



Context

The Philippines is one of the largest island groups in the world with 7,107 islands and islets (OCD-DND, 208). The country is exposed to multiple hazards - at least 60 per cent of the total land area is exposed to multiple hazards, and 74 per cent of the population is vulnerable to impacts (GFDRR, 2017; IFRC, 2020). The country is situated on the typhoon belt of the western pacific and located within the Circum-Pacific Belt, also known as the Ring of Fires. On average, about 20 tropical cyclones enter the Philippines waters each year, with approximately eight or nine making landfall (ESCAP/WMO, 2009; Bankoff, 2003), causing the greatest damage.

Other hazards which are increasing in frequency include floods, landslides, tsunamis and wildfires, all of which are occurring in frequency. Of these, hydro-meteorological events accounted for over 80 percent of the natural disasters in the country during the last half-century (UNDRR, 2019). *All the main hydro-meteorological hazards in the country (typhoons, storm surges, drought, sea-level rise, and tsunamis) are directly influenced by climate change and are, therefore, expected to continue to exacerbate in terms of intensity, frequency, and unpredictability over the coming years* (IFRC, 2020). According to the Philippine Atmospheric Geophysical and Astronomical Services Administration (PAGASA), the intensity of tropical cyclones entering the Philippines area of responsibility (PAR)¹ had been increasing between 1951 and 2015. In recent years, the country has been struck by some of the strongest ever recorded in the world, such as Typhoon Haiyan in 2013. Other slow-onset phenomena like the El Niño Southern Oscillation in 2015, which affected seven million individuals across 43 provinces and was the strongest since 1950, can disrupt the economy and livelihoods (IFRC, 2020).

Although the Philippines is on track to achieve the status of an upper-middle-income country in the next few years, there are several fundamental challenges. There is high inequality, high levels of poverty and vulnerability and capacity issues at the local government level. The poorest and most marginalised sectors

¹PAR is an area in the Northwestern Pacific where PAGASA, the Philippines' national meteorological agency monitors weather occurrences. Significant weather disturbances, specifically tropical cyclones, that enter or develop in the PAR are given Philippine-specific names

of the population are often more adversely affected by climatic shocks. For example, after typhoons Ondoy and Pepeng, the incidence of poverty in the province of Rizal almost doubled from 5.5 percent to 9.5 percent within three years (IFRC, 2021).

The islands and groups are divided into four main classes of administrative divisions, which consist of (as of 2018) 17 regions², 81 provinces, 145 Cities, 1,489 municipalities (Local Government Units -LGU), and the smallest political units, 42,044 Barangays (Villages) (PSA, 2018). Municipalities are divided into income classes according to their average annual income during the previous four calendar years³.

Legislation and Policy Environment

As a country significantly exposed to natural hazards, the Philippines has a long history in managing and responding to extreme events, with the institutional frameworks for DRR better developed and established than for CCA (OECD, 2020). Over the last decade, the Government of the Philippines has developed comprehensive legislation and institutional arrangements governing Disaster Risk Management (DRM). The entry point for anticipatory action (AA) is the Republic Act (RA) **10121**, also known as the **Philippine Disaster Risk Reduction Act (2010)**⁴. This provides an overarching legal basis for DRR/M and adheres to the principles and strategies consistent with the international standards set by the Hyogo Framework for Action (DRRNetPhils, n.d.)⁵. RA 10121 has significantly changed the old government structure from focusing on post disaster response to preparedness/anticipatory and risk reduction in general. The Act provides a comprehensive, all-hazard, multi-sectoral, inter-agency, and community-based approach to disaster risk management through the formulation of the National Disaster Risk Management Framework (WFP communication). Measures included in the Act include the a. formation of multi-agency, multi-sectoral Disaster Risk Reduction and Management Council at the national level (National Disaster Risk Reduction and Management Council (**NDRRMC**)⁶) and committees at provincial and local levels b. Creation of a Disaster Risk Reduction and Management Office (DRRMO) at province and local levels (Barangay Disaster Risk Reduction and Management Committee (BDRRMC)) c. Development of Disaster Management Plans at national to local levels, d. Use of a calamity fund to support DRR, mitigation, prevention and preparedness activities.

Both DRM and CCA systems mandate the LGUs to take the lead as ‘frontline agencies’, enabled by national government resources and funding. The Presidential Decree **1566** (1978) which preceded RA 10121, directed a tiered approach to responding to disasters from the regional level down to the barangay level. Leadership responsibility was given to local executives: the Provincial Governor, City Mayors, and Municipal Mayors, (and Barangay Chairman), each according to his area of responsibility. LGUs were authorised to allocate funds for disaster preparedness. RA **7160** (1991), also known as the **Local Government Code**, reinforced LGU autonomy by decentralising the government structure to enhance the provision of basic services at the grassroots level and improve efficiency in resource allocation. At the sub-national level, the institutional structure includes a Local DRRM Council (**LDRRMC**) and a local DRRM

² An autonomous region of the Philippines is a first-level [administrative division](#) that has the authority to control a [region's](#) culture and economy. The [Constitution of the Philippines](#) allows for two autonomous regions: in the [Cordilleras](#) and in [Muslim Mindanao](#). Currently, [Bangsamoro](#), which largely consists of the Muslim-majority areas of [Mindanao](#), is the only autonomous region in the country.

³ https://en.wikipedia.org/wiki/Municipalities_of_the_Philippines

⁴ Succeeded PD 1566 or the 1978 Presidential Decree on disaster control and community preparedness. Also known as "An Act Strengthening the Philippine Disaster Risk Reduction and Management System, providing for the National Disaster Risk Reduction and Management Plan, Appropriating Funds, Therefore and Other Purposes" was passed and approved on May 27, 2010 after 21 years of revisions and refile in the two legislative bodies. <https://www.officialgazette.gov.ph/2010/05/27/republic-act-no-10121/>

⁵ https://www.preventionweb.net/files/11448_PDCdrmbillprimer.pdf

⁶ Administered by the Office of Civil Defense (OCD) under the Department of National Defense (DND). It is composed of various pillars namely Disaster Prevention and Mitigation, Disaster Preparedness, Disaster Response and Disaster Recovery

Office (**LDRRMO**). Generally, the LDRRMO executes the DRRM agenda and the plan of the LGU, which includes DRR strategies such as prevention, mitigation and preparedness which can include AA activities (WFP communication).

In terms of potential funding for AA, the General Appropriations Act (GAA)⁷ is one of the most important legislation that Congress passes annually and it defines the annual expenditure program of the national government. A minimum of 5 percent of the national budget is allocated to DRM activities. The National Disaster Risk Reduction and Management Fund (**NDRRMF**)⁸ - previously known as the 'calamity fund', appropriated by the GAA - allocates 30 percent of appropriated funds (ie. a minimum of 5 percent of the national budget) as a Quick Response Fund (QRF) or stand by fund for emergency response and 70 percent for disaster prevention, mitigation and recovery (RA 1021). The rationale behind this split was that if DRR activities are implemented properly, then a smaller amount would be needed for response. However, with extreme events this is no longer the case (UNDRR KII). Funds can only be drawn after a declaration of a national state of calamity and subject to the approval of the Office of the President (OPM, 2018). The QRF, however, can be accessed without the approval for more timely release of funds. During Typhoon Haiyan, the size of the fund and the process to replenish it was found to be inadequate (OPM, 2017). Starting 2012, the QRF of various agencies were already incorporated into their regular budgets. Key members⁹ of the NDRRMC receive their QRFs through their respective annual budgets as specified under the annual GAA (Domingo, S. 2014).

