P1,035,985,507

^{3/} FY 2013 Releases (Fund Source: Unprogrammed Fund) - P8,541,400,000

^{4/} FY 2014 Releases (Fund Source: Supplemental Appropriation) - P1,880,408,741

Other sources of funding for Typhoon Pablo were efforts from donors such as the United Nations, Red Cross, etc. However, there is no central listing of all the projects as some of the donors dealt directly with the municipality. This has created an issue, for instance, for DepEd during times of disaster because due to the delay in fund releases, pipeline projects at times may already be started by NGOs or the private sector, thus, creating double funding. DepEd has had to re-program for other uses the released funds earmarked for those projects which is a complicated process.

New Bataan in Compostela Valley was one of the hardest hit landslide areas during Typhoon Pablo. To give a snapshot of the profile of the donations received by the LGU for Typhoon Pablo assistance, figures from New Bataan show that it received a total of Php3.8 million with donations ranging from Php4,000 to Php500,000. Of the Php3.8 million total donations received, transfers from other LGUs amounted to approximately Php3.1 million. Transfers from LGUs included donations from various barangays, cities and municipalities. Donations from the private sector and other government organizations such as the League of Municipalities and the Regional Development Council of Region 11 comprised the remaining Php700,000.

Lastly, often cited as a critical factor to the completion of the rehabilitation plan of Typhoon Pablo was the strong coordination led by the provincial governments of Davao Oriental and Compostela Valley among the national government, LGUs, private sector and NGOs/development partners. In Compostela Valley, the provincial LGU coordinated all post-disaster efforts which became critical in directing assistance to affected areas, post-disaster needs assessment, rehabilitation plan formulation and monitoring of implementation of the rehabilitation plan. This arrangement has been institutionalized in the province.

B. Typhoon Yolanda

As in the case of Typhoon Pablo, damages and loss assessments in the aftermath of Typhoon Yolanda were conducted culminating in NEDA Ray report (see Table 12 below)³³. The NEDA RAY report was led by NEDA and included estimates of damages and losses to both public and private sectors with the private sector bearing around 80 percent of total cost. As highlighted in the RAY report, in terms of fiscal impacts, additional public spending was estimated at Php125.1 billion for 2013 and 2014 while ADB estimates showed expected lost tax revenue in affected regions at Php2.3 to Php8 billion in 2013 and Php5.7 billion in 2014.

³³ The OCD also completed a PDNA in April 2014 but due to issues on data collection, the GoP uses the RAY estimates (GFDRR-World Bank, May 2015). The PDNA estimates does not include damages and losses to the private sector.

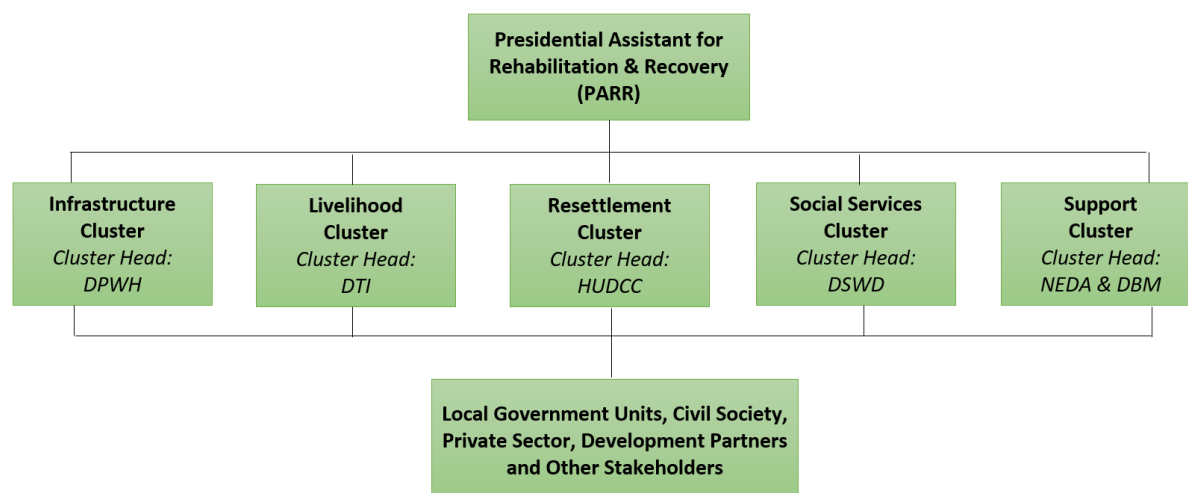
Table 12. Typhoon Yolanda RAY Damage and Loss Assessments for Public and Private Sectors
(in million pesos)

