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Resilience Practices and Approaches of the Most Marginalized and Deprived Children in Hazard-Prone Areas in the Philippines (Caraga)

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Abstract

This research is a special project funded by Save the Children Philippines to assess the impact of the organization's efforts on disaster resilience in the different communities of the Philippines. It aimed to determine the resilience practices and approaches of the communities in Caraga Region with focus on the safety and welfare of the children. Multi-stage sampling identified a total of 60 households, 6 barangay chairpersons, and 3 Municipal DRRM officers as the participants of the study. Salient findings disclose that due to the frequent experiences with natural disasters, the communities were able to cultivate disaster resilience through their coping, adaptive, and transformative capacities. Their coping capacities included disaster preparedness mechanisms, following forecasts on impending natural hazard, attendance to DRRM – related activities, and even building social cohesion. Adaptive capacities included social capital, economic development, and education. Transformative capacities included proactive practices such as appropriate solid waste management, establishment of safety nets, and the development of the culture of selflessness in times of disaster. Resilience approaches specifically for the welfare of the children included involvement of the children in family disaster preparedness planning; training of the youth for self-help and inculcating of the spirit of volunteerism; Adopt-A-Child program; Pabasa sa Nutrisyon program; prayer sessions in evacuation centers; Parent-Child encounters; and establishment of learning centers for the youth. Findings also disclose that the efforts of the communities in coming up with a high degree of disaster resilience are still wanting due to the insufficient government funding of DRRM related activities.

Keywords: *Disaster resilience, Save the Children Phil., resilience practices and approaches*

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1.0 Introduction

The menacing trends of disasters have confronted government efforts to build on disaster resilience among communities. Disaster resilience is given impetus among communities and households, especially those living in disaster-prone areas. More so is the need for disaster resilience among communities whose children suffer most of the impacts that disasters cause. Globally, there is increasing acknowledgment of the importance of continuous community engagement that facilitates preparedness before a disaster and allows for efficient recovery following the event (Arbon, et al., 2013). A culture of resilience provides a way to reduce vulnerability to disasters and their impacts before they occur, with the potential to decrease disasters' costs and consequences (National Academy of Science, 2012).

The Philippine government, in particular, had made reforms in the effort to combat the detrimental effects of disasters such as loss of lives and high cost of damages to crops and properties. The Philippine Disaster Reduction and Management Act (RA 10121) promotes the development of capacities in disaster management at the individual, organizational, and institutional levels. This law amends the previous focus on response and rehabilitation efforts during disasters with the inclusion of prevention, mitigation, and preparedness mechanisms. Intensive education and training of local government units had been conducted for the formulation of community-based disaster risk reduction management plans as well as local climate change adaptation plans. Alongside these efforts are the relevant support of non-government and civic organizations on disaster prevention and disaster preparedness practices of communities that may build upon the disaster resiliency of these communities. International humanitarian groups also joined the bandwagon in support of this national imperative.

Save the Children Philippines (SCP) is an international non-governmental organization that promotes children's rights, provides relief, and supports children in developing countries. It campaigns for long-term change to improve children's lives, improve children's access to the food and health care they need to thrive, including those separated from their families because of war, natural disasters, extreme poverty, and exploitation. In the local communities. SCP, through its Alert and Ready Communities Program, provides assistance in the formulation of effective and functional community-based risk reduction management plans (CBDRRMP).

There had not been efforts to assess the impact of the efforts of the non-government agencies, which helped in the promotion of disaster resilience. This assessment could also bring about information of the strengths of these efforts as well and of improvement, which the government may also consider addressing.

This research project which ultimately aimed to assess the impact of the Quality Assurance System (QAS) on the disaster resiliency efforts of the local governments was conducted in selected hazard-prone areas in the Caraga Region, Philippines.

1.1 Objectives of the Study

This research endeavor intended to present empirical data of disaster resiliency efforts of selected local government units identified as having improved the quality of their local DRRM plans. Specifically, the research aimed to present the following information:

1. The local concept of a community on resilience;
2. The practices, systems, and approaches in governance that effectively build the resilience of the most vulnerable and marginalized children; and
3. The role of Save the Children Philippines in improving the resilience of the most marginalized, deprived children in hazard-prone areas of the locality.

1.2 Theoretical Considerations

A system is usually designed to behave in a certain way under normal circumstances. When disturbed from equilibrium by a disruptive event, the performance of the system will deviate from its design level. The resilience of the system is its ability to reduce both the magnitude and duration of the deviation as efficiently as possible to its normal targeted system performance levels (Schipper & Burton, 2017).

