

Feasibility Study of Anticipatory Action Project



Country: Philippines

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Executive summary

Anticipatory action in the Philippines is a disaster risk management approach that involves taking early action to reduce the impact of potential disasters on vulnerable communities. It is a proactive approach that aims to prevent or minimize the damage and loss of life caused by natural hazards such as typhoons, floods, and earthquakes. This feasibility study is conducted with stakeholders from the municipality of Pagalungan, Province of Maguindanao and Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) on anticipatory actions against natural hazards such as flooding.

The city of Pagalungan is a low-lying area that is prone to flooding. The town is located in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), which is one of the poorest regions in the Philippines and is often affected by natural hazards such as typhoons and floods. Due to several factors such as topography, climate, deforestation, and poor infrastructure the city becomes a high risk for flooding thus, the need for its local government to work on flood mitigation measures to prevent severe damage from taking place.

In line with this, World Vision Development Foundation Inc. (WVDF), a Christian Humanitarian relief and development organization in the Philippines has started some disaster risk reduction activities in the municipalities of Datu Odin Sinsuat, Kabuntalan, and Shariff Aguak in 2021. While this has been ongoing, World Vision has been engaged in pilot activities on anticipatory action in other parts of the country as one of the implementing partners of UN CERF funded AA (via IOM and UNFPA).

Regional Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) provides early warning and forecasting in Maguindanao such as daily weather forecasts and severe weather bulletins, including typhoon warnings and flood advisories. PAGASA and the Local Government Unit (LGU) usually provide information through SMS-based warning systems, sirens for flood warnings, or through hand-held radios. However, consultation with the stakeholders revealed the need for increased availability of these equipment which may not be possible with the current project of WVDF due to limited funding.

A capacity assessment was made for the different stakeholders including 1) WVDF (general, human resources, financial, ability to implement AA, partnership, and sustainability); 2) Local Government Units (general, financial, training, inclusivity, and ability to implement AA); 3) Technical Services (forecasting capacities, and institutional commitment/buy-in); and 4) other Institutional Services, DRM, and social protection actors (enabling policies, and institutional commitment/buy-in).

The financial capacity to fund anticipatory action in Maguindanao was also assessed which may be done through a combination of sources such as those provided by the national and local government, private sectors, and internal aid.

It was determined that flooding is the most feasible for AA in Pagalungan, Maguindanao which also faces other several hazards such as communicable and noncommunicable diseases, drought, and conflict. Preparation for these hazards, reducing their potential impact on the community, and building resilience may be done by taking the necessary anticipatory action measures.

In order to implement effective and sustainable anticipatory actions in Pagalungan, Maguindanao, the following general recommendations are provided:

- Conduct a comprehensive risk assessment;
- Strengthen early warning and forecasting systems;
- Build local capacity and promote community participation;
- Enhance social protection mechanisms; and
- Monitor and evaluate initiatives.

Specific recommendations were also determined for each stakeholder including WVDF, LGU, Technical Services, Institutional Services in BARMM that can work on AA, AA Technical Working Group (TWG), and other AA Stakeholders. Lastly, the next steps in AA protocol development were determined in this feasibility study.

1. Introduction

1.1 About this report

This document is a study on the feasibility conducted with stakeholders from the municipality of Pagalungan, Province of Maguindanao and Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) on anticipatory actions (AA) against natural hazards such as flooding. WVDF joined other World Vision national offices in Asia Pacific to implement activities under a World Vision regional project funded by Aktion Deutschland Hilft (ADH) from September 2022 to December 2023. The goal of this project is to reduce selected high-impact natural or human-induced risks from negatively affecting populations through coordinated anticipated actions implemented by World Vision. Through this project, the targeted population is expected to gain more capacity in accessing early warning systems, employing mitigation measures and accessing assistance during AA window time.

1.2 Background

Forecast-based financing and Anticipatory action initiatives/pilots have been implemented in the country since 2014. Forecast-based financing technical group was created at the national level and now was called the Anticipatory Action Technical Working Group “AA TWG”. OCHA has facilitated the set-up in the Philippines with FAO, IOM, UNICEF, and WFP.

Defining Anticipatory Action

Anticipatory action in the Philippines is a disaster risk management approach that involves taking early action to reduce the impact of potential disasters on vulnerable communities. It is a proactive approach that aims to prevent or minimize the damage and loss of life caused by natural disasters such as typhoons, floods, and earthquakes.

Anticipatory action in the Philippines involves a range of activities, including:

- Risk Analysis and Pre-disaster preparedness: This involves developing plans, forecast-based triggers, protocols, and procedures to prepare for impending hazards, as well as identifying areas and populations that are particularly vulnerable.
- Early warning systems: These systems use real-time data and analysis to predict and alert communities to the potential impact of a disaster, providing enough time for early action.

- Pre-agreed financing: This is one of the core elements of AA. Cash transfers, and timely delivery of in-kind support are arranged together with stakeholders including communities. Communities including women, children, elderly, persons with disability, and Indigenous Peoples decide on priority actions to be financed.
- Pre-emptive action: This involves taking action before a disaster strikes, such as pre-emptive evacuation of residents in high-risk areas, improving the roofing and shelter structures, or pre-harvesting agriculture crops.

Anticipatory action is a critical approach to disaster risk management in the Philippines, which is prone to natural hazards due to its location in the Pacific Ring of Fire and the typhoon belt. By taking early action, the government and other stakeholders can save lives, minimize damage to infrastructure and property, and reduce the long-term impact of disasters on affected communities.

In the Philippines, one example of anticipatory action is the pre-emptive evacuation of people living in high-risk areas prior to a typhoon or other severe weather event. This is done to avoid the loss of life and property damage that could occur if people stay in their homes during the disaster. The Philippine government and non-governmental organizations collaborate to identify disaster-prone areas and develop evacuation plans that can be implemented quickly when a disaster strikes.

Another example of anticipatory action is the use of gender-age-and disability- inclusive early warning systems to alert communities to impending disasters. Weather forecasts and warnings are issued by the Philippine Atmospheric, Geophysical, and Astronomical Services Administration (PAGASA) to assist communities in preparing for severe weather events. Furthermore, the government and non-governmental organizations collaborate to create community-based early warning systems that use local knowledge and communication channels to warn residents of impending hazards.

Anticipatory action includes disaster preparedness and risk reduction initiatives. The government and non-governmental organizations (NGOs) provide training and education programs to assist communities in developing the skills and knowledge required to prepare for and respond to disasters.

In 2022, OCHA assisted in the establishment of an Anticipatory Action framework in the Philippines in collaboration with FAO, UNFPA, WFP, Red Cross/Red Crescent, and local authorities. The framework outlines a strategy for collective anticipatory action (AA) in the Philippines, including information on the forecasting trigger (the model), pre-agreed action plans (the delivery), and pre-arranged financing (the

money). UN agencies, NGOs, and the Red Cross/Red Crescent will provide multi-sectoral assistance in close collaboration with local authorities. Through the Office of Civil Defense, the National Disaster Risk Reduction and Management Council has collaborated with Forecast-based Financing (FbF) partners FAO, IFRC, WFP, and Start Network. OCD and FAO co-chaired the FbF Technical Working Group (TWG). The Disaster Preparedness Pillar of the NDRRMC adopted the concept of Anticipatory Action through the CERF pilot and renamed the FbF TWG into the AA TWG, with representation from the government: DSWD, DOST, DILG, and OCD, as well as other humanitarian agencies. According to the findings of the CERF pilot, early action is faster, cheaper, and more dignified than traditional humanitarian response. During the AA process, issues arose such as the importance of allocating sufficient start-up funds to enable UN agencies to carry out preparedness activities, the need to harmonize the strategy and messages to be shared with counterparts from the outside, and the importance of technical-legal advocacy of the AA approach at the country level based on local requirements for its institutionalization (OCHA, n.d.).

World Vision's contribution

World Vision Development Foundation Inc. (WVDF), as a Christian Humanitarian relief and development organization in the Philippines that is child-focused and community-based has been engaged in various preparedness and response activities in the country, particularly in areas where vulnerable sectors, especially children are located. One of the identified priority areas of World Vision is the BARMM, particularly the province of Maguindanao which sits along Liguasan Marsh and is traversed by major rivers and tributaries in Mindanao. According to the UNICEF situation analysis report in 2017, between the years of 2011 to 2017, 82% (or 166,515 families) of the affected population by disasters (such as flooding, typhoons, and earthquakes) in BARMM (formerly ARMM) were from the province of Maguindanao.

As initial support to strengthen the capacities of local duty bearers and the resilience of communities of Maguindanao affected by flooding. World Vision has started some disaster risk reduction activities in the municipalities of Datu Odin Sinsuat, Kabuntalan, and Shariff Aguak in 2021. While this has been ongoing. World Vision has been engaged in pilot activities on anticipatory action in other parts of the country as one of the implementing partners of UN CERF funded AA (via IOM and UNFPA). As a member of the START network, WVDF has been monitoring and engaging in different discussions around Forecast-based Financing, a relatively new concept that started to be adopted in the Philippines around 2017, whose goal is to enable anticipatory actions.

1.3 Enabling environment for AA activities in the Municipality

Anticipatory Action is feasible because of the commitment and willingness of the local government unit of Pagalungan and its stakeholders. In addition, there is technical assistance to be provided by World Vision, the forecasting agency, PAGASA committed to help establish AA, the LGU has plans that can support the implementation of AA such as risk assessment, contingency plan and LCCAP, however, there is a need to update the said plans. The seven barangays are interested and stated their pledge of commitment especially from the vulnerable groups and there is a pre-financing mechanism available from World Vision for the initial pilot.

Pagalungan, Maguindanao has several strengths that can support the implementation of anticipatory action initiatives in the municipality. Some of these strengths include:

- **Strong community ties:** Pagalungan has a close-knit community, with a strong sense of solidarity and cooperation. This can help facilitate community-led initiatives, including disaster preparedness and response.