Sector	Damage and Loss				
	Damage		Loss		Total
	Public	Private	Public	Private	
Infrastructure	16,024.30	4,285.00	7,108.40	6,565.40	33,983.00
Economic	3,743.50	67,560.00	87.00	106,716.60	178,107.10
Social	23,175.30	305,472.10	3,442.30	22,628.80	354,718.50
Cross-sectoral	4,000.00		300.00		4,300.00
Total	46,943.00	377,317.10	10,937.10	135,910.80	571,108.50

Source: NEDA, RAY Report, December 2013

The institutional arrangement for Typhoon Yolanda followed the cluster approach of Typhoon Pablo and led by the Office of the Presidential Assistant for Rehabilitation and Recovery (OPARR) (see Figure 9 below). The OPARR was formed through M.O. No. 62. The cluster approach has proven to be crucial in terms of coordination and planning. One difference with the cluster approach arrangement for Typhoon Yolanda relative to Typhoon Pablo was that resettlement cluster was headed by HUDCC instead of DILG.

Figure 9. Cluster Approach for Typhoon Yolanda



Source: Presentation of Atty. Lesley Y. Cordero, former Undersecretary to the OPARR, Geneva, Switzerland, July 2014

The CRRP budget of Php170.1billion was recommended by the OPARR and approved by the President (see Table 13 below). Unlike in the case of Typhoon Pablo, the proposed budget for Typhoon Yolanda was fully approved by the President. In terms of releases (see Table 14), the latest update report from the DBM shows that a total of around Php105.4 billion has been released to the various agencies, GOCCs, and LGUs with DSWD and NHA comprising Php65.2 billion or 62 percent of total fund releases.

Table 13. CRRP Budget for Typhoon Yolanda

Cluster Plans	2014-2016 (P)
Infrastructure	35,148,634,407.81
Social Services	26,406,233,815.17
Resettlement	75,678,680,000.00
Livelihood	33,682,884,441.65
TOTAL	170,916,432,664.63

Source. Yolanda Comprehensive Rehabilitation and Recovery Plan

Table 14. DBM Releases for Typhoon Yolanda *as of March 31, 2016 (in Pesos)*

Implementing Agency/LGU	YEAR				TOTAL RELEASES
	FY 2013	FY 2014	FY 2015	FY 2016	
NATIONAL GOVERNMENT AGENCIES	15,371,041,891	25,724,423,763	19,353,527,017	55,386,342	60,504,379,013
Department of Agriculture	1,728,720,000	1,045,569,785	58,620,000	0	2,832,909,785
Department of Agrarian Reform	100,000	0	0	0	100,000
Department of Budget and Management	1,200,000	1,551,493	6,115,500	8,939,000	17,805,993
Department of Education	1,110,290,000	3,859,346,000	751,932,518	0	5,721,568,518
Department of Energy	0	951,079	0	0	951,079
State Universities and Colleges	0	826,527,595	1,099,250,055	0	1,925,777,650
CHED	0	4,844,525	0	0	4,844,525
Department of Environment and Natural Resources	176,558,358	0	1,000,000,000	0	1,176,558,358
Department of Finance	0	2,000,000,000	0	0	2,000,000,000
Department of Health	1,453,350,000	500,000,000	0	0	1,953,350,000
Department of the Interior and Local	2,012,180,000	2,467,732,486	737,938,480	0	5,217,850,966