The Local Disaster Risk Reduction and Management Fund (**LDRRMF**) - RA 7160 mandated funding for LGU initiatives. *"Five percent (5%) of the estimated revenue from regular sources shall be set aside as an annual lump sum appropriation for unforeseen expenditures arising from the occurrence of calamities: Provided, however, that such appropriation shall be used only in the area, or a portion thereof, of the local government unit or other areas declared by the President in a state of calamity"*. Similar to the NDRRMF there is a 30-70 split in the use of the funds. Amendments RA 8185¹⁰ and RA 10121 expanded the use of the fund. Funds were earmarked to support disaster risk management activities such as, but not limited to, pre-disaster preparedness programs including training, purchasing life-saving rescue equipment, supplies and medicines, for post-disaster activities, and for the payment of premiums on calamity insurance. However, the release of QRF from N/LDRRMF for relief and recovery is mandated *after* the declaration of a State of Calamity. In 2019, the government passed Memo No. 60¹¹ or the Revised Guidelines for the Declaration of a State of Calamity. This states that a State of Calamity can be declared if *inter alia* *"at least 15 per cent of the forecasted affected population based on science -based projection are in need of emergency assistance; At least 30 per cent of the means of livelihood on agricultural, business and industrial sectors are affected"* (NDRRMC, 2019 pp2). In addition to this, a local declaration can be issued by the local *Sanggunian* (Council) on recommendation of the relevant LGU LDRRM based on a set of guidelines (NDRRMC, 2019:pp3). The utilisation of funds set out in Memo 60 are ex-post and specific, however the AA Technical Working Group (Refer to AA initiative section) is developing a position paper to advise the government on how to frame the memo, so that AA can be better funded under this. Memo 60 also mandates Local DRRM Councils to assess crisis situation using various tools such as the Pre-Disaster Risk Assessment (PDRA) and can utilise the QRF under the LDRRMF for prepositioning of, *inter alia*, food

⁷ <https://www.dbm.gov.ph/index.php/dbm-publications/general-appropriations-act-gaa>

⁸ Previously known as the calamity fund as appropriated under the annual General Appropriations Act (GAA)

⁹ These include: the Department of National Defense Office of the Secretary (DND-Osec), the Department of National Defense Office of the Civil Defense (DND-OCD), Department of Social Welfare and Development (DSWD), Department of Public Works and Highways (DPWH), Department of Education (DepEd), and the Department of Agriculture (DA)

¹⁰ An Act Amending Section 324 (d) An Act Amending Section 324 (d) of Republic Act No. 7160 (1991)

¹¹ NDRRMC (2019) Revised Guidelines for the Declaration of a State of Calamity (<https://www.officialgazette.gov.ph/downloads/2019/06jun/20190617-NDRRMC-MO-60-RRD.pdf>)

and medical supplies among others (WFP Communication). There are policy provisions/guidelines¹² that restrict how QRFs are utilised in order to ensure that the standby fund is properly disbursed and used as mandated (Domingo, S. 2014; NDRRMC, 2013¹³). However, an issue with this is that the LGUs that are the most vulnerable to disasters tended to be the poorest hence have smaller funds (IFRC KII).

Joint Memo Circular No. 2013-1¹⁴ was issued to guide LGUs in the allocation and use of LDRRMF and to enhance transparency and accountability in the use of the fund. The main concern of the Dept of Budget and the Audit Committee was that funds would be misused; therefore safety nets were built in - the memo stipulates that funds can be released but the funds need to be used specifically (UNDRR, KII). One interviewee mentioned that funds are available for pre-positioning etc via the usual disaster preparedness plans. But in general, there is a lot of hesitancy because of uncertainty of forecasts and the fact that a typhoon can change direction. One interviewee mentioned that there are some local executives who are bolder and have declared an 'imminent' state of calamity based on forecasts because they had zero doubt. If you live in a locality which is affected by typhoons regularly and understand scenarios you can afford to be bolder. When the typhoon hits, then a state of calamity is declared which then saves them from court cases.

From an AA perspective, RA 10121 states the need to *“Establish a national early warning and emergency alert system to provide accurate and timely advice to national or local emergency response organizations and to the general public through diverse mass media to include digital and analog broadcast, cable, satellite television and radio, wireless communications, and landline communications”*. The capacity of the National Meteorological and Hydrological Services Agency, Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), has improved over the last decade. After Super Typhoon Haiyan, improvements in early warning systems were made. Given the numerous regional languages, the PAGASA did not have a local term to properly communicate the phenomenon of a storm surge to all areas hit by the disaster. After the disaster, PAGASA has worked with linguists to craft simpler meteorological terms to ensure that the dangers from disaster risks are fully understood by all (OECD, 2020). In addition to this, *‘Pursuant to this function, the Department shall have the authority to require mobile phone service providers to send out alert at regular intervals in accordance with Republic Act No. 10639, also known as the “Free Mobile Data Alerts Act”’* (Senate SB No. 205, 2019). Mandating telecommunication companies to provide free mobile data for free is considered good practice. In 2014, the RA10639 was passed and signed into law, requiring the NDRRMC and telecom companies to send free mobile alerts before disasters happen. However, the law day idle for a while due to issues related to the implementation of the Implementing Rules and Regulations (IRR) - the law that guides telecom companies in executing the law¹⁵.

Prior to the passing of RA 10121 in 2010, the **Climate Change Act** of 2009 (RA 9729) had already been adopted, which apart from defining the climate change adaptation and mitigation framework also aims to create a nexus with DRRM. The act *“creates a comprehensive framework for integrating climate change with disaster risk reduction in policy formulation, development plans, poverty reduction strategies, and other development tools”* (LSE n.d.)¹⁶. Both the DRR and CC Acts ‘recognise respective areas of focus,

¹² RA 9184 or the Procurement Act, the fund designation indicated in the GAA, DBM National Budget Circulars 507/534/543

¹³ Allocation and Utilization of the Local Disaster Risk Reduction and Management Fund
https://ndrrmc.gov.ph/attachments/article/1320/JMC_No_2013-1_re_Allocation_and_Utilization_of_LDRRMF.pdf

¹⁴ chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2F%2Fndrrmc.gov.ph%2Fattachments%2Farticle%2F1320%2FJMC_No_2013-1_re_Allocation_and_Utilization_of_LDRRMF.pdf&clen=2539112&chunk=true

¹⁵ <https://www.manilatimes.net/2014/12/08/news/top-stories/mobile-disaster-alerts-law-idle/147426>

¹⁶ The Climate Change Act (RA 9729), and its Implementing Rules and Regulations (IRR, Administrative Order No. 2010-01)

highlighting their inherent links and convergent purposes, including the overarching aim to reduce risks and vulnerabilities from natural hazards, and the importance of localised implementation' (IFRC, 2021: pg16). High level oversight is provided through a Cabinet Cluster on Climate Change Adaptation, Mitigation and Disaster Risk Reduction that was created in 2017 after an internal reorganisation (IFRC, 2021). The Act created the Climate Change Commission (CCC), under the Office of the President, as the lead policymaking body in the country, tasked to coordinate, monitor and evaluate the programs and action plans of the government relating to climate change. It was amended in 2012 to establish the **People's Survival Fund (PSF)** for the financing of adaptation programs and projects. A billion pesos (US\$22.2m) is appropriated under the GAA as the opening balance. The fund's projects are meant to address the impacts of natural hazards and climate change which is considered good practice in terms of coherence (IFRC, 2021). However, although the fund¹⁷ is viewed as 'good practice' in terms of CCA- DRR mainstreaming, as of 2019 only six projects with a cumulative worth of approx. US\$6.5m are currently being implemented (IDCR *et al.* 2019).

However, unlike DRRM, climate change intervention at the sub-national level has no defined structure but its activities are crucial to provide climate related predictive analytics and forecasts that can support DRRM related preparedness actions (WFP communication). The Climate Change Act recognises the role of LGUs in the formulation, planning and implementation of climate change action plans, and the Climate Change Act Implementing Rules (2015) require the integration of LGUs' planning activities on both mitigation and adaptation with other sectoral plans, including local planning on Local DRRM Plans. Additionally, both the National CCA and the National DRR and Management Plans (covering the period 2011–2028) foresee a role for LGUs in the development and implementation of scaled-down local plans (IFRC, 2021).

The Philippines **Long-Term Vision 2040** (AmBisyon Natin 2040)¹⁸ integrates the three global agenda, Sustainable Development Goals, Sendai Framework for Disaster Risk Reduction and the Paris Agreement (UNDRR, 2019). The Philippines Development Plan (PDP) 2017-2022 supports the long-term vision and is the first 'socio-economic blueprint' of the country (UNDRR, 2019). The national DRM and climate change policy framework is made up of the **National Disaster Risk Reduction and Management Plan 2011-2028 (NDRRMP)**¹⁹, the **National Framework Strategy on Climate Change 2010-2022 (NFSCC)**²⁰ and the **National Climate Change Action Plan 2011- 2028 (NCCAP)**²¹. The NFSCC '*stresses a balance between adaptation and mitigation*' and laid the groundwork for the development of the NCCAP. The National Adaptation Plan is envisioned to be a derivative plan of the NCCAP²² and its implementation is aligned with the NDRRMP and the Philippines Development Plan (PDP) (NAP Global Network, 2018). An updated climate change plan is currently being discussed by the government and will incorporate the National Adaptation Plan (NAP) and the Nationally Determined Contributions (NDCs) per the Paris Agreement (IFRC, 2020). In terms of coherence - A MoU between the NDRRMC and CCC calls for a '*strengthened integration of respective CCA-DRR local planning and implementation*' (IFRC, 2020). The timeframes of the NCCAP and NDRRMP were established in parallel to 'reinforce' their convergence over the period 2011-2028. In the shorter term, the implementation phases were chosen to coincide with national

<https://climate-laws.org/geographies/philippines/laws/the-climate-change-act-ra-9729-and-its-implementing-rules-and-regulations-irr-administrative-order-no-2010-01>

¹⁷ Board is chaired by the Department of Finance

¹⁸ Philippine Development Plan 2017-2022 is the medium term plan <http://pdp.neda.gov.ph/philippine-development-plan-2017-2022/>

¹⁹ RA1021 developed and adopted a National Disaster Risk Reduction and Management Framework (NDRRMF), and pushed for the institutionalisation, implementation and funding of the NDRRMP.