- Knowledge of local hazards: The residents of Pagalungan have a deep understanding of the natural hazards that affect the area, including floods and landslides. This knowledge can help inform the development of anticipatory action plans and ensure that they are tailored to the specific needs and circumstances of the community.
- Active local government: The local government of Pagalungan has been proactive in implementing disaster risk reduction and management initiatives, including the establishment of a municipal disaster risk reduction and management office. This can help facilitate coordination and collaboration between different stakeholders in implementing anticipatory action initiatives.
- Strong partnership with NGOs: Pagalungan has a strong partnership with non-governmental organizations, including World Vision Philippines. This can provide additional resources, expertise, and support in implementing anticipatory action initiatives in the municipality.

2. Risk analysis per hazard

Pagalungan, Maguindanao is a low-lying area that is prone to flooding. The town is located in the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM), which is one of the poorest regions in the Philippines and is often affected by natural hazards such as typhoons and floods. The following are some factors that contribute to the flood risk in Pagalungan:

- **Topography:** Pagalungan is situated in a valley surrounded by mountains, which makes it vulnerable to flash floods and landslides, particularly during the rainy season. The town's elevation is also low, which means that water from nearby rivers and creeks can easily overflow and flood the area.
- **Climate:** The Philippines is located in the typhoon belt, which means that it is regularly hit by typhoons and tropical storms that can cause heavy rainfall and flooding. The rainy season in the country usually starts in June and lasts until November, and this can result in flooding in low-lying areas like Pagalungan.
- **Deforestation:** The Maguindanao province has been experiencing deforestation for years, particularly due to the expansion of agricultural lands and logging activities. This has resulted in the loss of natural barriers, such as forests and wetlands, which can help regulate water flow and prevent flooding.
- **Poor infrastructure:** The town of Pagalungan lacks proper drainage systems and flood control measures, which make it more vulnerable to flooding. The town's roads and bridges are also often damaged during floods, making it difficult for rescue and relief operations to reach affected areas.

In conclusion, Pagalungan, Maguindanao is a high-risk area for floods due to its topography, climate, deforestation, and poor infrastructure. It is crucial for the local government and other stakeholders to implement flood mitigation measures, such as improving drainage systems and building flood control structures, to reduce the risk of flooding and protect the town's residents and infrastructure from the damaging effects of floods.

3. Analysis of available forecast

In Maguindanao, early warning and forecasting are provided through a combination of national and local systems. The following are some of the ways early warning and forecasting are provided in Maguindanao:

- Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA): PAGASA is the national weather agency of the Philippines, which provides daily weather forecasts and severe weather bulletins, including typhoon warnings and flood advisories. PAGASA also operates a network of Doppler radars and weather stations across the country, which provide real-time weather data.
- The Local Disaster Risk Reduction and Management Office (LDRRMO): The LDRRMO is the local disaster risk management office in Pagalungan, which receives early warning information from Regional PAGASA and disseminates it to the local government unit (LGU) and communities. The LDRRMO also provides training and capacity building for LGUs and communities to improve their disaster preparedness.
- Community-based early warning systems: In some areas of Maguindanao, community-based early warning systems have been established to provide localized and timely warning of floods and other hazards. These equipment involve the use of rain gauges, flood level markers, sirens, loudspeakers, and other communication tools to alert communities of impending danger.
- SMS-based warning systems: NDRRMC and some LGUs in Maguindanao have implemented SMS-based warning systems to alert residents of incoming typhoons, rainfall, floods, and other hazards. These systems involve sending text messages to registered mobile phone numbers, providing real-time information on the hazards and recommended actions.
- Hand-held radios in some barangays. There are communities in Pagalungan that use hand-held radios as communication channels between and among community leaders to warn their constituents when there is imminent flooding.

Overall, early warning and forecasting in Maguindanao involve a combination of national and local systems, including weather agencies, disaster risk management agencies, community-based systems, and technology-based systems. These systems aim to provide timely and accurate information to enable LGUs and communities to prepare and respond to disasters effectively.

Gaps

The recent consultation with LDRRMC including the seven barangays revealed that there is a need to strengthen the use of EWS equipment such as sirens, hand-held radios and repeater towers and gender-age and disability-inclusive communication of early warning and early actions. The current project of World Vision has limited funding, it may not include the required tools, equipment and training for early warning system, which should be gender, age and disability-inclusive.

4. Capacity assessment

4.1 World Vision Development Foundation Inc.

4.1.1 General

World Vision Philippines is a humanitarian organization that has been actively involved in anticipatory action in the Philippines, particularly in disaster risk reduction and management. The following are some of World Vision Philippines' strengths in anticipatory action:

- **Community engagement:** World Vision Philippines works closely with communities in high-risk areas, providing training and capacity building on DRR and DRM to enable them to prepare for and respond to disasters. The organization also involves community members in the facilitation of DRRM Plan formulation and Contingency Plans and bringing in the rights and voices of children in the process. This includes collaborating on disaster risk reduction and management initiatives, sharing best practices, and pooling resources to address common challenges.
- **Early warning and forecasting:** World Vision Philippines is coordinating with government agencies, such as PAGASA and LGUs, to access and disseminate early warning information to communities. The National Disaster Risk Reduction and Management Council (NDRRMC) and LGUs also use technology-based systems, such as SMS-based warning systems, to provide real-time information to community members.
- **Representation at the national level:** World Vision is a member of NDRRMC, which is the highest policy-making body in the government when it comes to disaster risk management. World Vision advocates with the member agencies the community-based, child-focused and rights-based policies and guidelines based on community needs, lessons learned and gathered evidence.
- **Prepositioning of relief items:** World Vision Philippines prepositions humanitarian resources in high-risk areas, ensuring that they are readily available in the event of a disaster. The organization has entered into framework agreements with the private sector (e.g. financial service partners, stores, and accommodation) that enable the organization to provide immediate assistance to affected communities, reducing the impact of disasters on vulnerable populations.

Overall, World Vision Philippines' strengths in anticipatory action rely on community engagement, early warning and forecasting capabilities, prepositioning of relief items, and partnerships and collaborations. These strengths enable the organization to work effectively with communities and other stakeholders to reduce the impact of disasters on vulnerable populations.

4.1.2 Human resources

World Vision Development Foundation Inc., through Humanitarian Emergency Affairs (HEA) has trained personnel/staff on Cash Distribution. Currently, due to staff turnover, the trained personnel have taken over a new role/designation. However, during emergency response, HEA can still mobilize the trained employees on cash distribution.

4.1.3 Financial

Pilot AA

World Vision facilitated the detailed planning with shared responsibilities and resources from community stakeholders such as the Provincial Government, MSSD, and LGU. This included various activities related to AA such as early warning, social protection, and capacity building.

The current AA for Pagalungan is a pilot project implemented by World Vision that may only cover the initial year. Part of the characteristics of the current funding for AA is limited. If there will be no activation based on the agreed AA trigger or worst-case scenario, the funding will revert back to the donor after the project. It is important to find a different source of funding for AA of Pagalungan, Maguindanao to support the financing mechanism of AA. There is also a degree of chance of error in the model of AA since this is a pilot hence the activation of the AA may not happen within the year. Funds from the government for AA have bottlenecks, especially in the utilization of DRRMF funds.

One of the respondents suggested that in terms of livelihood, a portion of Community-Managed Savings and Credit Association "CoMSCA" should be used as part of AA.

Addressing the gaps

There is the National Emergency Preparedness and Response Fund (NEPRF) in World Vision that may be mobilized for quick response but its current policy and framework is not attuned to AA. A review of the guidelines in assessing NEPRF for AA may be necessary considering the core principles of AA, defining triggers, early warning, priority anticipatory actions, pre-

agreed financing, and protocols. Existing benchmarks may be done but the guidelines should be aligned with the organization's mandate, principles, and vision.

4.1.4 Ability to implement actions in AA lead times

WVDF expertise includes cash intervention, which is the modality that is mostly applied in Anticipatory Action. World Vision has the ability to implement cash transfer programs during emergencies and in disaster-affected areas, including in Maguindanao. The organization has experience in delivering cash-based interventions in emergency and recovery contexts, providing assistance to vulnerable households and communities.

World Vision's approach to cash transfer programs is based on the principles of efficiency, effectiveness, and accountability. The organization works closely with communities to identify and assess their needs, determine the most appropriate form of assistance, and design programs that are tailored to their specific needs and circumstances. There is a registration system to avoid missing beneficiaries and duplication. However, if the emergency has not yet occurred, WVDF relies on the criteria mostly exposed, and mostly vulnerable in terms of their conditions to pre-register them. However, there is a need to validate information after a certain period of time because of possible migration. There are teams assigned to gather and validate information in the field office.

World Vision also has established partnerships with financial service providers, such as banks and mobile money operators, to facilitate the delivery of cash transfers to beneficiaries. The organization has developed standard operating procedures and protocols for cash transfer programs to ensure transparency and accountability in the delivery and distribution of cash transfers. World Vision has an existing framework for procurement and finance with the financial service providers (Palawan, MLhuiller, LBC) but the delivery is based on the project. In some cases, in BARMM, when they have no access to these FSPs, WVDF has the option to do cash handling (finance will withdraw and they will be the ones to distribute).

In Maguindanao, World Vision has implemented cash transfer programs as part of its emergency response to disasters, such as floods and typhoons. The organization has provided cash transfers to affected households to enable them to meet their immediate needs, such as food, water, and shelter. World Vision has also implemented cash transfer programs as part of its recovery and rehabilitation efforts, providing support to households and communities to rebuild their livelihoods and improve their resilience to future disasters. For example, in

AA with the International Organization for Migration (IOM) which is for shelter, the cash may be used to strengthen the structure of their houses, it was also multi-purposed. It can be accessed through framework agreements with the financial service providers.