Government					
Department of Justice	2,000,000	50,000,000	0	0	52,000,000
Department of Labor and Employment	113,500,933	892,726,765	0	0	1,006,227,698
Department of Public Works and Highways	737,000,000	2,370,492,863	1,591,646,938	46,447,342	4,745,587,143
Department of Social Welfare and Development	5,906,604,000	11,441,571,882	13,449,523,526	0	30,797,699,408
Department of Science and Technology	0	31,000,000	0	0	31,000,000
Department of Trade and Industry	0	17,881,500	0	0	17,881,500
Department of Transportation and Communications	2,100,000,000	214,227,790	658,500,000	0	2,972,727,790
National Economic Development Authority	29,538,600	0	0	0	29,538,600
GOVERNMENT OWNED AND CONTROLLED CORPORATIONS	11,328,471,784	11,000,000,000	22,551,638,264	0	44,880,110,048
National Housing Authority	2,438,638,000	11,000,000,000	20,969,018,000	0	34,407,656,000
Phil. Coconut Authority	2,868,690,000	0	0	0	2,868,690,000
National Food Authority	111,205,000	0	0	0	111,205,000
National Electrification Administration	3,929,360,000	0	922,620,264	0	4,851,980,264
National Power Corporation	101,480,000	0	0	0	101,480,000
Transco	1,500,000,000	0	0	0	1,500,000,000
Local Water Utilities Adm.	334,098,784	0	660,000,000	0	994,098,784
National Irrigation	45,000,000	0	0	0	45,000,000

Administration					
LOCAL GOVERNMENT UNITS	36,831,947	0	0	0	36,831,947
Grand Total	26,736,345,622	36,724,423,763	41,905,165,281	55,386,342	105,421,321,008

Source. Department of Budget and Management (n.d.). *Releases for Typhoon Yolanda - FYs2013, 2014, 2015 & 2016: By Year/Implementing Agency/Fund Source/SARO/Purpose as of March 31, 2016 (In pesos)*. Retrieved on March 28, 2017 from [http://www.dbm.gov.ph/wp-content/uploads/YOLANDA/List%20of%20Releases%20\(excel%20file\)/Yolanda%20Releases%20as%20of%20March%2031%202016%20\(1\).pdf](http://www.dbm.gov.ph/wp-content/uploads/YOLANDA/List%20of%20Releases%20(excel%20file)/Yolanda%20Releases%20as%20of%20March%2031%202016%20(1).pdf).

There has been much issue taken with the delay in implementation of the CRRP for Typhoon Yolanda. However, based on update reports from NEDA and the information on releases from DBM show that almost 100 percent of the CRRP has already been completed in all sectors except in housing sector which was discussed in the previous section. For Typhoon Yolanda, almost all reconstruction efforts were implemented by the line agencies with the rationale being that LGUs did not have capacity for reconstruction at a massive scale.

Table 15. NEDA update report as of October 2016³⁴

Social Services				
<i>DepEd</i>	Targeted	Completed	Ongoing (Under Procurement)	Not Yet Started
Textbooks and learning materials provided (copies)	6,470,478	5,122,709	1,347,769	0
Learning kits provided	339,745	339,745	0	0
<i>DSWD</i>				
Emergency shelter assistance provided (families)	1,032,655	1,038,671	42,197	0
Infrastructure				

³⁴ Based on notes from the NEDA update report, outputs listed in Table 15 does not show the whole list of agencies. The updates are based on agency reports submitted on (a) October 2016 (DPWH, CHED, DILG, NIA, DA), (b) September 2016 (NHA, BFAR, PCA, TESDA), (c) August 2016 (DTI, DSWD), (d) July 2016 (DepEd) and (e) February 2016 (DOTr).