Disaster resilience is the ability of individuals, communities, organizations, and states to adapt to and recover from hazards, shocks, or stresses without compromising long-term prospects for development. According to the Hyogo Framework for Action (UNISDR, 2005), disaster resilience is determined by the degree to which individuals, communities, and public and private organizations are capable of organizing themselves to learn from past disasters and reduce their risks to future ones, at international, regional, national and local levels (Combaz, 2015).

Beyond the resilience of individuals or individual organizations, the community will prove resilient in the event of a

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severe emergency or disaster when members of the population are connected and work together so that they can: a) function and sustain critical systems, even under stress; b) adapt to changes in the physical, social or economic environment; c) be self-reliant if external resources are limited or cut off; and d) learn from experience to improve over time (Torrens Resilience Institute, 2015).

Key characteristics that define resilient communities include functioning well while under stress, successful adaptation to new challenges, self-reliance and social capacity. Social support systems, such as neighborhoods, family and kinship networks, social cohesion, mutual interest groups, and mutual self-help groups are important for building community resilience. Various community assets should be considered when evaluating community resilience, such as community members' skills, knowledge, experience, and motivation, as well as physical assets and the connections between them (Maguire & Cartwright, 2008). It is important to consider the internal community structure, the community history and community vulnerabilities, and to assess community resources and adaptive capacities (Longstaff, et al., 2010).

Bene (2013) pointed out that attempts to measure disaster resilience define a set of desired characteristics or attributes for individuals, households, communities, systems, regions, or countries that are considered resilient. This method is typically rooted in practical experience using a bottom-up approach and/or based on general theories on resilience. In most measurements, characteristics include two or multiple attributes capturing physical, economic, social, political, institutional, etc., dimensions of resilience capacities.

The National Alliance for Risk Reduction and Response Initiatives (NARRI) framework for community resilience is not limited to just the first line of defense, rather it promotes and envisions continual growth of the target beneficiaries. The framework emphasizes three major phases where programs /activities need to act upon. They are: 1.) Build stability through preparedness, response, and resource mobilization; 2.) Improve adaptive strengths by building resilient livelihood and access to basic services along with social safety nets; and 3.) Develop transformative capacity through encouraging good governance and transformation of leadership.

Figure 1 shows the research paradigm that illustrates community resilience to disaster as an aggregate of the coping capacities, adaptive capacities, and transformative capacities of the individuals in the community. Coping capacities are those abilities related to access to equitable governance and authorities, disaster preparedness and early warning, medical services, social networks, and material coverage. Adaptive capacities refer to economic development (employment, wealth generation, value of property), social capital (gender equity, children rights, children participation in governance), adaptation strategies and investments, information and communication (access to information, promptness of communication), education (education costs, waste management, ecosystem protection, etc.).Transformative capacities refer to community competence such as but are not limited to local understanding of risk, counseling services, absence of psychopathologies (smoking, drugs, domestic violence), health and wellness, quality of life (high satisfaction), vulnerability reduction, and safety nets.

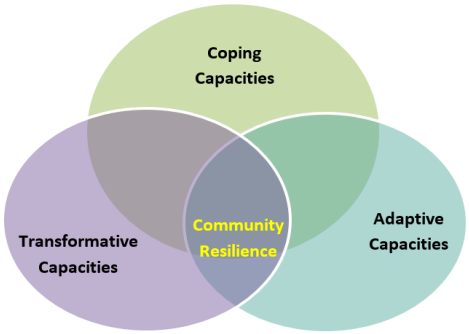


Fig. 1. Community Resilience Model

2.0 Methodology

The research commenced with the gathering of the baseline data from the CSU portal showing the list of local government units (LGUs) with DRRM plans assessed through the Quality Assurance System standards. The result of the Quality Assurance System in the region was the criterion in choosing the participants of the study.

This research endeavor utilized a combination of quantitative and qualitative research designs. The quantitative parts consisted of the identification of the different disaster resilience mechanisms practices by the households in the communities that were identified. These quantitative data were also triangulated by the qualitative data gathered through the interviews done with the households.

Multi-stage sampling was then done to identify the elements in the sample space of the study. Two provinces and one city of the region were chosen in the first stage. The second stage identified one municipality each from the two provinces, and, in the final stage, two barangays were chosen in these municipalities. These barangays were chosen at random from the list of barangays assessed through the Quality Assurance System standards done by Save the Children, Inc. A total of 60 households, 6 barangay chairpersons, and 3 Municipal DRRM officers composed the participants of the study. The 60 households were identified by the barangay officials during the courtesy calls.