²⁰ This sets out the guiding principles, main goals and objectives of the country's strategy

²¹ This is more detailed plan of programmes and strategies for addressing climate mitigation and adaptation

²² This is a nationally driven plan that outlines a long-term programs and strategies for adaptation and mitigation focusing on the seven thematic priorities.

and local elections. This would favour leaders if they were able to complete related activities within their terms (IFRC,2021).

Since at the local level, LGUs are responsible for the bulk of CCA and DRR policy implementation, this highlights the importance of strong vertical coordination across levels of governments, and a clear allocation of roles and responsibilities. Where robust LDRRMCs are in place, they can also act as a focal point for mainstreaming climate considerations into DRR plans. For example, LDRRMCs often act as climate change champions, by communicating sea-level rise risk maps at the community-level.

RA 10121 and 9729 require the inclusion of DRR-CCA into the local development planning process. From 2018 onwards, the development of a combined DRR-CCA plan is also part of the requirements by the Department of Budget and Management (DBM), Office of Civil Defense (OCD) and the DILG for the approval and release of its annual budget. This includes the 5 percent Local Disaster Risk Reduction and Management Fund (**LDRRMF**)²³. The presence of civil society organisations assure the integration of the interest of the communities in the local development plans (Gabriel, A. et al., 2021). Also, although, the formulation of **Local Disaster Risk Reduction and Management Plans (LDRRMP)**²⁴ as well as **Local Climate Change Action Plans (LCCAP)**²⁵ is mandated by law, compliance rates are still low . Out of 1634 Cities and municipalities, 748 or less than 50 per cent of LGUs had integrated CCA and DRR in the Comprehensive Land Use Plan (CLUP) in 2018 (OECD, 2020). But most LGUs have some form of plan since it is mandated that local DRR funds will only be released upon the development of a LDRRMP at the very minimum, regardless of quality (IFRC KII).

At the local level there can be more coherence than at the national level through the **Comprehensive Development Plan (CDP)**²⁶ which both the LCCAP and LDRRMP feed into. The CDP is used for the annual investment allocation that defines the budget for the year. Further coherence can be attained through the use of risk assessment methodologies such as the climate and disaster risk assessment tool (CDRA)²⁷. Technical assistance is provided by various organisations to already resource weak municipalities The Global Initiative on Disaster Risk Management (GIDRM), supports the CDRA²⁸ process in two regions (region 8 Samar and 13 Surigao del Norte), and based on CDRA results supports the development of DRR-CCA plans in 12 municipalities in Cebu, two provinces in Region 8 (Samar and Leyte) and one province in Region 3 (Zambales) (GI:DRM n.d.; Pulhin, J. et al. 2021).

On 21 September 2020, a new Bill (**Disaster Resilience Act**), a priority for President Duterte, was approved by the lower House of Representatives as part of a 'Sunset Review' of the RA 10121, and is currently under review in the Senate (USAID Communication). The motivation for the review was post Typhoon Haiyan, when it was recognised that there needs to be more focus on prevention and mitigation as opposed to just preparedness and response. Also it was recognised that there isn't a strong mechanism

²³ <https://www.gidrm.net/en/gidrm-phase-2/coherence-in-practice/pilot-country-philippines>

²⁴ LDRRMPs are developed by the LDRRMOs at the provincial, city and municipal levels and the Barangay Development Councils and serves as the basis for the implementation of DRRM programs and activities at the local level (mandated by RA 10121).

²⁵ Formulated by local governments, to mirror the NCCAP, following the guidelines from the DILG (MC No, 2014-135). LGUs are mandated to submit all copies of the action plans and all subsequent amendments, modifications, to the CCC, within one month from their adoption.

²⁶ The CDP is a mandated action plan utilised by every LGU to develop and implement priority sectoral and cross-sectoral programs and projects.

²⁷ The CLUP Guidebook aims to equip LGUs to assess risk and vulnerability in their respective municipalities, with a broad aim to inform municipal disaster preparedness and planning.

²⁸ The GI: DRM project supports the DILG to harmonize risk management approaches. <https://www.gidrm.net/en/gidrm-phase-2/coherence-in-practice/pilot-country-philippines>

to link disaster and climate resilience²⁹. If signed to law, a new, permanent, specialised agency - the Department of Disaster Resilience would be the primary government agency responsible “to ensure a more efficient, coordinated, and complete system of disaster management — from risk assessment to emergency response right down to reintegration assistance and rehabilitation”³⁰. It is also expected that it will be built with the necessary structure and powers to manage broader climate-disaster governance arrangements, potentially taking on the powers of and functions of the OCD, and establishing “coordination and convergence” mechanisms with the Climate Change Commission (IFRC, 2020). This would be a higher level of authority than the current level of ‘bureau’ of the OCD as the Secretariat for the National DRM Council. However, the bill is currently stuck at the debate level because of the proposed funding requirement for the creation of the department - 1 billion Pesos (approx. US\$20 million) - mostly for staffing and operation costs (IFRC KII). An opening for AA is that the bill allows for a declaration of imminent state of calamity, which will legalise what some LGU executives have been already doing, as mentioned previously (IFRC KII). However, it appears unlikely that it will be approved anytime soon, before the end of the Duterte administration (IFRC KII, USAID Communication).

Disaster Risk Financing

Overall allocations for DRR/M in the Philippines have been steadily increasing over the past decade, which in part can be explained by an increasing political focus on DRR and by the growing expenses from damages from increasingly intense typhoon events. There is evidence of general under-investment in ex ante risk reduction and a bias towards reliance on ex-post response. In recent years, the Philippines has made great efforts in recent years to counter the bias by increasing investments in prevention (OECD, 2020). Although at the national and local level, there appears to be many funding sources, even with the best investments in disaster prevention or CCA, no government can fully protect itself from the costs of extreme events. In addition to clear funding for *ex-ante* prevention, a wide disaster risk-financing toolkit is becoming more largely available to governments to facilitate post-disaster relief, recovery and reconstruction and limit related fiscal risks. In 2013, Typhoon Haiyan alone left 6,200 people dead, caused US\$12.9 billion of damage, and pushed two million people below the poverty line (GFDRR, n.d). This vulnerability led the Government, with the assistance of the World Bank and GFDRR, to look into a program of financial planning. The Philippines Disaster Risk and Insurance (DRFI) Strategy is built on a country specific catastrophe risk model and identifies priority actions at the national, local and individual levels (World Bank *et al.*, 2018). One of the objectives is to ‘*reduce the impact on the near poorest and most vulnerable; shield the near-poor*’ (GoP, Dept of Finance 2019). The strategy is consistent with the ASEAN Agreement on Disaster Management and Emergency Response, and the ASEAN DRFI Roadmap and can feed into the DRFI initiative under APEC Cebu Action Plan (GoP, Dept of Finance 2019). AA funding through international instruments for disaster risk financing is currently limited. Although there are various triggers built in and they can be considered ex-ante, funds are not released on the basis of a trigger and there aren’t any associated Early Action Plans. The AA TWG sub working group on finance is looking at identifying different sources of financing for AA. Type of disaster financing include:

- **CAT-DDO** (i.e. a Disaster Risk Management Development Policy Loan with a Catastrophe-Deferred Drawdown Option³¹) - The Philippines became the first country in Asia to secure a US\$500 million line of credit. The World Bank disbursed the first CAT-DDO to the Philippines in December 2011 after Tropical Storm Sendong (Washi), and approved the second Cat-DDO (2) for another US\$500 million in December 2015 following Typhoon Ompong (Mangkhut). The Philippines can access this credit line upon ‘a state of calamity’ being declared by the President. In the case of Typhoon Ompong, the World

²⁹ Other motivation includes the need to have greater transparency around international donations and to protection issues related to internal displacement, which will be included in the act.