<i>DPWH</i>	Targeted	Completed	Ongoing (Under Procurement)	Not Yet Started
National roads reconstructed/ rehabilitated (<i>km</i>)	105.3	102.28	2.575 (0.448)	0
National bridges reconstructed/rehabilitated (<i>km</i>)	1,852.53	1,852.53	0	0
Flood control structures reconstructed/rehabilitated	110	99	11	0
<i>DOTr</i>				
Airport facilities rehabilitated (<i>e.g. asphalt overlay, passenger terminal building</i>)	38	36	0	2
Seaport facilities rehabilitated (<i>e.g. port, passenger terminal building, causeway, seawall</i>)	57	23	(27)	7
<i>DepEd</i>				
Newly constructed classrooms	2,313	1,744	253 (3)	313
Rehabilitated classrooms	17,335	9,545	2,715 (557)	4,518
<i>CHED</i>				
State colleges and university projects completed (<i>e.g. repair/rehabilitation of classroom, dormitory, library</i>)	719	700	19	0
<i>DILG</i>				
Municipal facilities rehabilitated (<i>civic centers, municipal halls, and public markets</i>)	307	305	2	0
Barangay facilities rehabilitated (<i>barangay halls, barangay day care centers, barangay civic</i>)	3,551	2,448	754 (294)	55

centers)				
NIA				
National/communal irrigation systems restored (structures)	206	111	4	91
Resettlement				
NHA	Targeted	Completed	Ongoing (Under Procurement)	Not Yet Started
Housing units constructed	205,128	29,661	102,240	73,227
Livelihood				
BFAR	Targeted	Completed	Ongoing (Under Procurement)	Not Yet Started
Fishing boats repaired/replaced (unit)	54,825	53,969	4,927	0
Fishing gears and paraphernalia provided (set)	68,636	79,105	2,546	0
DA				
Farm tools (set-includes pick, mattock, shovel, bolo, water sprinkler, and rake)	27,372	24,643	(531)	2,198
Tractors and Other Machineries (unit)	188	150	(9)	20
Rice and corn seeds distributed (bags)	148,848	131,091	6,241	7,716
PCA				
Coconut areas replanted (hectares)	100,000	83,240	(54,638)	0
Areas with coconut intercropping (hectares)	282,000	82,786	(25,185)	174,029
DTI				

Starter kits distributed	12,477	4,397	0	8,080
Entrepreneurship trainings conducted	364	301	0	63
<i>DSWD</i>				
Livelihood assistance grant and Cash for Building Livelihood Assets (CBLA) provided (<i>beneficiaries</i>)	360,437	376,198	0	0
<i>TESDA</i>				
Skills and livelihood trainings conducted	48,733	40,022	0	16,158

Source. National Economic Development Authority

There is no comprehensive and centralized listing of donations during Typhoon Yolanda but figures from Tacloban City show that a total of Php36.85 million was received. Financial assistance from (a) LGUs amounted to Php29.5, (b) national government and GOCCs amounted to Php1.9 million and (c) private and foreign donors at Php5.45 million.

Looking into the sources and levels of DRFI in Typhoon Yolanda and Pablo validate key issues identified at the overall level. First, the GoP continues to be the main source of financing for recovery and reconstruction. Limited funds of the GoP force it to prioritize and recognize the fact that many of the needs or requirements will remain unfunded³⁵ and this will hamper full recovery from disasters. Second, ad hoc institutional arrangements prevail although recent improvements are shown in the adoption of the clustering approach in both Typhoons Pablo and Yolanda. One instance where ad hoc arrangements can affect government post-disaster response in recovery and reconstruction is the lack of delineation of mandates or responsibilities. For instance, there is an overlap in responsibilities between DSWD and NHA in providing permanent shelter. Third, in terms of budget execution, procurement and absorptive capacity issues curtail timely and smooth implementation of projects. As was noted in previous sections, the length of the procurement process hinders project implementation and there is a need to clarify emergency procurement guidelines. In terms of absorptive capacity, for disasters at a massive scale such as Typhoon Yolanda, NGAs were hampered in their response in the immediate aftermath as physical and manpower resources were affected. However, for NGAs, it has been raised that they were able to

³⁵ GFDRR-World Bank, May 2015.

adjust to meeting the post-disaster needs unlike LGUs whose capacities were constrained. Lastly, recognizing the importance of the role of the province is crucial. As in the case of Typhoon Pablo, strong coordination from the province led to efficient gains in coordination, participatory planning and faster response. A general lack of communication among the agencies, province and other sub-LGUs was cited in some instances in Typhoon Yolanda. For example, some LGUs were not aware which projects have been approved and the status of funds and project implementation.