Courtesy call and presentation of the study was done at each of these communities at the respective barangay offices, which concluded with identifying key participants in the data gathering activities. Key informant interviews were done with the municipal DRRMOs, barangay chairpersons, and households of the sample barangays. Household interviews were done with locals in the said barangays, most of which were residing at least 50 meters or at most 200 meters from the water systems that expose them to natural hazards (i.e., creeks, rivers, and the ocean). Household participants consisted mainly of the mothers and one or two of the children who were gathered in their respective homes for the interviews and quantitative data gathering. The interviews were not only focused on their personal experiences and perceptions of their concept of resilience. Data gathering included evidence of such perceptions in terms of the parameters that were gathered from literature on community resilience. Focus group discussions were also conducted for data validation.

2.1 Participant Communities

Barangays Homilog and Panaytayon of RTR, Agusan del Norte are prone to flood hazards being situated in a catch basin of three rivers/creeks traversing through the neighboring localities. Sedimentation of the two creeks further added to the severity of the flood hazard on the lives of the residents and the very vulnerable groups: the children, the elderlies, persons with disabilities, pregnant and/or breast-feeding mothers, and the indigenous groups.

Barangays Cagbaoto and Magobawok of Bayabas, Surigao del Sur are prone to storm surge and tsunami being coastal towns. Specifically, Cagbaoto is also prone to landslides since many residents are located near a creek that continuously erodes, especially during heavy rains. They had submitted requests to the different government agencies (such as DPWH, NEDA) for the construction of a protection dike along the creek, which, up to present, had not been addressed. This has been a problem that challenges the municipality, especially that most of the houses are situated less than 100 meters from the bank of the creek. Along the seashore, they have planted mangroves to fend off the area from severe storm hazards. Magobawok, on the other hand, is directly facing the Pacific Ocean; hence it is directly exposed to storm surge. While there exist sea walls along the seashore, these are not really reliable to avert the disastrous effects of strong storms. The community, though, consider themselves resilient to whatever storm-related hazards since there is an established early warning system, and they are already capacitated in terms of preparedness mechanisms. In the worst-case scenario, they are also aware of what to do and where to go.

Barangay Amparo and Bonbon of Butuan City are prone to flooding and landslides, respectively. Amparo is located along the Agusan river and a clogged creek which exposes the residents to flooding, especially during heavy rains or storms. The barangay forges linkages with private sectors such as the affluent families and foreigners residing in the barangay. Remarkably, these are the very responsive members of the community during calamity. At Barangay Bonbon, the households are prone to the dangers of landslides, especially those who are residing near Mt. Mayapay and those along the lower grounds of the said mountain. In 2014, there were 5 houses buried by the landslide in one of its mountainous areas. Nobody was harmed, though, since the community was given the early warnings, and they heeded the call to evacuate. These households were helped by the Butuan City government fund for the rehabilitation of lost properties.

Government efforts through the Department of Local Government (DILG), Office of Civil Defense, and, in partnership with Save the Children Philippines (SCP), enabled the communities to design functional disaster risk reduction management plans and be capacitated to address their devastating experiences of natural disasters in their respective areas. In a way, these efforts are geared towards developing disaster resiliency among these communities.

3.0 Results and Discussions

The data that was gathered from the above-mentioned communities were collated and analyzed based on the objectives of the study.

3.1 The local concept of a community on resilience

Accordingly, a community is considered resilient if they are capacitated on what to do before, during, and after a calamity. They are capacitated by the trainings on DRRM, especially on preparedness for disaster. Emergency drills included worst scenarios that make them realize related disaster risks such that corresponding relevant preparedness practices are designed and sustained. Their frequent experiences of floods and the application of indigenous knowledge systems (such as understanding the onset of flood by the odd movements of ants, or strange croaking of frogs, or the presence of an unusual number of flying insects in the surroundings) also helped them realize more effective measures of disaster preparedness. These practices support the findings of Lee (2019), which revealed that when disaster frequency experienced by local communities is high, the magnitude of disasters experienced is small, and internal network and public relations contribute to increased disaster resilience.

Other communities perceive that they feel safe even during natural calamities because they have forged partnerships with various social sectors that are always there at the onset of a hazard. Partnerships with school, church, and private sectors readily provide needed assistance in transportation access, capacity building opportunities, and even evacuation venues. According to Busch & Givens (2013), partnerships between private sectors and government are re-shaping disaster management strategy, operations, and tactics. These effects combine to strengthen community resilience in the face of disasters in multiple ways.