³⁰ AN ACT CREATING THE DEPARTMENT OF DISASTER RESILIENCE, DEFINING ITS POWERS AND FUNCTIONS, AND APPROPRIATING FUNDS THEREFORE <http://legacy.senate.gov.ph/lisdata/3046327341!.pdf>

³¹ The instrument acts like a catastrophe bond in that they provide a source of capital contingent on a disaster being declared.

Bank released US\$496.25 million to support the government's efforts in Luzon (World Bank, 2018)³². The Cat-DDO 2 instrument has a drawdown period of three years and can be renewed up to four times across a total of 15 years. The amounts repaid during the drawdown period are immediately available again for subsequent withdrawal, should further disaster strike. (Artemis, 2018)³³. In 2021, the government was seeking another line amounting to another US\$500 million³⁴.

- **Catastrophe Bond** - In November 2019, the World Bank issued a catastrophe bond for the Philippines, the first of its kind in Asia, which can provide the country with a maximum payout of US\$ 225 million - US\$150 million for TC disaster insurance protection and US\$75 for earthquake protection. The bond features a 'modelled loss' trigger and in 2020 the Bureau of the Treasury issued a notice to the calculation agent³⁵ for the cat bond transaction since it believed that Super Typhoon Haiyan to be an applicable event to require a calculation of the modelled losses to be undertaken. (Artemis, 2020)³⁶.
- **Southeast Asia Disaster Risk Insurance Facility (SEADRIF)**³⁷ - The Philippines is the seventh member of this Facility³⁸. Although SEADRIF payouts are not currently based on an ex-ante trigger, the PRC looked to see whether funds could be accessed for medium size disaster events such as Tropical Storm Tembin for which a 2.5 m CHF appeal was launched and unfunded. As a consequence vulnerable people living in a badly affected province have been displaced and have been living in tents and evacuation centres for over two years (IFRC, 2020). Funding for AA might be too operationally complex (World Bank KII).
- **Parametric Insurance Policy** - In 2018, the Government³⁹ placed this policy with a maximum cover of P20.49 billion (US\$400m) that could provide quick liquidity to national and local governments (in 25 disaster prone provinces in the Eastern Seaboard)⁴⁰. The premium for the program was allocated under the NDRRMF of the 2017 General Appropriations Act (RA 10924) for P1 billion (US\$19.5 million)⁴¹.
- **Philippine City Disaster Insurance Pool** - Technical assistance from the Asian Development Bank (ADB) has allowed the Ministry of Finance to explore the feasibility. Initial coverage includes earthquakes and typhoons, with the possibility of expanding this to also include floods. One of the advantages of such an insurance pool is that upon the occurrence of a triggering event, payments are made to governments within 15 business days (ADB, 2018). For vulnerable groups, this means that they can bounce back much quicker from a disaster as they do not have to wait for the oftentimes lengthy release of disaster aid by the international community. This in turn prevents these communities from falling into a spiral of poverty. However, for insurance pilots to translate into sustained strategies, they must include clear exit, replication or scale-up plans. In addition, across the case studies further sensitisation and education of the general public on micro risk insurance products is needed before coverage can be increased.
- **Philippine Crop Insurance Corporation** - The Department of Agriculture also provides agriculture insurance to farmers affected by disasters through the Philippine Crop Insurance Corporation (PCIC)⁴². The government pays the premium for small farmers and fishermen using a conditional criteria. After

³² <https://www.worldbank.org/en/news/press-release/2018/10/02/world-bank-releases-us496-million-to-assist-philippines-after-typhoon-ompong>

³³ <https://www.artemis.bm/news/philippines-gets-500m-for-typhoon-mangkhut-from-world-bank-cat-ddo-2/>

³⁴ <https://business.inquirer.net/325185/ph-seeks-500-m-contingent-credit-line-from-world-bank>

³⁵ Catastrophe risk modeller AIR Worldwide

³⁶ <https://www.artemis.bm/news/philippines-gov-requests-cat-bond-loss-calculation-for-typhoon-goni/>

³⁷ <https://www.seadrif.org/>

³⁸ SEADRIF is a platform for ASEAN countries to access disaster risk financing solutions and increase financial resilience to climate and disaster risks.

³⁹ In collaboration with the Dept of Finance, Government Service Insurance System, the World Bank and UKAID

⁴⁰ <https://www.dof.gov.ph/phl-urges-greater-regional-cooperation-on-disaster-risk-financing/>

⁴¹ <https://businessmirror.com.ph/2018/02/27/the-philippines-disaster-risk-financing-and-insurance-strategy/>

⁴² Created by virtue of PD 1467 (June 11, 1978), later on amended by PD 1733 (October 21, 1980) and further amended by RA 8175 (December 29, 1995)

the declaration of a disaster, PCIC pays the claims in 2 weeks, thereby helping the beneficiaries to make an easy recovery after a disaster. Typhoon Mangkhut in 2018 was the first large test, and farmers did receive payouts⁴³. This is one of few cases where poor/disaster affected Filipino households were partially insured during a disaster (USAID communication).

Philippines Risk Layering Framework⁴⁴



Source: World Bank, GFDRR, UKaid, GSIS (2018)

Social protection

There is growing interest in shock responsive social protection from the government. The Philippines has a robust social protection system led by the Department of Social Welfare and Development (DSWD). Therefore this could be scaled up as an anticipatory action to respond to severe hazards like floods and typhoons by using existing and targeting delivery systems. In November 2020, the Government endorsed a 'Roadmap to establish an adaptive and shock-responsive social protection (ASRSP) system' which is anchored on key policies from both the Social Protection Framework and the NDRRMP. This collaboration with FAO seeks to enhance coherence between social protection and agricultural programming, and to promote the establishment of SRSP for building resilience. This is one of the milestones of the DSWD Social Protection Plan 2020-2022. The National Household Targeting System for Poverty Reduction or **Listahanan**⁴⁵ is the national social registry for multiple programs, that the government has mandated⁴⁶ all agencies to use in order to identify poor households that could benefit from social protection programmes (OPM, 2017). It is hoped that "Listahanan 3" or the third round of assessment of poor families will be completed by 2021⁴⁷. In the 2016 update, 15 million households were recorded (approx. 75 per cent of the population), of which 5.2 million households were classified to be poor (World Bank, 2018; OPM, 2017)⁴⁸. However, interviewees noted that the list has been found to be inaccurate therefore had to create

⁴³ Philippines News Agency (2018) Ilocos, Cordillera farmers get crop insurance pay after 'Ompong' <https://www.pna.gov.ph/articles/1049306>. Accessed 11 October 2021

⁴⁴ SEADRIF - Featuring the experience of Indonesia and the Philippines <https://www.financialprotectionforum.org/sites/default/files/SEADRIF%20Webinar%206%20-%20Country%20experience%20final.pdf>

⁴⁵ Formally known as the National Household Targeting System for Poverty Reduction (NHTS-PR). Currently, only the 2015 Listahanan 2 database is available and needs to be updated. Listahanan 3 data is currently undergoing validation.

⁴⁶ Executive Order 867 (2010). It should be updated every four years.

⁴⁷ <https://mb.com.ph/2020/09/17/dswd-targets-complete-list-of-poor-households-by-2021/>

⁴⁸ <https://documents1.worldbank.org/curated/en/830621542293177821/pdf/132110-PN-P162701-SPL-Policy-Note-16-Listahanan.pdf>

beneficiary lists from other sources for FbF pilots. In addition to this the lists aren't easily accessible to humanitarians because of data privacy issues etc.

The **Pantawid Pamilyang Pilipino Program** (4Ps)⁴⁹, one of the users of Listahanan⁵⁰, is a flagship conditional cash transfer program managed by DSWD⁵¹. In 2019, President Duterte signed RA 1130 to institutionalise the 4PS⁵² (Govt of Philippines, 2018). Previously, the fact that it was not enshrined in law was highlighted as a possible bottleneck to the effectiveness of shock-responsive programmes planning to use the Pantawid administrative systems are heavily dependent on continued political (OPM, 2017). The programme reaches 4.4 million of the country's estimated 20.2 million households. This includes a high proportion of poor households, particularly in areas prone to disasters. However, it does not reach all poor households, or all of those who are not poor but who may be vulnerable to a disaster (OPM, 2017). Pantawid payments are delivered monthly through an established network of payment service providers, and includes manual over the counter payments through the post office, and electronic payments through Land Bank of the Philippines (LBP) cash cards in areas with accessibility to ATM services. Program beneficiaries can receive cash grants for up to seven years and the list is re-evaluated every three years. After Typhoon Haiyan, WFP used Pantawid to vertically expand the programme by providing top-ups to their regular assistance immediately after the typhoon. The top-up value was around US\$30 per month for two months, along with 50kg of rice in some areas over 105,000 Pantawid beneficiary households in affected areas. Therefore Pantawid offered proven systems with extensive coverage and those in the lists received assistance quickly. However, given that there were affected households not in the 4P beneficiary lists, additional assistance had to be coordinated by the international humanitarian response system to (OPM, 2017).