VI. Policy Recommendations

The importance of the DRFI agenda has risen significantly in recent years. There has been a paradigm shift in government in accepting that the occurrence of more frequent and large-scale disasters has become the “new normal”. At a global level, the GoP has assumed a leadership role in advancing the DRFI agenda such as in APEC, ASEAN and the V-20. With this, the GoP is trying to institute additional innovations and mechanisms that will allow it to not continue its heavy reliance on the usual ways DRFI has been managed, beginning with the implementation of the national DRFI strategy. However, as has been fully discussed in the previous sections, considerable issues remain to be addressed.

In general, as discussed in previous sections, the fundamental issues that need to be addressed pertain to improving existing risk retention and risk transfer mechanisms or expanding the array of DRFI instruments to improve efficiency in overall DRFI management. Several initiatives are ongoing to address these as has been discussed such as the institutionalization of parametric insurance in GSIS and overall improvements to NDRRM Fund access through the recently approved JMC of OCD.

Currently, limitations of data, protracted or inefficient processes as well as weaknesses in structure or mechanism design have linkages that lead to sub-optimal outcomes. For instance, protracted processes for budget approvals and fund releases from the NDRRM Fund or fiscal budget for reconstruction needs lead to demand for quick-disbursing insurance products such as parametric insurance. Parametric insurance is more compatible with the immediate liquidity needs for the relief phase of disasters. With the lengthy claims processes of traditional insurance and the delays in fund releases from the national government, line agencies and LGUs are opting to avail of parametric insurance as a short- to medium- term solution. In the long-term, improvements to indemnity-based insurance and processes for NDRRM Fund access is needed.

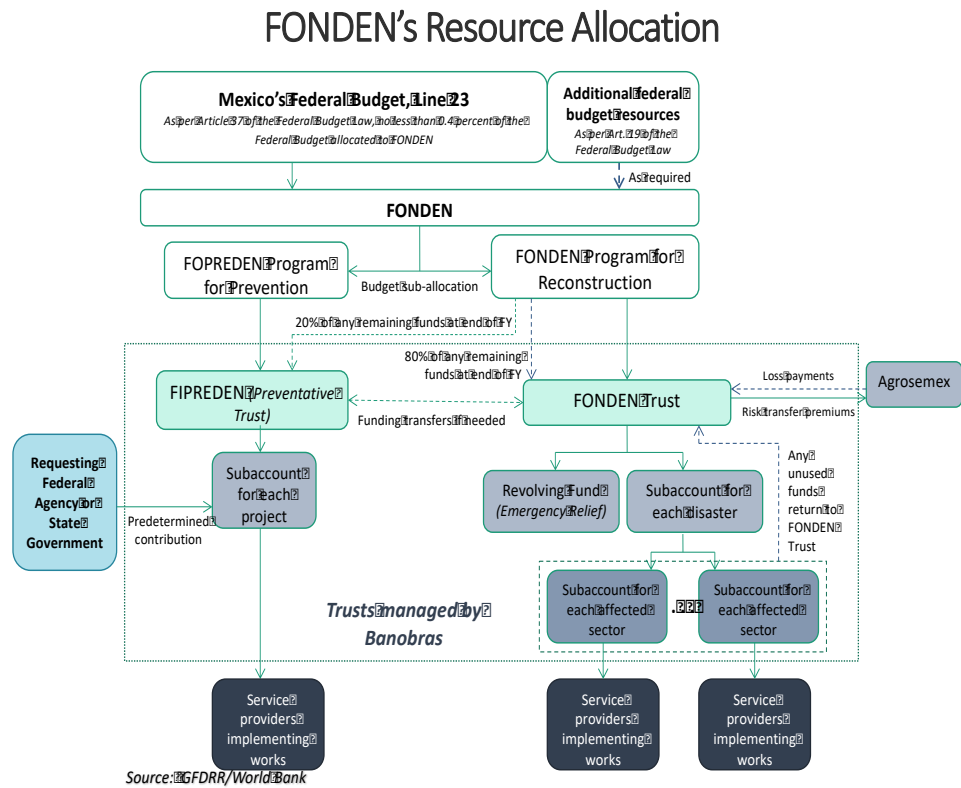
However, the integrated approach needed for efficient DRFI management needs to be reflected in the core DRFI structure design. Effective DRFI management will formulate strategies that