Gaps on assessing the gender-related barriers

In the beneficiary selection, we have to ensure that no one is left behind (e.g., identify who are the most vulnerable, and gender-related barriers). The members of the communities must be well-assessed. However, there is no sufficient tool in the organization to assess these barriers thus, the need to engage other stakeholders that has the capacity to support them.

Challenge on forecasting the needs

When the project identifies the trigger, HEA internally requests financing from finance with prior preparation on the approved beneficiary list. The challenge is that since it is "forecasted", seeing the actual magnitude of what is needed is limited. However, initial prioritization is made for those identified to be the most vulnerable during assessment. Currently, the assistance extended is in cash since in-kind assistance is a bit challenging and may incur more costs in the distribution.

Training needs

The World Vision International (WVI) region has the capacity to provide technical training. The management should be oriented as part of the continuing awareness. The surge capacity team has to be trained on AA. There is currently an on-going discussion to include it in the module as part of the continuing education.

4.1.5 Partnership

WVDF is open to having available local partners, if there will be sub-agreements since it is inclusive and aims to maximize local resources. There is an existing partnership process for NGOs and private entities which includes capacity assessment, due diligence, defining terms of engagement, etc.

For cash assistance, WVDF looked into the available branches in the area since usually, the beneficiary should be the one to visit the branch to claim the cash assistance. If the financial service providers will directly deliver the cash to the community, it can be scheduled and arranged.

In previous experience such as in Catanduanes, WVDF assessed the capability of the people and the hazards if they can claim cash through the FSP branch. In some instances, it will be directly given to them to ensure the delivery of assistance while still prioritizing their safety. For areas without an FSP branch, cash handling is observed by WVDF adhering to safety protocols.

Another option is to provide cash vouchers if there are existing big stores in the area. WVDF experienced identifying the materials needed and arranged purchase orders with the nearest available shops and delivering the vouchers to the beneficiaries or providing transportation for beneficiaries to claim orders.

4.1.6 Challenge on Sustainability

The actual facilitation of anticipatory action on the ground is yet to be learned by the staff. After the life of the project, there is a focal person from WVDF that may be reached out to by the people in Pagalungan for technical support. They are based in Cotabato City. Hence, the local government, partner non-government organizations working in the area and the communities can learn from this initial pilot and apply the lessons learned to adjust their policies and frameworks to accommodate the concept of Anticipatory Action such as the use of Local Disaster Risk Reduction and Management Fund and Quick Response Fund should be advocated up to the national level.

4.2 Local capacities and needs

4.2.1 General

Executive Order on Pre-emptive Evacuation and Resolutions on Disaster Risk and Reduction Management in Pagalungan, Maguindanao may be used as leverage for implementation/piloting AA. There is an existing contingency plan for flooding with protocols developed per sector. Activation procedures were clearly stated in the contingency plan for flooding. Based on PAGASA's weather forecasts the local government unit conducts Pre-disaster Risk Assessment (PDRA). Activation and deactivation of clusters depend on the result of the PDRA and the results of the Early Warning System (EWS). The local chief executive convenes the clusters involved and delegates authority to the clusters upon receipt of the result of the PDRA. The incident commander organizes and mobilizes the Incident Management Team (IMT) per operational period.

4.2.2 Financial

There are various sources of funding but mostly it is from the 5% allocation for local disaster risk reduction and management. This money is allocated by the municipality. Budget from Internal Revenue Allocation (IRA) and Tax Collection is also being used as a source of funding. In addition to this, the municipality also receives cash assistance from BARMM.

The municipality has a Local Disaster Risk Reduction and Management Plan which is the basis for the allocation of no less than five percent (5%) of the budget to disaster prevention and mitigation, preparedness, response, and rehabilitation and recovery. However, due to frequent disasters, the LDRRMF is limited and exhausted in responding to flooding and armed conflict.

Funding is said to not be enough due to budget cuts and the frequency of disasters. Thus, remedies are being observed such as augmentation of funds from nearby provinces and careful selection of the beneficiaries in the community – only those who are identified to be in-need will receive relief or the assistance provided by the government.

Cash assistance was highly suggested during the consultations conducted to help in the preparation and in minimizing the damage and losses. One of the respondents said,

“More than sa pera, gusto ko sana kung ano yung nawala sa kanila, yun ang itulong tulad ng livelihood. Kung nawalan sila, ano yung pwedeng ibigay sa kanila. Kung pera lang yan, nauubos yan sir eh.”

Furthermore, aside from cash assistance, it was recommended that assistance should be extended further such as the provision of livelihood. In one of the discussions with the LGU, the concept of a seasonal livelihood program was brought up wherein livelihood programs based on weather forecasts will be given to the community.

4.2.3 Training needs

There are several training needs for the staff such as training on the following concepts: 1) Anticipatory Action, 2) DRR, 3) Basic First Aid, 4) EWS Walkthrough, 5) Incident Management (up to level 3), and 6) Communication protocols.

The MDRRMC staff needs to be trained in Anticipatory Action, Early Warning System risk assessment, monitoring, forecasts, and communication.

4.2.4 Early Warning System and Gender, Age and Disability inclusion

Vulnerable groups are the top priority of the EWS. However, they have difficulty understanding and remembering technical terms and concepts and only focal persons or leaders are able to do so. But in essence, they are aware of what to do already in case of an impending disaster. One of the respondents said,

“Dapat lakasan pa yung sirena. Wag sana umasa sa social media sana yung "mas connect" pa para masabihan kami ng maaga at makapaghanda pa. Sana may kinocontact per barangay di lang sa munisipyo para mas mabilis.”

The respondents mentioned that the early warning systems are effective as it led to early action even 2 to 3 days before the expected calamity which aided in lessening damages and casualties. However, the EWS device could be improved to make it more PWD-inclusive (e.g., blinking lights).

During the early days, indigenous people would use the environment (e.g., birds flying, wind direction) to identify incoming calamities or disasters. However, nowadays, triggers are being observed using a checklist or using water levels or flood markers to predict flooding, and even prepare for the amount of food and non-food items to be given to affected families in communities.

4.2.5 Ability to implement actions in AA lead times

LGUs are able to understand the forecast and risk assessment as they are regularly being trained on the use of EWS devices. However, it was recommended that reliable and sustainable representation of the vulnerable sector in assessment and planning should be strengthened. Municipal and barangay links are assigned persons in Pagalungan, Maguindanao who were asked by the local government to be representatives of their vulnerable groups. This can be one way to strengthen DRRM assessment, planning, implementation monitoring, and evaluation.

4.2.6 Gaps and challenges at the local level

It was recommended to emphasize the permanency of the positions in the Local DRRM office since it was observed that changing of administrations after elections led to different people working on disaster management. Thus, continuity and consistency in the level of preparedness are very difficult to achieve.

“Sa region level, walang continuity kasi sa LGU na experience namin na kapag siya ang naassign na focal person, next year ay iba nanaman. Sayang yung training na nabigay sa kanila. Iba nanaman yung mayor, iba na ang tao. Kung sino ang focal person siya lang talaga dapat”

4.3 Technical services

4.3.1 Forecasting capacities

PAGASA has early warning devices that were delegated to the municipality such as devices that detect rainfall, and wind speed and direction. At least 3 days before the calamity, PAGASA can warn the municipality about the incoming weather system and gives advice for preparation. Aside from this, the PAGASA website is said to contain fifty (50) to eighty (80) advisories daily about the rainfall forecast in the next 10 days. With regard to difficulty in predicting the season of rains due to climate change, the agency also has a climate outlook for the next 6 months through its website.

According to the respondents, there are various sources to get early warning but mostly they rely on the information given at the Provincial Level which is rendered to them by PAG-ASA. Other sources of information include: 1) social media, 2) NDRRMC Text Messages, 3) Local News, and in severe cases 4) National Advisories.

As mentioned previously, early warning led to early action even 2 to 3 days before the expected calamity which aided in lessening damages and casualties. However, the EWS device could be improved to make it more PWD-inclusive (e.g., blinking lights).

4.3.2 Gaps and challenges

Despite the availability of the equipment and information, there is a challenge in disseminating information due to electricity and connection problems.

Concerns were raised with regard to the dissemination of information via social media in areas within the municipality that have little to no signal or difficulty accessing stable internet connection.

During discussions, it was emphasized that the protocols for early warning and communication are insufficient and are yet to be improved since some response teams rely on “*sariling diskarte*” to get early warning information for early actions. For one, communication equipment such as sirens could be further improved, as well as the use of a direct line of communication through hand-held radios that may be accessed by individuals even in far-flung areas of the municipality.

It was also recommended that the Pre-Disaster Risk Assessment (PDRA) should be implemented and observed across all agencies, especially MDRRMO. More so, not everyone is aware or familiar with the current protocols.

4.3.3 Institutional commitment/buy-in

PAGASA is an agency under the Department of Science and Technology mandated to “provide protection against natural calamities and utilize scientific knowledge as an effective instrument to ensure the safety, wellbeing and economic security of all the people, and for the promotion of national progress.” (Section 2, Statement of Policy, Presidential Decree No. 78; December 1972 as amended by Presidential Decree No. 1149; August 1977).

As such, the agency is committed to providing timely weather forecasts to enable the community and its officials to prepare for an impending calamity. Moreover, they are also committed to providing training to government staff on the use of their local early warning devices.

4.4. Institutional Services, DRM and social protection actors

4.4.1 Enabling environment of policies, strategies and plans

The Republic Act (RA) 10121, also known as the Philippine Disaster Risk Reduction Management Act (2010)⁴, is the starting point for anticipatory action (AA). This provides an overarching legal basis for DRRM and adheres to the principles and strategies established by the Sendai Framework for Disaster Risk Reduction. RA 10121 shifted the old government structure's emphasis from post-disaster response to preparedness/anticipation and risk reduction in general. Through the development of the National Disaster Risk Management Framework, the Act provides a comprehensive, all-hazards, multi-sectoral, inter-agency, and community-based approach to disaster risk management. (REAP Case Study Philippines).