A positive consequence of cash coordination was DSWD's creation of a process for humanitarian agencies to coordinate with the Listahanan. As a result, DSWD enrolled an additional 20,000 households (which were identified as newly impoverished as a result of the disaster) into the Modified Conditional Cash Transfer (MCCT) (OPM, 2017). Interviewees confirmed that FbF beneficiary lists were fed back into the system to update the Listahanan. However it was also highlighted that the list was politicised and used by politicians as a tool to garner votes in return of being included in the list.

A recent joint simulation exercise, by implementing agencies, government agencies and PAGASA⁵³ in three barangays in the Bicol Region, explored the feasibility of working with the national protection systems and the DSWD to a) both pre-register beneficiaries using the Listahanan and other databases and b) deliver cash. Both pre-registration and pre-lists that have been agreed by both the LGU and the community is a very useful anticipatory action given the three day lead time for typhoons and floods. For the simulation an MoU was signed between DSWD provincial offices to share beneficiary data with the Philippines Red Cross to protect personal information, which was a lengthy process. One impediment is the existence of multiple registries and data sources. For example, FAO works with DSWD at the national level to have access to the Listahanan, the Department of Agriculture's (DA) own Registry for Basic Sectors in Agriculture

⁴⁹ Pantawid Pamilyang Pilipino Program <https://www.officialgazette.gov.ph/programs/conditional-cash-transfer/>

⁵⁰ No household can be enrolled in the Pantawid unless identified as poor by Listahaan

⁵¹ All households that are classified as 'poor' according to the Listahanan, and that have a pregnant woman, and/or children under 14 are eligible for assistance

⁵² An Act institutionalising the Pantawid Pamilyang Pilipino Program
<https://www.officialgazette.gov.ph/downloads/2019/04apr/20190417-RA-11310-RRD.pdf>

⁵³ German Red Cross, Philippines Red Cross and FAO with observers from Start Network, WFP and OCHA
<https://www.anticipation-hub.org/news/philippines-simulating-with-cash-early-actions-social-protection-for-flood/>

(RSBSA) for the list of small-holder farmers, and the Bureau of Fisheries and Aquatic Resources' (BFAR) for fisherfolk beneficiaries. It is hoped that PhilSys⁵⁴, a government led national ID system will help to improve targeting. Although the focus of the 4Ps programme is the poor, there is an overlap with those who are likely to be impacted by floods. The pre-registration process looked at existing registries to identify who would be most affected in the event of a typhoon-induced flood, followed by a validation process led by the Barangay Committee of local leaders. This process could potentially complement a national scalability framework response for floods which the government is currently working on. As a result 200 final beneficiaries were selected to receive anticipatory cash in two flood prone barangays - this included 23 per cent from 4Ps (recipients of government social assistance; 35 per cent from Listahanan 2 (not receiving 4Ps benefits) and 39 per cent new beneficiaries with the support of Barangay committee. These new beneficiaries had been impacted by COVID therefore recently fell below the poverty line and would not have been included in static Listahanan and 4P lists (Anticipation Hub, 2021). The CERF pilot is working mainly off WFPs SCOPE beneficiary registration system.⁵⁵ UNICEF will use the existing government mechanism via LANDBANK.

A delivery system is important in transferring cash and electronic cash is ideal for early action especially for rapid onset events. The existing system used by the DSWD to release cash is the LandBank of the Philippines. In future agreements would need to be in place in order to piggyback off this. It is unclear what the impact of the DSWD's recently released Guidelines for Emergency Cash Transfer During Disasters (ECT)⁵⁶ and partners still need to explore if it can also look at anticipatory action and make its systems shock responsive. (Anticipation Hub, 2021). Initiatives such as Oxfam's iAFFORD, an electronic cash transfer initiative, could provide a last mile solution to the 4P program, the challenge which DSWD has been trying to overcome. It could lend itself to ex-ante cash transfers and FbF and is being tested out in Eastern Samar (Oxfam, 2019)⁵⁷.

AA Initiatives at country level

Coordination The Technical Working Group (TWG) on FbF, recently renamed as the Anticipatory Action TWG, brings together members of national governments as well as the UN and INGOs involved in FbF⁵⁸. It meets on a regular basis and is expected to provide FbF projects with technical guidance, and establish national standards for FbF that will ultimately support the replication of forecast-based early actions protocols at all government levels. It is currently chaired by FAO, DSWD and OCD. The TWG is composed of Technical Sub-groups (TSG) with government counterparts in each group: Triggers (Dept of Science and Technology (DOST), Financing (Department of Finance), Early Action (DSWD) and M&E (OCD). The Department of Agriculture (DA) has also expressed their interest to adopt AA into its programming (WFP communication).

On July 13 2021, the AA TWG was added to the disaster preparedness pillar of the NDRRMP by the Council, a process which had started in 2015. Core Groups have also been established at regional and provincial level with members from various governmental agencies. The Groups select early actions agreed by key actors and in each targeted province provides the necessary technical guidance to the Core Groups

⁵⁴ 4 million complete PhilSys online registration (July 2021) <https://www.pna.gov.ph/articles/1148590> Accessed 28 July, 2021

⁵⁵ SCOPE is a flexible, cloud-based digital solution that helps WFP in identifying beneficiaries. This is partnership with DSWD and can be leveraged for future AA interventions

⁵⁶ DSWD (2019) Guidelines for Emergency Cash Transfer During Disasters <https://www.dswd.gov.ph/issuances/MCs/MC_2019-017.pdf>

⁵⁷ https://cng-cdn.oxfam.org/philippines.oxfam.org/s3fs-public/file_attachments/cs-philippines-cash-transfers-271119-en_OxfamPilipinas.pdf

⁵⁸ The members of the TWG include the OCD, DILG, PAGASA, DSWD, DA Commission on Audit, Department of Finance, FAO, Start Network, CARE International, Oxfam, and other relevant national government agencies.

for the development and implementation of the Early Action Protocols (EAP), including on the preselection of areas the most at-risk as well as criteria for pre-selecting beneficiaries.

1. **OCHA** is in the process of developing a typhoon anticipatory action framework through the Central Emergency Response Fund (CERF) with an approved amount of US\$7.5m for (2021-2022). The pilot focuses on regions V (Bicol) and VIII (East Visayas) and builds on the existing capacity of existing networks and protocols of the country. For example, for trigger methods and thresholds they will be utilising the Netherlands Red Cross 510 model. This is being implemented with a Core Group of five UN agencies (OCHA, UNFPA, WFP, FAO, IOM, UNICEF) and GRC/PRC, and START Network as strategic partners. The pilot is targets four provinces⁵⁹ and 20 municipalities in Region V and four provinces⁶⁰ and 34 municipalities in Region VIII - targeting a population of 315,000 (OCHA, As of 28 June 2021). Stage 1 (readiness) is when the tropical cyclone (using forecasts from ECMWF and/or PAGASA and other meteorological agencies) reaches category level 4 or higher (greater than 200 km/h wind speed) projected to impact areas within region V and VII. Stage 2 is when triggers are activated. Using the thresholds generated by the 510 initiative - the typhoon Early Actions will be triggered once the predicted number of totally damaged houses and probability are within the scale range generated on or before 72 hours prior to forecast landfall (GRC communication) .80 percent of AA activities are in the form of cash transfers (OCHA interview). Some changes were made to the existing 510 model, mainly a move from a deterministic model to a probabilistic one (Start Network KII). At the provincial level, participating UN agencies have been designated as the lead in charge in the overall coordination among LGU counterparts and implementing partners coming from local NGOs/CSO. A convergence approach is also being adapted in the implementation highlighting piggy-backing and top-ups. For example, WFP will support FAO on its beneficiary deduplication in the province of Catanduanes and will include a UNFPA criteria on their sectoral top-ups involving pregnant and lactating women. Alongside vulnerability data and information from the LDRRMOs, the WFP PHCO's VAM Unit introduced another tool for better inform Barangay/Village level targeting by using Physical attributes such as elevation, slop, distance to coast vis-à-vis to settlement density of the 15 Municipalities in Region 5 (WFP communication).
2. **Philippines Red Cross (PRC) (Supported by the German Red Cross)** The FbF project (2017-2022) "Forecast-based Financing in the Philippines – Closing the Gap between Disaster Risk Reduction and Emergency Relief" Two Early Action Protocols (EAP) developed for typhoons and floods after consultation with government partners and PRC chapters. Four early actions were identified, and proposed in the EAPs: strengthening of shelters (for typhoon), evacuation of livestock and early harvesting of matured crops (for either typhoon or flood), and temporary relocation of stocks for small businesses (for flood in urban context). The Typhoon protocol was approved in November 2019 and targets 2,500 households (PRC, 2020; 3W mapping) and the flood pilot covers 1,450 households per activation. Early actions for drought started in 2019 covering five barangays and 210 beneficiaries and involved a cash transfer to farmers (PRC, 2020).