combine the use of various DRFI instruments or mechanisms as well as the levels of funding from each instrument based on the risk profile, fiscal position of the government, its DRFI objectives and market conditions. At the same time, the structure needs to address the uncertainty in terms of annual budget allocations to the NDRRM Fund, the protracted funds flow processes, and ensuring effectiveness of outputs, integrating build-back-better principles.

The experience of Mexico in DRFI management with its core structure, the FONDEN Fund, may provide vital insights and lessons to the Philippines. The key features of FONDEN are the following (see Figure 10 below):

- a) Annual budget appropriations are pre-determined as prescribed by law which is .4 percent of the annual federal budget. This guarantees a set level each year unlike the uncertainty that is faced in the Philippines with respect to the funding levels of the NDRRM Fund.
- b) The annual budget allocations accrue to a trust fund, thus, allowing for reserves to grow sustainably in the long-term if invested well; the trust is managed by a state-owned financial institution, Banobras. In the case of the Philippines, any unexpended amounts at the end of the fiscal year reverts back to the General Fund.
- c) Reserves can be leveraged through risk transfer products thus increasing the financial capacity of FONDEN especially in times of large-scale events; risk transfer transactions are coursed through a state-owned insurance firm, Agrosemex. In order to increase financial capacity of the FONDEN and not drain its reserves, it takes a portion of its reserves to purchase insurance that protects the FONDEN during major events. For instance, an insurance product that the FONDEN utilizes is one that if loss levels from a disaster reaches a certain point, the insurance policy triggers and inject cash into the fund.
- d) There are only 3 members in the managing body of the FONDEN: 2 representatives from the Ministry of Finance and 1 representative from the Ministry of the Interior; Overall DRFI management is based on strategies that consider risk information, market conditions, and fiscal/development objectives.
- e) There are separate pillars for prevention/mitigation and reconstruction. Unlike in the current set-up of the NDRRM Fund where these priorities compete for funding, the institutionalization of 2 distinct pillars in FONDEN allows for certainty that funding will be channeled towards both prevention/mitigation and reconstruction.
- f) There are cost-sharing rules as well as defined contingent liabilities or financial responsibilities of the government for post-disaster requirements.
- g) There are pre-established channels for funds flow wherein funds go direct to accounts of service providers implementing reconstruction works.
- h) There is a built-in incentive structure for sub-national governments to encourage states to take responsibility for their own DRFI management. At the first request, states can avail up to 100 percent of their funding request. However, the amount of funding declines at subsequent applications for fund request if the state does not avail of catastrophe risk insurance for its public assets.

Figure 10. Structure of FONDEN’s Resource Allocation



To fully reach the objectives of improving financial resilience and mitigating contingent liabilities in the face of natural disasters as well as minimizing negative impacts especially to the people, a review of the current DRFI management structure is needed. The sunset review of RA 10121 that is currently underway can provide an opportunity to institute changes in the core managing structure for DRFI. Features from FONDEN that are applicable to the Philippine setting can be integrated as it addresses the core issues of uncertainty in funding, protracted processes for fund access and releases as well as procurement issues. The proposed managing structure allows for an integrated approach to DRFI management as well as addresses the need to manage contingent liabilities of the GoP due to natural disasters. There can be clarity in terms of criteria and rules for fund access and fund delivery channels. Lastly, separate pillars for risk reduction/mitigation and reconstruction addresses the need to bring about the virtuous cycle that harnesses the linkages between investments in disaster risk reduction and DRFI.

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