In terms of potential funding for AA, the General Appropriations Act (GAA) is one of the most important pieces of legislation that Congress passes each year, defining the national government's national expenditure program. DRRM activities receive at least 5% of the national budget. The National Disaster Risk Reduction and Management Fund (NDRRMF), formerly known as the 'calamity fund' and appropriated by the GAA, allocates 30% of appropriated funds (i.e., a minimum of 5% of the national budget) as a Quick Response Fund (QRF) or standby fund for emergency response and 70% for disaster prevention, mitigation, and recovery (RA 10121). The reasoning behind this split was that if DRR activities were properly implemented, a smaller amount would be required for disaster response. (REAP Case Study Philippines).

There are several enabling social protection policies that can support anticipatory action initiatives, including:

- **Disaster risk financing:** Policies that support disaster risk financing can help provide a sustainable and predictable source of funding for anticipatory action initiatives. This can include insurance policies, catastrophe bonds, and risk-pooling mechanisms.
- **Social safety nets:** Social safety net policies, such as cash transfer programs, can provide targeted support to vulnerable households and communities, including in the context of anticipatory action. This can help ensure that the most vulnerable populations are able to access timely and appropriate assistance in the event of a disaster.

According to Minister Atty. Jajurie, the MSSD is implementing several social protection programs that have been designed “to reduce poverty and vulnerability by enhancing people’s income-generating capacities, diminishing people’s exposure to risks and enhancing their capacity to protect themselves against hazards, and interruption or loss of income.” (Bangsamoro.gov.ph).

- Early warning systems: Policies that support the development and implementation of early warning systems can help facilitate anticipatory action initiatives. This can include investments in weather monitoring and forecasting, as well as community-based early warning systems that are tailored to the needs and context of the community.

While the three bullets pertain to supporting AA, the two bullets below have to complement AA leading to durable solutions to address vulnerability and exposure.

- Disaster risk reduction and management: Policies that support disaster risk reduction and management can help build resilience and reduce the impact of disasters. This can include investments in infrastructure, such as flood control systems and early warning systems, as well as community-based disaster risk reduction and management initiatives.
- Climate change adaptation: Policies that support climate change adaptation can help address the long-term impacts of climate change, including natural hazards and disasters. This can include investments in adaptive infrastructure, as well as initiatives that build the resilience of communities and ecosystems to the impacts of climate change.

Overall, these policies can help create an enabling environment for anticipatory action initiatives, supporting their effectiveness and sustainability, and ensuring that vulnerable populations are able to access timely and appropriate assistance in the event of a disaster.

4.4.2 Institutional commitment/buy-in

The MSSD funded the conduct of community-based training (Family DRR & First Aid), the conduct of preparedness activities for AA activation, and repositioning activities for AA training for community representatives. They also have Provision of Grab bags (after PDS), Anticipatory: Cash Assistance, Cash for Work- Tree Planting, Disability Inclusive DRR (sessions), and Water Sanitation and Hygiene (WASH) that can be contributed to this project. Local government, WVDF, and MSSD with other offices in BARMM can complement each other's resources to aid the most vulnerable population in Pagalungan, Maguindanao.

The MSSD implements the Kalinga Para sa May Kapansanan Program or the monthly stipend for indigent persons with disability (PWDs). The program is part of the MSSD's comprehensive response to provide social protection interventions for differently-abled persons, which includes the provision of assistive devices, skills training, capital for livelihood projects, and organizing and strengthening local PWD federations. The program does not have an AA component but it prioritized a PWD affected by a natural or human induced hazard (MSSD MC 158 S. 2022).

4.5 AA technical working groups

4.5.1 Recommendations on relevant stakeholders to lead/engage in AA working groups

To carry out an effective AA, stakeholders have to work together instead of siloed activities in AA. Respective of mandate, agencies and organizations can deliver their services using an anticipatory approach. National government agencies like the Department of Social Welfare and Development or the Ministry of Social Services and Development in the case of BARMM are now relating AA in their delivery of social services particularly through shock- responsive social protection. Social protection in all its forms must be established in a coherent manner in BARMM.

Many of the social protection components such as social assistance, social insurance, social safety nets and labor market interventions are not yet well established in BARMM. Moreover, the establishment of these systems can already include AA based on results of the initial implementation of AA. From macro to micro perspectives, risk responsibility must be carefully studied to develop a strong social protection system in BARMM. Market Benefits

and individual capacity to participate and contribute to the system must be carefully analyzed to make a good operational/ business model while rights-based services are provided to the members/constituents.

4.5.2 Recommendations on areas for capacity building for stakeholders

Capacity building of stakeholders on AA can be a very huge task but building the key messages on how each group's behavior and perspective should change can be more feasible as an immediate step. AA is a relatively new concept. It can build on the preparedness and response thematic pillars of the Philippine DRRM Act. There are several capacity building needs in Maguindanao that can support the effective implementation of anticipatory action initiatives, including:

- Early warning systems: There is a need to strengthen the capacity of local stakeholders, including communities, local governments, and non-governmental organizations, to develop and implement early warning systems that are tailored to the needs and context of the community.
- Disaster risk reduction and management: Capacity building is needed to strengthen the capacity of community members including women, children, elderly, persons with disability and Indigenous Peoples in disaster risk reduction and management, including in the areas of hazard mapping, risk assessment, and contingency planning.
- Community-based disaster preparedness and response: There is a need to build the capacity of communities to develop and implement community-based disaster preparedness and response initiatives, including in the areas of search and rescue, evacuation, and first aid.
- Climate change adaptation: Capacity building is needed to support the development and implementation of climate change adaptation initiatives, including in the areas of adaptive infrastructure and natural resource management.
- Data management and analysis: There is a need to strengthen the capacity of local stakeholders in data management and analysis, including in the areas of data collection, analysis, and visualization, to support evidence-based decision-making and the effective implementation of anticipatory action initiatives.

- Communications and advocacy: Capacity building is needed to support effective communications and advocacy around anticipatory action initiatives, including in the areas of community engagement, stakeholder coordination, and advocacy for policy and resource mobilization.

These capacity building needs can help strengthen the ability of local stakeholders in Maguindanao to implement effective and sustainable anticipatory action initiatives, building resilience and reducing the impact of disasters on vulnerable populations.

4.6 Financial

Anticipatory action in Maguindanao can be funded through a combination of sources, including government funding, private sector funding, and international aid. The following are some of the possible sources of funding for anticipatory action in Maguindanao:

- National government funding: The national government of the Philippines provides funding for disaster risk reduction and management initiatives. However, there are no clear guidelines yet for anticipatory action but can be leveled off in the preparedness pillar under pre-emptive evacuation.
- Local government funding: Local government units (LGUs) in Maguindanao can also provide funding for anticipatory action initiatives in their respective areas. This funding may come from local budgets and is allocated to the LGUs' disaster risk reduction and management offices. However, this will require clear guidelines from the national government to allow allocation using local funds.
- Private sector funding: The private sector, including corporations and non-profit organizations, also provides funding for anticipatory action in Maguindanao. This funding may come in the form of corporate social responsibility (CSR) programs, grants, or donations.
- International aid: International aid organizations, such as the United Nations agencies, World Vision, the International Red Cross and Red Crescent Movement, and non-governmental organizations (NGOs) also provide funding for anticipatory action

initiatives in Maguindanao. This funding may come in the form of grants, technical assistance, or in-kind donations.

Overall, the funding for anticipatory action in Maguindanao comes from a variety of sources, reflecting the multi-stakeholder approach to disaster risk reduction and management in the Philippines.

5. Actions analysis

5.1 Existing evidence for actions

The Project of World Vision is focusing on piloting AA. The LGU, the MSSD, forecasting agency, World Vision and its FSP partners have plans and previous experiences that can support AA implementation.

The expertise in cash programming, community-based DRR and the humanitarian response of World Vision and other non-government organizations can be used in AA. The Local government's approach in the full cycle of DRR and initial actions in proactive DRR is a facilitating factor to develop AA. AA can just be inserted in the full cycle of DRM preventing or mitigating damages and losses by preparing and doing early actions with cash and in-kind support for vulnerable families in anticipation of an impending hazard.

The MSSD and PAGASA and stakeholders at the regional and national levels provide technical, financial and programmatic support in Pagalungan, Maguindanao for socio-economic development. There are policy hindrances to allow an anticipatory approach in service delivery such as social protection but that can be studied further.

5.2 Institutional capacity for actions of specific sectors

There is a need to train more individuals, focal persons and different sector groups including the vulnerable groups. Synchronize the different systems related to AA and its relation to long-term plans and potential durable solutions. The concepts learned and systems to be established have to be simulated and possibly activated and learn from these practices.

The Local DRRM Office has to have permanent positions. Continuous training with community leaders, municipal and barangay links who are assigned representatives of vulnerable groups of women, children, elderly, and persons with disability.

Gender, age and disability inclusion in risk assessment, early warning system, planning, implementation monitoring and evaluation have to be part of the intentions of actors in disaster risk management. Tools, technology, policies and social behavioral change and communication should be tailored to vulnerable groups and the service-providers who will use them.

Climate change, peace-building and conflict sensitivity, environmental management, and socio-economic development should be part of the conscious undertaking of AA. AA should contribute to durable solutions to address the vulnerability of the people in the communities.

5.3 Possible AA per hazard

Flooding is the most feasible AA to prepare for but secondary hazards should be coordinated as well like communicable and non-communicable diseases, prevention of sexual exploitation and abuse, and prevention of grave child rights violations, among others.