Typhoon: the EAP is triggered if the predicted impact of winds, 72h before landfall, is of more than 10 percent of houses being totally destroyed, in at least 3 municipalities. Initially, the EAP was triggered if the predicted impact of winds, 72 hours before landfall, was of more than 10 percent of houses being totally destroyed, in at least three municipalities. However, some changes were made to the existing 510 model, mainly a move from a deterministic model to a probabilistic one, So, using the thresholds generated by the 510 initiative - the typhoon Early Actions will be triggered once the predicted number of totally damaged

⁵⁹ Camarines Sur, Albay, Sorsogon, Catanduanes

⁶⁰ Samar, E. Samar, N. Samar, Leyte

houses and probability are within the scale range generated (70 percent - 70.000 houses totally damaged / 80 percent - 60.000 houses damaged / 90 percent - 50.000 / 100 percent - 30.000) on or before 72 hours prior to forecast landfall (GRC communication). Forecast used: ECMWF, and statistical model developed by the 510 initiative⁶¹.

Flood: the EAP is triggered if the predicted impact of flood on crops, 48h before extreme rainfall event, is of more than 30 percent of crops affected in the Panay river basin, or more than 50 percent in the other 3 river basins, in at least 1 municipality. Forecast used: ECMWF for the rainfall, and flood modelisation for the flood extent (HEC RAS, HEC HMS, Flo2D, RRI depending on the river basin) (REAP 3W mapping). The Government recently set up a 'flood forecasting centre' that provides real-time forecasting. The forecasting centre sends warnings that flooding is possible within hours, but not where to expect flooding. These warnings do not give sufficient lead time nor the granular detail to understand where impacts will be felt. The Philippines Red Cross (PRC) is working with the University of the Philippines to develop a flood risk tool that focuses on the Panay River Basin and a university in Mindanao to do the same analysis for the Agusan River Basin, which will provide the risk information necessary to trial forecast-based action to floods (IFRC, 2020, SEADRIF).

In December 2019 for typhoon Tisoy/Kammuri, the EAP was activated at a small scale (200 beneficiaries). AA started three days before landfall and included the early harvesting of abaca trees in Catanduanes province and strengthening of houses in Camarines Norte. Although livestock evacuation was being prepared in the same province the activation wasn't triggered since this early action wasn't pushed through as the track of the typhoon shifted south in the last 24 hours before landfall. Core Groups were established in 22 provinces to support coordination with other stakeholders and to help guarantee smooth implementation during activation (PRC, 2020). Four provincial LGUs are already allocating preparedness funding for replicating PRC anticipatory actions (Western Samar, Southern Leyte, Agusan del Norte and Davao de Oro).

3. **Food and Agriculture Organization (FAO)** Between 2018 and 2019, FAO used the Special Fund for Emergency and Rehabilitation Activities (SEFRA) to act early on the island of Mindanao between 2018 and 2019, ahead of an El Niño-induced drought. The intervention took place in two municipalities in the provinces of Cotabato and Maguindanao - two of the most vulnerable and fragile where many are smallholder farmers. During the 2015/16 El Niño Mindanao suffered losses and damages worth US\$325 million. By November 2018, the EWS signalled warnings to trigger anticipatory action⁶² and actions to mitigate started four and half months earlier than the usual mid-March timeframe. AA were done in cooperation with the LGUs specifically with the Municipal Agriculture Office, together with several farmers organizations. This included distributing 50 tonnes' worth of drought-tolerant rice seeds and fertiliser, tools and irrigation support and cash in exchange for work. For every US\$1 spent on livelihood interventions, households had a return of US\$4.4 (FAO, 2020). Following this, recently, additional work has started on enhancing adaptive and shock responsive protection under the project

⁶¹ It derives its name from the 510 million square kilometres that cover the surface area of the earth. For the PRC, 510 built a model based on historical data that captures the relationship between Impact (the house damages) and all the explanatory variables. <https://www.510.global/ibf-typhoon-trigger-warning-model/>

⁶² Model Probability Forecast for Precipitation; Model Probability Forecast for Temperature; South Asia NMME Seasonal - Precipitation Probability Forecast; South Asia NMME Seasonal (2m) Air Temperature Anomalies; NDVI - Normalized Difference Vegetation Index; Agriculture Stress Index; Vegetation Condition Index; Vegetation Health Index; Plant Pest/Diseases; Monthly Temperature Forecast; Monthly Rainfall Forecast; Probabilistic Rainfall Outlook; Start of the Growing Season; Length of Dry Spell; Forecast Watershed Rainfall; Start of the Growing Season ENSO Forecast - El Niño; Probabilistic MME Forecast - Precipitation; Probabilistic MME Forecast - Temperature T2m. The combination of indicators leads to a final triggering score (3W WG mapping)

Joint SDG Programme 'Ensuring Inclusive and Risk-informed and Shock-responsive Social Protection (RISRSP)' (See social protection section)⁶³.

4. **Building Resilient, Adaptive and Disaster Ready Communities - B-READY Pilot** (Oxfam, Plan International, Global Parametrics) - the pilot focused on an innovation that combined weather forecasting and pre-disaster cash technology. It was launched in 2019 in nine coastal villages in Region V, targeting the most vulnerable such as the poor rural households, the elderly, single women, children, and those with disabilities (many who are geo-tagged as part of the LGU DRR plan), who were consulted to both design the EAP and understand their coping capacities throughout the typhoon e.g. regardless of early warnings fishermen will still go to fish otherwise they will have no income. The beneficiaries received pre-paid cards on which funds would be deposited three days before landfall (this card also serves as an identity card) and used unconditionally. Using the parametric index, forecast information was combined with historical data on disaster events in the community and how the community was affected by previous disasters along with social vulnerability. Global Parametrics used 50 years worth of historical data from PAGASA for region 8 (which was then digitised using Oxfam funds) and forecast information from more than 20 forecast agencies to assess a coming typhoon. This helped local governments and communities to make a decision on whether to stay or evacuate, and what and how to prepare. The project used a two trigger system - firstly, information from Global Parametrics showing the extent of potential impact and then a trigger by the LGU to release funds. As a result 9,300 individuals in nine barangays in Salcedo accessed digital financial services and received pre-disaster cash grants for two devastating typhoons Goni and Vamco/Ulysses. Lessons learnt included that AA can be done outside of cash e.g. having framework agreements in place with suppliers and transportation to transfer assets. There are also limitations to cash transfers - the transfer value was only for five days, so there are questions about sustainability. Other learning included the need for continuous training and education - just one or two orientation sessions aren't enough - B-READY had two activations yet people forgot what to do. B-READY is now branching to a municipality in Mindanao, using the lessons learnt and making it more contextualised e.g. flooding in urban settings (Oxfam KII, Oxfam⁶⁴).

5. **World Food Programme (WFP)** Since 2011, WFP's Disaster Preparedness and Response/Climate Change Adaptation Programme has worked with the government on disaster preparedness, response and resilience-building initiatives. This involved supporting over 40 LGUs in building DRR structures and systems, developing policies and plans, purchasing tools and equipment, and developing capacities. The "Forecast-based Emergency Preparedness for Climate Risks" project of WFP which was implemented in 2015 with support from the German Federal Foreign Office was able to support ten provinces in developing their FbF Standard Operating Procedures (SOPs) indicating triggers and anticipatory actions for typhoon-induced floods. The provinces currently have set plans to institutionalise the FbF approach in their respective areas. AA is a cross-cutting strategy at the country office linking this to food security and nutrition, livelihood and capacity building of both national and local governments in general. Specifically WFP PHCO's Vulnerability Analysis and Mapping (VAM) unit has developed tools and products that provides predictive analytics such as the Climate Change and Food Security Analysis (CCFSVA) under which livelihood zones are identified and overlaid with climate analysis anticipating potential impacts of livelihoods. Recently, the PHCO also pushed for the inclusion of AA into the Action Track 5 on Resilience of the UN Food Systems Summit (WFP Communication).