Pagalungan, Maguindanao is located in a region that is prone to several natural hazards. Some of the possible hazards that may require anticipatory action in Pagalungan, Maguindanao include:

- **Flooding:** Pagalungan, Maguindanao is situated in a flood-prone area, particularly during the rainy season. Heavy rainfall can cause flash floods, river floods, and landslides, which can damage homes, infrastructure, and livelihoods.
- **Typhoons:** The Philippines is located in the western Pacific typhoon belt, and Pagalungan, Maguindanao may be affected by typhoons or tropical cyclones during the typhoon season, which typically occurs from June to November. Typhoons can cause strong winds, heavy rainfall, and storm surges, which can result in flooding, landslides, and infrastructure damage.
- **Drought:** Pagalungan, Maguindanao is also vulnerable to drought conditions, particularly during the dry season. Drought can result in crop failures, food shortages, and water scarcity, which can lead to malnutrition, health problems, and loss of livelihoods.
- **Conflict:** The region where Pagalungan, Maguindanao is located has experienced armed conflict in recent years, which can lead to displacement, loss of livelihoods, and humanitarian needs. Conflict can also exacerbate the impact of natural hazards and limit the ability of communities to prepare and respond to disasters.

By taking anticipatory action measures, communities and local organizations can prepare for these hazards before they occur, reducing the potential impact and building resilience to future disasters.

6. General Recommendations

These recommendations can help World Vision and the stakeholders of Pagalungan, Maguindanao to implement effective and sustainable anticipatory action initiatives in Pagalungan, Maguindanao, and build resilience in vulnerable communities.

- **Conduct a comprehensive risk assessment:** The project should work with local communities and government agencies to conduct a comprehensive risk assessment that identifies the most significant hazards and vulnerabilities in Pagalungan, Maguindanao. This assessment should take into account the impact of climate change and other factors that may increase the frequency or severity of disasters.
- **Strengthen early warning and forecasting systems:** The project and/or the LGU should invest in strengthening early warning and forecasting systems that can provide timely and accurate information to communities and local organizations. This may involve partnering with local weather agencies and disaster risk reduction organizations to enhance the availability and accessibility of climate data and other hazard information.
- **Build local capacity and promote community participation:** The project should work to build local capacity and promote community participation in anticipatory action initiatives. This may involve providing training and resources to local organizations and community members, and involving them in decision-making processes related to disaster risk reduction.
- **Enhance social protection mechanisms:** The project should work with local government agencies and other stakeholders to enhance social protection mechanisms that can support vulnerable populations during and after disasters. This may include cash transfer programs, food assistance, and other forms of support that can help communities recover from the impacts of disasters.
- **Monitor and evaluate initiatives:** The project should establish a monitoring and evaluation system to track the effectiveness of anticipatory action initiatives and identify areas for improvement. This system should involve regular assessments of the impact of these initiatives on local communities, and the use of feedback mechanisms to ensure that communities are actively involved in the implementation and evaluation of these initiatives.

6.1 Specific for World Vision

- *Train and build a team of experts within the organization and the partners they are working with*

AA will require more concepts to deconstruct including standards, rights-based approach, inclusivity, sensitivity to conflict and Indigenous Peoples culture, among others. Experts from the organization will be needed to fulfill the needs of these areas of concern other than the standardized process that AA is offering now. AA has to be linked with the phases of disaster risk management, development and eventually the well-being of all people.

- *Review internal processes and prepare to institutionalize AA in all its areas*

World Vision can revisit the policies and frameworks for their National Emergency Preparedness and Response Fund (NEPRF) to consider the requirements of AA.

Studies have shown that investing in anticipatory action can lead to significant cost savings compared to traditional disaster response and recovery efforts.

For example, a report by the World Bank estimates that every dollar invested in disaster risk reduction initiatives can save up to seven dollars in economic losses. This is because anticipatory action can help to prevent or reduce the impact of disasters, which can result in lower costs associated with response, recovery, and reconstruction.

Another study conducted by the Red Cross Red Crescent Climate Centre found that anticipatory action measures, such as pre-emptive evacuation and cash transfers, can be more cost-effective than traditional disaster response measures. The study showed that anticipatory action can help to reduce the costs associated with response, recovery, and reconstruction by up to 40%.

Furthermore, a report by the International Federation of Red Cross and Red Crescent Societies (IFRC) found that anticipatory action initiatives can help to reduce the humanitarian and economic impact of disasters. The report highlights examples of successful anticipatory action initiatives that have helped to prevent or reduce the impact of disasters, including early warning systems, pre-positioning of relief supplies, and pre-emptive evacuation.

- *Contextualize and standardize a rights-based approach to AA*

There are few studies on AA aside from its effectiveness in reducing the costs of humanitarian response, recovery and reconstruction. The current standards available are related to humanitarian response. Specific to vulnerable groups, the standards can be developed, agreed and compiled in consultation with them and the national government agencies concerned.

- *Pilot and replicate*

Since there is also a limited piloting of AA in the Philippines, it has to be conducted in different contexts. However, the approaches can be replicated such as the rights-based approach, cash-based and multi-stakeholder mobilization of resources if applied and successful.

6.2 Specific for LGU

- *AA allocation in the 70% LDRRMF, under- preparedness*

The LGUs can include AA in their LDRRMP which is the basis of allocating for AA from the LDRRMF. Approval of LDRRMC and approval of Appropriation Ordinance by the Local Sanggunian as reviewed by the Provincial Sanggunian should be taken subsequently. This will allow AA to have an allocation from the LGU budget. However, this does not mean that this is a guaranteed solution because the LDRRMP and LDRRMF cover the whole phases of disaster risk management hence the fund may not be sufficient to cover all the needs and actions required.

- *Cost- benefit analysis during response vs. preparedness for response fund (AA)*

Building on the previous recommendation, the LGU can conduct a cost-benefit analysis on AA to know where they can best put their money. This can be influenced by the socio-economic and environmental factors in their municipality. The presence of non-government actors, and private sectors can be opportunities but there are threats as well such as the logging activities and upcoming elections that may spur conflict crises.

- *Regular updating of hazard-specific contingency plans, climate and disaster risk assessment and LDRRMPs and their relation to Comprehensive Land Use Plan (CLUP) and Comprehensive Development Plan (CDP)*

Though Pagalungan, Maguindanao has most of these plans, the communication of these plans to vulnerable groups helping them understand the risk and capacitating them to act on it, implementation of the plan, monitoring and evaluation is limited. The consultations conducted said there was limited participation in DRR. Hence, the updating, review, communication, implementation, and M&E should be made participatory, rights-based, and linked to socio-economic development in the area.

- *Continuous engagement with donors, stakeholders and communities on AA and strategize on leading it to durable solutions*

The LGU and its communities are the lead actors in AA even though the AA funding may come from NGOs or donors. They should lead in driving AA to durable solutions. They should be able to see the bigger picture for the well-being of their constituents especially the vulnerable groups.

- *Continuous improvement of inclusive early warning system that should lead to early actions at different levels from provincial, municipal, barangay up to purok and household level*

Wide-range handheld radios were recommended to be used in all barangays as participants in the FGD mentioned. However, the early warning system includes communication and feedback. It should not end on signals provided by the devices. It should be communicated properly to all concerned, especially the vulnerable groups including women, children, elderly, persons with disabilities and Indigenous Peoples.

6.3 Specific for Technical Services

- *Define the Triggers for AA and build capacities with the participation of stakeholders*

PAGASA and other science agencies including MGB should provide technical services in risk assessment of LGUs. Build their capacity in the beginning and equip them with skills that they can use so the risk responsibilities are distributed and executed well.

- *Inclusivity*

Together with the LGUs, PAGASA should monitor how their information reaches the concerned individuals. They should tailor their early warning according to the needed information of the LGUs, barangays and concerned households. If their intended users are not able to get their information, there must be an error in communicating the information that defeats the purpose of generating the information.

- *Empower local governments up to village or purok level on Early Warning, Risk Assessment and analysis.*

If risk assessment is vital to the preparedness of “ordinary people.” The process of doing it must be simplified and adapted to the ability of “ordinary people” for their own safety and for the safety of their assets.

Receiving real-time information about the hazard is vital because it aids in early information dissemination for the community and officials to prepare for the disaster. There is a need to establish a local early warning system to be operated by the community stakeholders and Local DRRM Council. Coordination to access the EWS devices such as rain gauges, Automated Weather Station (AWS), and water level gauge upstream (Province of Agusan, Bukidnon, Arakan Valley and other parts of North Cotabato) needs to be established in setting the trigger activation for Anticipatory Action.

Community preparations include activation of the command center, alerting the community, coordination with the barangay, and salvaging of people's livelihood. These preparations are made at least 2 to 3 days before the expected disaster.

6.4 Specific for Institutional Services in BARMM that can work on AA

- *Integrate AA in their processes such as social protection services*

MSSD support for cash assistance as part of the social safety net of their social protection program can integrate AA. Other agencies and stakeholders that can support Pagalungan, Maguindanao, have to study their internal policies and procedures including partnerships with financial service providers, municipal and barangay links among others to integrate AA.

- *Link with LGUs in the delivery of services, empower and train LGUs to maximize decentralization and devolution of powers*

Other sectors such as health, education, livelihood, prevention of sexual exploitation and abuse, and environmental protection, among others, that are led by national and BARMM agencies can provide essential technical assistance and financial resources to LGUs like Pagalungan, Maguindanao. Now that the LGU is beginning to integrate AA for flooding the approach should be holistic to include these sectoral services.

- *Recommend new law if necessary*

The Congress or parliament can study the statutory limitations and opportunities pertaining to AA because AA is a vital part of the protection of lives, losses, and damages. A budget line item or

funding stream has to be institutionalized for LGUs and provide legal bases for national and local agencies to integrate AA and align this with socio-economic and environmental development.

6.5 Specific for other AA stakeholders

- *Each group of layers of governance should understand their role and take risk responsibility for actions*

National and BARMM government and private entities (macro), provincial and municipal (meso), and households and individuals (micro) have a stake in risk responsibility. They all have contributions to AA financially, in-kind, or through behaviors and actions. They should understand AA and its relation to disaster risk management, climate and disaster risk financing, and social protection.

- *Coordinate with the AA TWG coordinator/ LDRRMO for the coherence of AA activities and initiatives*

There are various actors for AA as in the risk responsibility discussed above and there are various entities who want to implement AA as well. All interested actors should course through the local chief executive and the local DRRM officer for the coherence of plans, programs, projects, and activities in relation to Anticipatory Action.

- *International Humanitarian Assistance guidelines and protocols should be reviewed to include AA so that siloed and chaos can be avoided. Instead, IHA guidelines can be observed in the AA or preparedness phase*

6.6 Next steps on AA protocol development

For the Project and the stakeholders, the following is the list of steps for protocol development:

- Conduct Participatory Risk Assessment with community members, especially the vulnerable groups
- Defining triggers for activation of AA
- Early Warning System review, inclusivity assessment, improvement and training

- Plan Detailed Anticipatory Actions and defining priority actions to be funded
- Design and agree on financing when triggers are met. This will be followed immediately by a discussion with stakeholders on what, who and how will financing be executed
- Establish protocols on responsibilities, from pre-disaster risk assessment, early warning, early actions, financing, monitoring and evaluation
- Plan for Monitoring and evaluation, reporting and learning schedules and assignments

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Annex 1: Desk Review

Situational analysis

The Municipality of Pagalungan lies along the flood path of Pulangi RIVER which makes it highly vulnerable to severe flooding incidents of this kind threatening high-risk barangays and low-lying positions of this municipality.

The uncertainty of future calamity at the onset of the rainy season and climate change should be anticipated with unforeseen events in known disaster/calamity-prone areas to ensure maximum safety and lesser effect on life and property to threatened 12 Barangay of the municipality.

Assumptions:

1. Typhoons and heavy rains will cause and prolong water flooding in affected areas.
2. Continuous rain will trigger the Pulangi River to overflow and flash floods will threaten barangays along Pulangi River bank.
3. Hasty rescue and evacuation operations will be conducted with difficulties due to the very limited resources and hesitance of the vast majority to force evacuation.
4. Looting incidents and food shortages will be experienced

The Municipality of Pagalungan, Maguindanao is exposed to 3 natural hazards namely Flooding, Drought and Earthquake. There are also two (2) Human-Induced hazards like Armed Conflict, Rido or Political war and Fire which seldom happen in a year.

The most common climate-related hazard affecting the municipality is flooding. It stimulates different results in all sectors especially agriculture and fisheries sectors further affecting the constituents' livelihood, and the health sector further affecting public health and water, sanitation, and hygiene.

Table 1 Anatomy of the hazard

ROOT CAUSES	EARLY WARNING SIGNS	TRIGGERING FACTORS	EXISTING MITIGATING MEASURES
The Geographic location of the Municipality of Pagalungan which is the catch basin of all rain water from Province of Agusan, Bukidnon, Arakan Valley and other parts of North Cotabato Province due to Typhoon, LPA, ITCZ or habagat resulting to heavy rains.	<ul style="list-style-type: none"> - PAGASA via Facebook Acct/ Cellphones - Flood Markers - 2 way radio communication - Tri media people (TV and Radio broadcast) - 	<ul style="list-style-type: none"> - Heavy down pouring of rain in Bukidnon, Agusan and Arakan Valley - LPA - ITCZ - Habagat - Tropical Cyclone passing thru Hinatuan and Eastern part of Mindanao 	<ul style="list-style-type: none"> - Tree Planting along river banks (Bamboo) - Clearing of canals, creeks and Waterways - De silting of rivers - Construction of flood control dikes - Rip-rapping of river banks in barangay Layog - Implementation of Ordinance on Solid waste management disposal - Establishing EWS, flood level markers, Mun wide siren, Communication on 2 way radios - Strengthening of IEC materials like Tarps, flyers. Manuals, and signages

Source: Pagalungan Contingency Plan

Risk analysis

This section is lifted from the Municipal Disaster Risk Reduction and Management Plan (DRRMP) 2021-2023 of the Municipality of Pagalungan, Maguindanao.

From January 2015 to December 2020, the MDRRMC reported a total of 23 disaster incidents in the Municipality of Pagalungan with a total estimated damage cost of more than a Hundred Million pesos. The geologic and hydro-meteorological disasters that hit the Municipality of Pagalungan were floods (both flash and plain), Drought, Fire and earthquake. Clashes of clans/clan family feuding or is locally called as “rido” is also experienced thrice a year. The recent Pandemic (Covid-19) is also affecting the lives and economic activities of the people.

Based on the data gathered from the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), flooding in Pagalungan is attributed to the following factors, namely: Continuous or heavier rains that accumulate in low-lying areas with poor drainage capacity. Overflowing waters from rivers and tributaries from local or upland rains. Heavy rains are usually associated with typhoons, monsoons or low-pressure areas.

Pagalungan is the catch basin of water from up-land areas which makes it more susceptible to flooding. Based on the reported extent of the floods in the past years, the Philippine Atmospheric, Geophysical and Astronomical Services Administration mapped the affected areas, which tended to concentrate from Barangay Layog, Linandangan, Galakit, Damalacak, Dalgan Poblacion and spread to the other Barangays down to Barangay Kudal, Inug ug, Bagoenged, Buliok and Kalbugan.

On October 13, 2020, the severe/worst flooding reached the municipal hall with a height of 1.5 meters and all the Barangays of Pagalungan submerged devastating most of all agricultural products including livestock. These situations were experienced in the previous years; on January 18, 2017, and June 28, 2011, as shown in Table 11. (Record of Previous Disaster) Covid-19 pandemic started its impact on March 15, 2020, when the President of the Philippines declared the entire country under a State of Emergency due to the rapid effect of the Pandemic. Because of this disease outbreak (Covid-19) pandemic, adolescents have to adapt to a world where they can't go to school, hang out with friends, and leave their homes. This can take a toll on their health and well-being.

Drought occurred in the month of January 2018 to June 2018. This Calamity resulted in the decrease of the sources of livelihood which eventually led to low income of the people, shortage of food supplies, and limited water supply causing migration of the people to Ligawasan Marsh.

An earthquake shook the whole of Central Mindanao on October 16, 2019, with a Magnitude of 6.8 Richter scale that happened in the Municipality of Makilala, North Cotabato.

Another is human- induced hazards or incidents of calamity that happened during and after the election. Political rivalry and Rido or family feud resulted in fire-fighting distracted the living conditions of the people, and devastated their means of livelihood.

Due to rapid urbanization, the Municipality of Pagalungan has witnessed mushroom growth of Concrete buildings and houses made of light materials with scant respect to requirements of open spaces, preservation of water bodies and forested areas etc. making these more prone and highly vulnerable to disasters like fire and earthquake.

Table 2 Historical data of past disasters

TYPE OF DISASTER/ NAME	DATE OF OCCURRENCE	AFFECTED			Casualties			Damages		
		No of Barangays	No of Families	No of Individuals	Death	Injuries	Missing	Properties	Infrastructure	Livelihood
Flooding	October 13 to 22, 2020	12	11,000	60,187	0	1	0	500,000	10,000,000	25,000,000
COVID-19 Pandemic	March 15, 2020	12	11,000	60,187	0	0	0	500,000	1,000,000	30,000,000
Earthquake	October 16, 2019	12	11,000	58,500	0	1	0	2,000,000	50,000,000	200,000
Drought	Jan to June 2018	12	7,930	39,653	2	0	0	300,000	1,500,000	20,000,000
Flash Flood	January 17 to 28, 2017	12	7,930	39,653	1	0	0	300,000	5,000,000	15,000,000
Drought	April 2015 to June 2016	12	7,930	39,653	2	0	0	500,000	2,500,000	30,000,000
Flooding	June 28, 2011	12	6,369	31,891	1	0	0	150,000	2,000,000	1,000,000
Earthquake	August 17, 1976	12	5,000	20,000	20	35	4	500,000	100,000,000	2,000,000

Table 3 Affected population breakdown

Affected Population Breakdown

Age Group	Population (2015)	Age group percentage
1 to 4	4,619	11.65%
5 to 9	5,500	13.87%
10 to 14	4,713	11.89%
15 to 19	4,367	11.01%
20 to 24	3,368	8.49%
25 to 29	3,291	8.30%
30 to 34	2,837	7.15%
35 to 39	2,574	6.49%
40 to 44	2,266	5.71%
45 to 49	1,940	4.89%
50 to 54	1,160	2.93%
55 to 59	774	1.95%
60 to 64	446	1.12%
65 to 69	366	0.92%
70 to 74	159	0.40%
75 to 79	104	0.26%
80 and over	111	0.28%
Total	39,653	100.00%

Quantitative Risk Analysis

The likelihood of Flooding is almost certain, it comes more or less than 5 times a year, changing rainfall patterns, and the impact on agricultural crops, population and infrastructure is severe devastation. High levels of poverty and lack of assets, rendered majority of farmers not credit-worthy and hence they could not access normal loans to purchase farm inputs. Earthquake is almost certain because of the big one and almost every month will happen in Mindanao and the impact is major destruction to property and infrastructure. The Outbreak of Covid-19 Pandemic is rampant in every place and the impact particularly on economic aspect is major losses and danger to the lives of the people. Drought is possible, it occurs

every 3 to 5 years but the impact is devastation to agricultural crops, limited supply of water and more people dying because of heat stroke. Drought is a recurrent problem, often causing widespread crop failure which affects the livelihood of the farmers. The dependency on rain-fed agriculture exposes the smallholder farmers to weather- related risks which negatively impact smallholder farmers household income and food security. Fire is also not certain but because of congested houses mostly made of light materials, possible impact is severe losses of property. Human-induced incidents like “rido” are possible particularly during elections but the impact is moderate. People are aware of the situation and can evacuate immediately but their property was left behind.