⁶³ <https://mafar.bangsamoro.gov.ph/fao-un-conducts-workshop-on-enhancing-adaptive-and-shock-responsive-social-protection-in-barmm/>

⁶⁴ <https://philippines.oxfam.org/latest/stories/b-ready-paradigm-shift>

The country office is also part of the **Green Climate Fund (GCF)** funded⁶⁵ 'Hazard Impact-Based Forecasting and Early Warning System' (MH-IBF-EWS)⁶⁶ project (UNESCO 2020)⁶⁷⁶⁸ that will be implemented in four municipalities that are at the entry point of extreme weather⁶⁹. The project will develop interactive, multi-hazard risk maps and assessments and will generate, *inter alia*, impact forecasts and advisories for disaster preparedness (i.e., early warning, early action); emergency management and post-disaster assessment. The aim is to '*paradigmatically (sic) shift the system of forecasting and EWS from the first mile to the last mile to lead a more people-centre and inclusive climate risk management in the Philippines*' (GCF, 2020). The project will integrate work on probabilistic forecasting, modelling and risk assessment to facilitate impact based forecasts and warnings for early action and early response during the window of anticipation. Early Action Protocols will be developed for the pilot sites including shock responsive social protection. Forecast based action will be enabled through Output 3 (Improved national and local capacities in implementing a people centred impact-based forecast and forecast based early actions and financing (FbA/FbF) and Output 4 (Mainstreamed climate risk information and MH-IBF-EWS in development policy and planning, investment programming and resilience planning at national and local levels and institutionalized a people-centered MH-IBF-EWS in the Philippines) (GCF, 2020).

6. **START Network (FOREWARN)** has launched a pilot in the Philippines which is currently working on developing a network of experts who have an interest in disaster risk reduction and anticipatory action. As part of this, a dengue risk assessment tool is being developed. The Network has also drafted a Financial Flow and Gap Analysis report (forthcoming) studying the flows of funds from different financing instruments to different LGUs (Start Network KII). Another example of integration into the DRM system is the Lahar⁷⁰ risk anticipation action tool developed by CARE. The provincial government of Albay rolled out the use of the tool in all areas within the lahar hazard zones⁷¹ and used it to standardise the understanding of lahar as a hazard. The tool serves as a guide to facilitate LGUs and barangays in providing capacity to the communities affected by lahar and to re-visit their respective lahar contingency plans (REAP 3W Mapping). In 2020, Super typhoon Goni (and Molave, Atsani and Vamco) brought extensive rainfall in the province and significant damage was caused by the lahar from the flanks of Mount Mayon, an active stratovolcano. Although no casualties were reported in the pilot areas, the municipality of Guinobatan reported fatalities (Start Network KII; Start Network 2021⁷²).

Analysis

The government has a clear commitment to DRM and building effective systems for disaster response as evidenced by the legislation and executive policies. AA is not an alien concept to the government and there

⁶⁵ US\$10m from the GCF and US\$10m from the Government. GCF Accredited Entity: LANDBANK; CGF NDA: Climate Change Commission (CCC) <https://www.greenclimate.fund/project/sap010>

⁶⁶ National Designated Authority (NDA) is the Climate Change Commission. Executing Entity is the Department of Science and Technology - Philippine Atmospheric Geophysical and Astronomical Services Administration (DOST-PAGASA). Co-Executing Entities (CoEE) include Mines and Geo-Sciences Bureau (MGB), Office of Civil Defense, National Disaster Risk Reduction Management Council (OCD, NDRRMC), Department of Interior and Local Government (DILG), Local Government Units of: - Tuguegarao City, Cagayan - Legazpi City, Albay - Palo, Leyte, and - New Bataan, Davao de Oro, World Food Programme (WFP).

⁶⁷ Project sites: New Bataan, Davao de Oro (Severe Wind & Landslide); Palo, Leyte (Severe (Severe Wind & Storm Surge); Legazpi City, Albay (Severe Wind & Flood); Tuguegarao, Cagayan (Severe Wind & Flood) (UNESCAP, 2020)

⁶⁸ https://www.unescap.org/sites/default/files/2a_Lorenzo%20Moron_Multi%20Hazard%20Early%20Warning%20System%20in%20the%20Philippines.pdf

⁶⁹ Legaspi City, Province of Albay; Tuguegarao, Province of Cagayan Valle; Palo, Province of Leyte and New Bataan, Province of Davao de Oro

⁷⁰ Lahars are a destructive mudflow on the slopes of a volcano. They are a particular hazard in the Philippines due to the large number of volcanoes that erupt explosively and the tropical climate.

⁷¹ The project pilot was in the municipalities of Daraga, Camalig and Sto, Domingo - Adnam Lahar project (Prepare for Lahar)

⁷² Philippines: Acting in anticipation of Lahar amidst COVID 19 <https://startnetwork.org/news-and-blogs/philippines-acting-anticipation-lahar-amidst-covid-19>

are entry points for advocacy. FbF related advocacy started over a decade ago through Partners for Resilience and the Red Cross Red Crescent Climate Centre. An interviewee with experience of lobbying remarked that given the amount of time it takes for legislation to be made and the difficulty of battling with Congress, there is enough policy space for advocacy to take place through avenues at the executive level, using evidence from the local level. When the 2010 Disaster Management Act was being enacted, there were entry points to advocate for changes. For e.g. the Red Cross Red Crescent Climate Centre influenced the implementing guidelines and fought hard for the 70/30 funding split in the local funds (UNDRR KII). Currently, various Ministries are engaged in the AA TWG. According to one interviewee, “AA in principle and practice, has been adapted or mainstreamed in the country and within the Preparedness strategy of the National DRRM framework but this has not been done “explicitly” following triggers and thresholds defined in the AA framework and approach such as utilizing finance to preposition and release support prior to a crisis according to threshold i.e % of population/families, houses anticipated to be affected based from science-based forecast”.

However, although there are sufficient legislative provisions to support a proactive response to disaster events, gaps in policy execution exist, especially at the local level. The decentralised structure does give rise to implementation issues at the local level due to issues such as weak technical capacity. DRR/CCA implementation at the local level often remains fairly disconnected from national policies. Although local DRR/CCA plans are mandated for the release of funds, compliance is weak. In the past without this requirement there were cases where the Mayor used the disaster fund to give out bonuses. Also at the local level, the money lies with the institutional DRRM funds. Local climate change action plans are unfunded since funds from the People Survival’s Fund are not automatic as LGUs need to apply to receive funds for projects. It is currently technically challenging to get a proposal approved, as applicants need to demonstrate a stringent vulnerability assessment and the effectiveness of their proposed interventions before submitting a proposal. At the same time, projects that receive funding must be well thought through and include a clear adaptation component along with socio-economic components, which LGUs struggle to articulate. Improvements in the governance and institutional architecture is still work in progress. (IDRC et al, 2019⁷³). “The hardest part is to establish a case that you are experiencing climate risks, which is a new way of thinking for LGUS. The logic of ‘there are more floods, therefore I need more boats’, no longer applies” (UNDRR KII). The CCC is pushing to bring alignment, which could give climate change practitioners access to local DRR funds, which will also address climate risks i.e. how does climate risk exacerbate disaster risk. This could become a moot point if the Disaster Resilience Act becomes law and the DRRM funds are replaced by a Resilience Fund.

An issue related to scale up is related to financial sustainability. For e.g. Both 510 and Global Parametrics use historical data supplied by PAGASA - however using a service provider such as Global Parametrics comes at a cost. According to an interviewee, 510 was selected for the CERF pilot over Global Parametrics and the Impact and Vulnerability analysis conducted by WFP, because 510 uses open source data versus proprietary data. Although the Philippines has a robust social protection system and a national social registry, the fact that agencies can’t select beneficiaries from the outdated Listahanan, reduces its value. The system has the ‘bones’ for a shock responsive social protection system and there appears to be an enabling environment for the use of electronic cash.

The CERF pilot provides a further opportunity for evidence building given the scale of the potential cash transfer - 300,000 people across 44 municipalities. If there is a triggering event, information from the pilot will then be presented to the government to demonstrate how AA works on the ground. With additional evidence it is hoped that the local experience can be catalytic leading to a review of the National Disaster

⁷³ https://tdri.or.th/wp-content/uploads/2020/04/Revised_Final_Research_Report_Yanquiling_Rhomir.pdf

Response Plan which can provide funding for preparedness (OCHA KII). Currently, the implementing agencies are working on AA in the Philippines at a relatively small scale. The B-READY pilot, although with limited coverage, is ready to scale up since it was able to provide sufficient evidence of success to the LGU of Salcedo, who were involved from the start. The LGU presented the experience to its national counterparts, the NDRRMC and the thematic sub group on triggers. The pilot facilitated the LGU adoption of a resolution for using parametric index as part of the EWS⁷⁴. Funding is being looked at, potentially through a portion of the preparedness budget to earmark AA assistance to vulnerable coastal communities (Oxfam KII).