Table 4 Quantitative risk analysis

HAZARD/ THREATS	RISK	LIKELIHOOD (L)	IMPACT (I)	RISK RATING (L x I)
Flood	Agricultural crops, fishery, livestock, animal, Drowning, Death, Disease, Limited movement,	5	5	25
Earthquake	Damage to Infrastructure, Loss of Lives and property Damage to Agricultural crops	4	5	20
Covid – 19 Pandemic	Death, Disease, increases un-employment rate Loss of livelihood, loss of income, limited movement	4	5	20
Arm Conflict	Loss of lives, Distraction to property Loss of Livelihood	3	3	9
Fire	Loss of Lives, Loss of property,	2	5	10
Drought	Agricultural crops, livestock, fishery, Dehydration, Death, Disease, limited movement, increase electrical bills, Water shortages	3	5	15

Operation center standard operating procedure, municipality of Pagalungan, Maguindanao.

Scenario 1 - Flooding:

The effect of the Tropical Cyclone, Tail-End of the Cold Front, Low- Pressure Area estimated to landfall at Bukidnon, Cagayan, Agusan and Cotabato province area causing the Pulangi river to overflow resulted in flooding at the entire municipality of Pagalungan, Maguindanao. The entire population is presumed to be affected, Farm to market roads, schools, Barangay Hall, Health Centers and the entire agricultural product are also affected and devastated.

Scenario 2 - Earthquake:

The effect of the Earthquake with magnitude 7, intensity 8 struck at the entire municipality of Pagalungan, Maguindanao. The entire population is presumed to be affected, Government owned buildings, Farm-to-market roads, school buildings, Barangay Hall, Health Centers, residential houses and the entire agricultural product are also affected and devastated. Given this scenario, the MDRRM Council shall lead the coordination and support in response and resource mobilization as stated in R.A. 10121 Section 15 and Rule 11, Section 1 of IRR: Coordination during emergencies.

Objective: To establish a system of Incident command and control for the municipality of Pagalungan immediately before, during, and after the flooding.

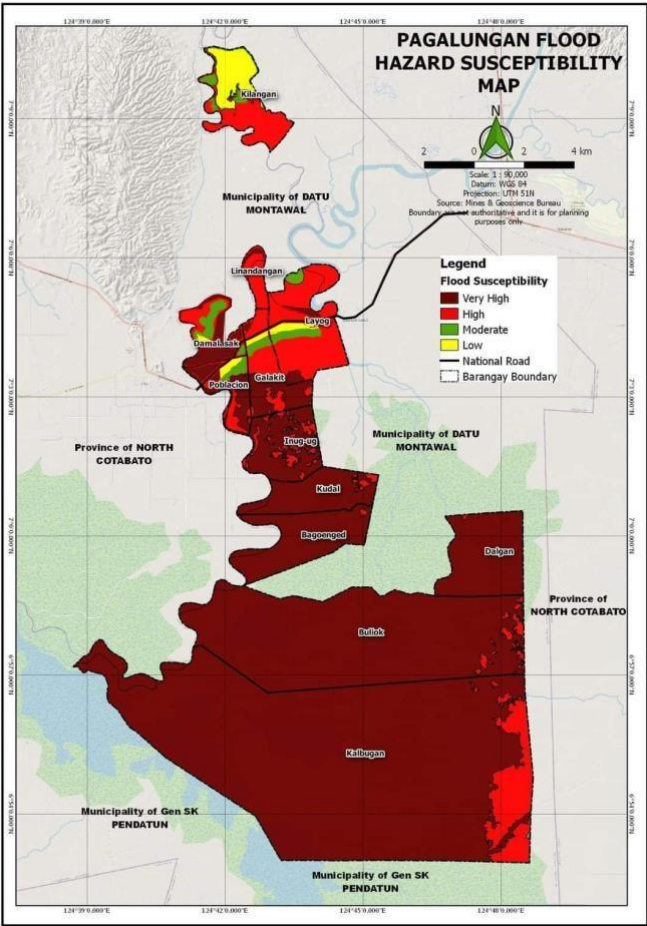


Figure 1 Pagalungan Flood Susceptibility Map

In the city of Pagalungan, flooding is their main concern since they are to be a “catch basin” of nearby areas. Aside from flooding some responded to fire in relation to drought since it is also known to heavily affect the lives of the people in the community. For some, earthquakes are also part of their top 3 hazards

that need prioritization. Other hazards that were considered during the discussion were armed conflict, drugs, and the recent COVID-19 pandemic.

In general, said loss and damages are linked to most hazards present in the municipality. Hazards affect agricultural livelihood because of destruction of crops by the disaster, loss of markets because of immobility in the province caused by flooding, damage to infrastructure because of bombings and flooding. Health and sanitation are also affected due to non-potable water caused by flood and scattered trash, and even families migrate because of the loss of livelihood that was affected by flooding.

Local climate change action plan

This section is lifted from the Local Climate Change Adaptation Plan of the Municipality of Pagalungan, Maguindanao.

Human settlement sector: exposed to flooding and drought and their impacts

The primary impact of flooding and drought in the sector of Human Settlement is the destruction of residential houses. Basically, there is also damage to properties which results in the displacement of the affected community. All Twelve (12) barangays are exposed to these hazards. Farmers, families, children, women, persons with disabilities and senior citizens are the exposed elements of this hazard.

Poor construction of houses, housing sizes, lowered structures, and settlement sites influence the human settlement sector for drought and flood hazards respectively. Housing sizes and number of occupants per house affect the comfort of residents during drought. Houses made of light materials are prone to fire during dry spells. Approximately 3 houses were burned every drought in barangay Kudal and Inug ug. On the other hand, settlement sites increase the danger and vulnerability of residents to the effects of floods. Lowered structures during floods leave the constituents with no other choice but to evacuate to nearest unaffected family and relatives. Houses made of light materials and poor construction along the riverside were destroyed by water currents. Flooding and dry spells contribute to the rapid increase of Informal settlement and migration.

Sensitivity and threat level assessment

One of the primary triggering factors that make the human settlement sector vulnerable and exposed to different hazards is the location of the houses. Many are built in the flood prone area and near river banks. Further, these houses are made of light materials. Twenty percent (20%) of the population is at risk and this eventually increases up to 100% of the population if not properly given attention. The stressors or external factors that aggravate the condition of elements at risk are Non-compliance to the Building Code

and lack of municipal ordinance prohibiting the construction of houses in the flood prone areas and near river banks, high poverty incidence and no identified relocation area for Internally Displaced Persons. The threat level for this sector is (5) five.

Agriculture sector: exposed to flash flood and drought and their impacts

Flooding and dry spells or drought have brought great impacts particularly on agricultural products. Agricultural areas are submerged in water when there is flooding. Meanwhile, these areas will be totally damaged in the occurrence of drought.

The vulnerability of the agricultural sector is evident in constituents' limited knowledge of climate-resilient farming, burning of corn and rice straw, as well as in mishandling and misapplication of synthetic fertilizers and pesticides resulting into synthetic-products-dependency, damage of agricultural products, high incidence of pest and diseases as well as livestock diseases will be experienced. These will result in less productivity, low income of the poor farmers, shortages of food and decrease in livestock supply. Farmers, fisher folks, families, children, animals, agricultural areas and products are the exposed elements to the identified hazards.

Forest denudation due to both illegal logging and legal cutting of trees in the mountainous part of Bukidnon Province, Agusan Province and North Cotabato area, massive use of synthetic chemicals such as pesticides, fertilizers, GMO seeds and kaingin farming system or slash and burn are some of the main identified triggering factors to these climate-related hazards which bring great impact on agriculture. Apparently, the estimated number of people/ area risk per given threshold affected is thirty percent (30%) of the population. If this is not properly addressed, the estimated number of people/ area risk per given threshold which will be affected in the near future will increase up to One hundred percent (100%). The external factors that aggravate the condition of elements at risk are lack of enforcement of the policies and ordinances, limited support to farmers and the mono-cropping system of farming. Upon assessment, the agriculture sector is the most vulnerable and most exposed to flooding and drought hazards. The threat level is 5 which is considered the highest.

Fisheries sector: exposed to flooding and drought and their impacts

There are some inland fisheries in the municipality, particularly in Barangay Kalbugan, Buliok, Dalgan, Bagoenged, Inug ug, Damalask, Galakit, and Poblacion. Most of these are found in Liguasan Marsh and small lakes, rivers and canals. Vulnerability of fisher folk sector is evident by critical rate of water level in the tributaries and Liguasan Marsh, insufficient ponds' depth, Minimal adaptive fishing infrastructure (such as floating fish cages and fish nets), improper traditional fishing practices, and illegal fishing practices like electrofishing and fish poisoning or fish kill.

In the occurrence of flooding and drought, the dikes (fishponds) are damaged. Fishing gear like fish nets, fish cages, including *bancas* and pump boats used for fishing were damaged and some were lost by the current of water. During drought, the body of water becomes a wetland. Fish sanctuary destroyed. Loss of fish stock which results in less to no income of fishermen and less supply of fish, the tendency of price hike in the market. Most affected populace as a whole; the farmers, families, children, animals and fisher folks are the elements exposed to these hazards.

Inland fishermen have had minimal fishing technology and facilities. The traditional system of fisher folks is one of the triggering factors that make this sector vulnerable and exposed to the identified hazards. The estimated number of people/ area risk per given threshold is 2.5 % of the total population. In the near future if this issue is not properly resolved, an increase of up to 3.5% of the total population will be affected. Inadequacy of knowledge, skills and facilities for fishing, no alternative source of income and lack of linkage of the Local Government Unit to the Department of Agriculture and Fisheries (DAF) are considered as external factors that aggravate the condition of elements at risk. Looking at its general impact on the locality, the vulnerability and exposure of this sector are lesser. The threat level is 4.

Annex 2: KII FGD Results

Part I. Early Warning and Early Action

- a) *Are there policies related to AA that can be used as leverage for AA implementation/ piloting?*

Anticipatory action (AA) is said to be most similar to the current Early Warning System of the municipality with the use of Early Warning Devices to gather data on rainfall, temperature, and wind strength and direction, as well as the use of social media by the disaster team to alert the barangay about an incoming calamity specifically typhoons, in order for them to prepare beforehand. Moreover, Executive Order on Pre-emptive Evacuation and Resolutions on Disaster Risk and Reduction Management may be used as a leverage for implementation/piloting for AA.

- b) *How effective and efficient (e.g. real-time information sharing and communication) are the forecasts, risk assessment, and early warning systems for different hazards?*

It is very effective for the municipality as it leads to early preparation which leads to less damage and casualties. However, concerns were raised with regard to the dissemination of information via social media in areas within the municipality that have little to no signal or difficulty accessing stable internet connection.

- c) *Are the protocols for early warning and communication ready for AA, identify the gaps and recommend actions to be taken?*

During discussions, it was emphasized that the protocols for early warning and communication are insufficient and are yet to be improved since some response teams rely on “*sariling diskarte*” to get by the early warning preparations. For one, communication equipment such as sirens could be improved further, as well as the use of a direct line of communication through radio or “walkie-talkies” that may be accessed by individuals even in far flung areas of the municipality. It was also recommended that the Participatory Disaster Risk Assessment (PDRA) should be implemented and observed across all agencies, especially MDRRMO. More so, not everyone is aware or familiar with the current protocols.

- d) *Are there contingency plans for different hazards and are they updated?*

There are contingency plans which allocate 5% of the budget to disaster response. However, this is mostly for flooding and armed conflict.

With regards to updating the contingency plan, it is said to be updated yearly through information gathered from different sectors. However, there is difficulty in gathering this data.

e) *What are the training needs for the staff?*

There are several training needs for the staff such as training on the following concepts: 1) Anticipatory Action, 2) DRR, 3) Basic First Aid, 4) EWS Walkthrough, 5) Incident Management (up to level 3), and 6) Communication protocols.

“Sa region level, walang continuity kasi sa LGU na experience namin na kapag siya ang naassign na focal person, next year ay iba nanaman. Sayang yung training na nabigay sa kanila. Iba nanaman yung mayor, Iba na ang tao. Kung sino ang focal person siya lang talaga dapat”

It was recommended to emphasize the permanency of their positions since it was observed that different administrations led to different people working on disaster management thus, continuity and consistency on the level of preparedness is very difficult to achieve.

f) *Which hazards have historically caused negative impacts for the following categories?*

Mortality and morbidity, Loss of livelihoods, Loss of assets, Market disruption, Damage to infrastructure, Health and Sanitation, food insecurity, displacement and migration insecurity .

In general, said categories are linked to most hazards present in the municipality. Hazards affect agricultural livelihood because of destruction of crops by the disaster, loss of markets because of immobility in the province caused by flooding, damage to infrastructure because of bombings and flooding. Health and sanitation are also affected due to non-potable water caused by flood and scattered trash, and even families migrate because of the loss of livelihood that was affected by flooding.

g) *What are the top 3 hazards that may be prioritized by the community / LGU for AA?*

It varies for people in the city of Pagalungan, however, flooding is their main concern since they are to be a “catch basin” of nearby areas. Aside from flooding some responded to fire in relation

to drought since it is also known to heavily affect the lives of the people in the community. For some, earthquakes are also part of their top 3 hazards that need prioritization.

Other hazards that were considered during the discussion were armed conflict, drugs, and the recent COVID-19 pandemic.

h) What could be the actions that could have been done if you received real-time information about the hazard?

Receiving real-time information about the hazard is vital because it aids in early information dissemination for the community and officials to prepare for the disaster. Preparations include alerting rescuers, and community, activation of command center, coordination with the barangay, and salvaging of people's livelihood. These preparations are made at least 2 to 3 days before the expected disaster.

i) Where do you usually get the early warnings? Do you get information from the same source regularly?

There are various sources to get early warning but mostly they rely on the information given at the Provincial Level which is rendered to them by PAGASA. Other sources of information include: 1) social media, 2) NDRRMC Text Message, 3) Local News, and in severe cases 4) National Advisories.

j) Did women, children, elderly, persons with disability, and indigenous peoples understand the early warning?

They are the top priority of the EWS. However, they have difficulty understanding and remembering technical terms and concepts and only focal persons or leaders are able to do so. But in essence, they are aware of what to do already in case of an impending disaster.

k) Did the early warning lead to early actions? How can this be improved?

As mentioned previously, it led to early action even 2 to 3 days before the expected calamity which aided in lessening damages and casualties. However, the EWS device could be improved to make it more PWD-inclusive (e.g. blinking lights).

- l) *How did communities and representatives from the vulnerable groups include their concerns and participate in risk assessment?*

Municipal and barangay links are asked to be representatives or focal persons of vulnerable groups. Risk assessment is also incorporated in the active development of *Pantawid Pamilyang Pilipino Program (4Ps)*.

- m) *Did the LGU and community understand the forecast and risk assessment? How can communicating risk be improved?*

LGUs are able to understand the forecast and risk assessment as they are regularly being trained to use the EWS devices. However, it was recommended that Reliable and sustainable representation of the vulnerable sector should be observed.

- n) *How often should the risk assessment be conducted?*

Risk assessment should be conducted yearly as part of updating the contingency plan because of the dynamic nature of weather systems in the system due to current climate change. Some recommended weekly or monthly, while some said quarterly since it is also a struggle to gather people due to busy schedules.

- o) *Are there triggers for pre-emptive actions? Who provides the triggers and what are the basis for the triggers? How accurate are the modeling techniques to provide the triggers for AA?*

During the early days, indigenous people would use the environment (e.g. birds flying, wind direction) to identify incoming calamities or disasters. However, nowadays, triggers are being observed using a checklist or using water levels or flood markers to predict flooding, and even prepare for the amount of food and non-food items to be given to affected families in communities.

- p) *Are the protocols for preemptive actions being followed? How should these be improved for future AA?*

It is being followed, however, there is a need to strengthen its AA aspect. More so, not everyone in the disaster team understands it fully or is very knowledgeable about it, thus, the need for training to re-echo the protocols to community and officials.

Part II. Anticipatory action, financing, and protocols

- a) *Are the different concerns included in the contingency plans, and DRRM plans? How is responsibility for preparedness and response previously assigned in each level of unit responsible:*

Region, Province, Municipal, Barangay Council, vulnerable support Groups/CSO, family, individuals including women, children, persons with disability, elderly, indigenous peoples

There is a designated 5% allocation for vulnerable sectors during calamity (e.g. PWD). More so, there is an assigned personnel/focal person by DRMM and the needs of the vulnerable sector included are based on the needs information gathered on-ground.

- b) *How can the different responsibilities be assigned to each unit of responsibility for future AA?*

At the barangay level, there is a disaster committee created for direct communication and plans for disaster response are taken care of by this group. Meanwhile, the provincial government offers support for the preparation plans.

- c) *What are the sources of funding? how will they use them? How can the communities benefit from these?*

There are various sources of funding but mostly it is from the 5% allocation for calamity funds. This money is allocated by the municipality among provinces towards the barangays and eventually to the vulnerable groups. Money from IRA and Tax Collection is also being used as a source of funding. In addition to this, the municipality also receives cash assistance from BARMM but it is limited and is given only once a year, and in some cases, none.

- d) *Will the projected funding for AA be enough for the projected number of affected communities?*

Through proper screening and assessment, LGUs should be able to identify areas greatly affected by the disaster. However, funding is said to not be enough due to budget cuts and the frequency of disasters. Thus, remedies are being observed such as augmentation of funds from nearby

provinces and careful selection of the beneficiaries in the community – only those who are identified to be in-need will receive relief or the assistance provided by the government.

e) *What are the other sources of funds for AA activities?*

There are external sources such as NGOs that can provide assistance but usually in-kind. Some cited that there are no other sources of funds other than the ones previously mentioned allocated for calamity funds.

f) *What kind of assistance would you like to get to make you better prepared or minimize the damage and losses?*

Cash assistance was highly suggested during the discussions to help in the preparation and in minimizing the damage and losses.

“More than sa pera, gusto ko sana kung ano yung nawala sa kanila, yun ang itulong tulad ng livelihood. Kung nawalan sila, ano yung pwedeng ibigay sa kanila. Kung pera lang yan, nauubos yan sir eh.”

Furthermore, aside from cash assistance, it was recommended that assistance should be extended further such as the provision of livelihood. In one of the discussions with the LGU, the concept of seasonal livelihood program was brought up wherein livelihood programs based on weather forecasts will be given to the community.

g) *How much do they need to do their AA?*

The amount of money needed to do their AA will depend and should be assessed further.

h) *What will the amount do?*

This will help in the further assistance of AA activities such as drills, Evacuation Centers, training, and cash assistance.

i) *How will it improve their well-being?*

The assistance should be able to help in supplying their essential needs such as food. However, some staff or personnel are still unaware of its impact since they've only been part of the team recently.

j) Until when do they need such kind of assistance?

Short-term assistance usually lasts 2-3 days. The assistance usually comes in waves augmented with assistance coming from non-government organizations (NGOs).

k) How can it be sustainable?

Ask for help from agencies and assist in referring affected families and individuals to different government agencies such as the Department of Agriculture

l) How much of your time can you spend on this incoming project (time in a day, number of days in a week, in a month) given your productive and reproductive work?

The disaster team, including their higher officials and volunteers, they are said to be committed to this incoming project 24/7 since it is part of their mandate. However, other suggested times by other government staff are: 1) 12 hours daily, and 2) a maximum of 2 days in a week. All of this still depends on their schedule thus, communicating activity prior is needed. More so, weekdays are preferred since they have a lot of other activities conducted during the weekend.

Asia Anticipatory Action for Disaster Mitigation Project



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