With regards to financing the issuance of Memo 60 - Revised Guidelines for the Declaration of a State of Calamity⁷⁵ provides an opportunity for AA since it means that LGUs can make their own decisions and mobilise funds for AA purposes. However, this has not been used because there is some lack of clarity around whether funds can be used based on forecasts from other sources apart from PAGASA such as 510 or the Global Parametrics Model. Guidelines are being prepared by the AA TWG -Finance sub group, chaired by WFP and the OCD (Start Network KII).

The government doesn't have an AA model for Typhoons and the 510 model is used. PAGASA generates only real time information, which is not relevant to AA and will result in classic post disaster humanitarian action. In addition to this, LGUs can unlock funds only after guidelines from PAGASA. In the past there have been issues with activation such as in 2019 during Typhoon Kummari when communications went down so people only had access to cash four days later. Coupled with the lack of finance service providers at Barangay and community level, makes the actual delivery of cash transfers slightly difficult for implementing agencies in times of a pre-emergency (German Red Cross communication). Coordination and triggers need to be fine-tuned. There are issues caused by facts like a typhoon can change track in the last few hours. In 2019 the PRC couldn't activate the trigger because the three-day threshold wasn't met. Other issues related to the trigger related to the protection of assets as a trigger - if the poor don't have assets, then the trigger of 5,000 houses being impacted doesn't protect them (OCHA KII). The PRC has a productive relationship with PAGASA at the subnational level for floods. However, for typhoons the relationship is challenging at the central level and an MoU has been on hold since June 2019 (Eco, 2019). Although PAGASA provides data to PRC/510, there are certain forecasting products that PAGASA is developing that it is reluctant to share. One reason is that there is a fear that LGUs can sue them if the forecasting is incorrect (Start Network KII).

Interviewees were generally sanguine about the future of AA but generally agreed that local efforts and pilot activations need to continue at the local level to build evidence and demonstrate proof of concept to the government authorities. Although one interviewee was concerned about the shifting interests of the government authorities. To make it replicable, a paradigm shift is needed and government authorities at the national level have to be influenced and convinced that the concept works. Although the governments are very active in developing anticipating actions and forecasts as well as robust EWS, they don't have a 'no regrets approach' yet (GRC Communication). Advocacy at the national government level for a no regrets approach is crucial. Local agencies and actors like PAGASA Climate Center Committee, Universities, PRC Operational Centre etc need to be engaged in the decision making process. This is important because they need to buy into and own the AA concept since the government relies on them for implementation. The information provided for AA can't just come from 'outsiders' (GRC Communication).

⁷⁴ <https://philippines.oxfam.org/latest/stories/lessons-b-ready>

⁷⁵ <https://www.officialgazette.gov.ph/downloads/2019/06jun/20190617-NDRRMC-MO-60-RRD.pdf>

At the local levels it needs to be clear that although AA can be considered as part of the DRRM system, it reinforces the need to make 'clear' and 'timebound' early interventions which can further improve the preparedness action of LGUs. AA has specific SOPs which are vital in anticipating major crises which can be forecasted in terms of occurrence and impact to population and assets. This is particularly pertinent since the CERF pilot will increase funding greatly (GRC Communication). In addition to this, EWSs need to be strengthened and become people centric, so that communities actually receive the message. This is essential for the CERF pilot once the threshold is reached (GRC Communication).

Capacity building at the local level is paramount. There needs to be further capacity building at the LGU to understand AA in order to allocate funds from their DRM plans - and be able to plan ahead as part of their annual procurement plan (as was the case with the B-READY pilot). LGUs need to understand better that 70 percent of the local DRR funds can be used for pre-position supplies and can be used for CCA if linked to disaster mitigation and preparedness (and vice versa for the People's Survival Fund). If a LGU knows its risk profile, then it can use the 70 percent of funds to procure a stockpile. According to one interviewee, some LGU officials are stuck with the idea that they should only be using the QRF. However, a reason for this also could be that with the QRF, no lengthy procurement process is required, hence it's just an easier way rather than the most appropriate.

ANNEX MAPPING SUMMARY

	Partners	Province	Cities/Municipality	Barangays/villages
Oxfam (Flooding) ⁷⁶		Bangsamoro Autonomous Region In Muslim Mindanao (BARMM)	Cities of Cotabato and Marawi, Lamitan?	
OXFAM/PLAN B-READY (Typhoon)	Humanity and Inclusion, People's Disaster Risk Reduction Network, IDEALS, City Government of Cotabato and Marawi City; OXFAM (Consortium Lead) Plan International, Philippine Disaster Risk Reduction Network (PDRRN), LGU of Salcedo, Global Parametrics, PayMaya, Smart Padala, PAGASA		Municipality of Salcedo (5th class municipality)	9 coastal: Matarinao, Burak, Bagtong, Buabua, Butig, Palanas, Cagaut, Asgad and Balud
German Red Cross / Philippines Red Cross (Typhoon, Floods)		Typhoon - 19 provinces: Cagayan, Isabela, Aurora, Camarines Norte, Camarines Sur, Catanduanes, Albay, Sorsogon, Masbate, North Samar, East Samar, West Samar, Leyte, south Leyte , Cebu, Surigao del Norte, surigao del sur, Davao oriental and Davao de Oro . Flood EAP is covering 4 river basins: Cagayan, Bicol, Panay, Agusan Regions: North Luzon, Bicol, East Visayas and Mindanao.		
WFP (?)		National government council handling disasters and 10 provinces.		
FAO (Drought)	LGU, local partners	Cotabato; Maguindanao (Mindanao)	Pigcawayan; Datu Saudi Ampatuan	
CARE and Humanity and Inclusion		Albay and the Albay Public Safety and Emergency Management Office (APSEMO): Municipality of Daraga, Barangay Salvacion; Municipality of Camalig, Barangay Ilawod; and Municipality of Santo Domingo, Barangay Lidong.		
OCHA CERF (Typhoon)	Core Group of five UN agencies (OCHA, UNFPA, WFP, FAO, IOM, UNICEF), GRC/PRC, and START Network. Oxfam in Cash Working Group.	Province 5 (Bicol) and 8 (Eastern Visayas)		

⁷⁶ Philippines: helping people before disaster strikes https://ec.europa.eu/echo/blog/philippines-helping-people-disaster-strikes_en. Accessed 28 July 2021

REFERENCES

Asia Development Bank (2018)

Dominguez, S (2014)

FAO (2020)

GIDRM and DILG-LGA (2019) Status Report

GFDRR (n.d.) DISASTER RISK FINANCING AND INSURANCE PROGRAM Strengthening Financial Resilience to Disasters

Green Climate Fund (2020) Multi-Hazard Impact-Based Forecasting and Early Warning System (MH-IBF-EWS) in the Philippines (Presentation made on 18 November 2020)

GRC (2021)

Government of the Philippines (2019) Department of Finance: The Philippines Disaster Risk Financing Strategy (Powerpoint presentation)

IFRC (2021) Integrating CCA and DRR laws and policies towards climate-resilient development lessons from the Commonwealth of Dominica.

IFRC (2020a) Addressing specific vulnerabilities through integrated climate and disaster risk governance - Lessons from the Philippines

IFRC (2020b) SEADRIF Feasibility Study

NAP Global Network (2018) The Philippines - National Adaptation Plan (NAP Approach)

Oxfam (2019) Cash-In-Hand - Electronic cash transfer and digital financial inclusion during crises and conflicts in the Philippines

Oxford Policy Management (2020) Delineation Report

Philippines Red Cross (2020) Typhoon Early Action Protocols - Pocket Version for PRC Chapters

Pulhin, J., Tapia-Villamayor, M., De Luna, C., Cruz, R., Peria, A., Anacio, D., Almarines, N. (2021). Enhancing resilience through capacity building in LCCAP formulation in the local government of Aurora, Philippines

PRC (2020)

United Nations Office for Disaster Risk Reduction (UNDRR) (2019) The Philippines - Status Report

World Bank (2020) World Bank Reference Guide to Climate Change Framework Legislation

World Bank, GFDRR, UKAid, GSIS (2018) Developing a Disaster Risk Finance and Insurance Strategy for the Philippines