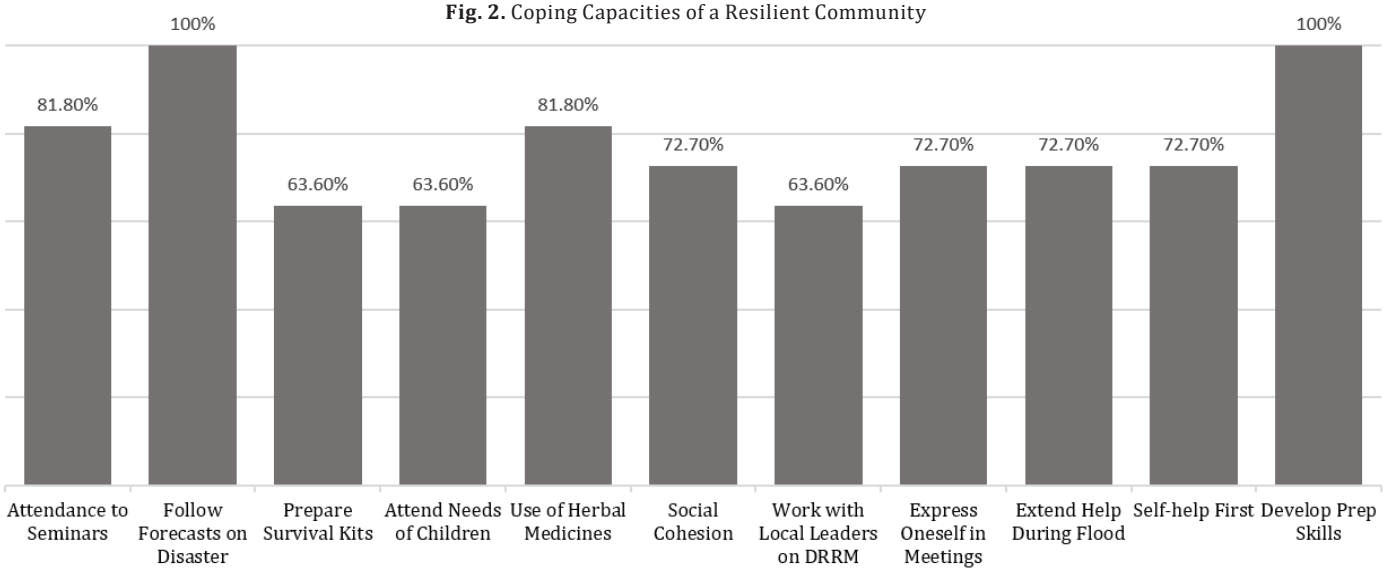
More importantly, the communities recognize the importance of a sturdy dwelling, stable food supply, and strong family relationships as contributors to the advancement of disaster resilience. Storms and floods occur, and they are ready for these natural occurrences. Should they need to evacuate, they are ready with their survival kits- good enough for every member of the family until government help is given. Should they not need to evac, they are safe in their now sturdy dwellings, waiting for the water to subside and ready to bounce back. Gone are the days when they considered flood as a natural phenomenon and that nothing could be done with it: accept it as a sad part of life, dwell on household vulnerabilities, lament on the losses of crops, damage to houses, illness of children, etc. These communities just expressed their adherence to the resilience framework, which points out the very significant role of preparedness in building stability during a disaster.

Because risk and systems are dynamic, resilience should be thought of as a process rather than simply an outcome, involving learning, adaptation, anticipation, and improvement in basic structures, actos, and functions.

A supportive local government unit is also identified as a contributing factor toward disaster resiliency. The harmonious relationships between LGU leaders and the community make it "lighter" for households to face any hazard. These relationships are translated in the form of periodic checking of agreed risk reduction practices; emergency drills even in the most remote areas; installation of early warning systems; "on the dot" response delivery of emergency needs; and impartial attendance to problems raised during assemblies. Working with local leaders on disaster risk reduction measures helps them realize that they have a significant role to play during the occurrence of hazards.

Social cohesion before and during flood is another factor that makes "bouncy" households in a flood/storm. Working well with neighbors, they are able to keep abreast with trends in disaster risk reduction and management. Cohesive communities also rekindle the "bayanihan" spirit, which, in turn, helped develop more effective self-help skills. More importantly, they have recognized disaster preparedness and disaster prevention skills that they utilize in a calamity. It can thus be said that a resilient community has heightened its coping capacities (Fig. 2).

Fig. 2. Coping Capacities of a Resilient Community



In addition, adaptive capacities such as social capital, economic development, and education had been established due to their desire to attain a degree of disaster resilience. Each household member has specific roles in disaster risk reduction management (i.e., the father keeps the house strong; mother takes care of preparedness measures with attention to needs of children and other vulnerable members of the household; young children help their mother while older ones help their father). Roles of the households in the community DRRM plan include active participation in cleanup activities of the creek and the rivers; tree planting; and the maintenance of harmonious relationships with neighbors to sustain waste segregation and proper waste disposal measures. In all these activities, there is also the recognition of the role of the children, especially those who are school-aged. Since they were also taught in schools about disaster risk reduction, they also take a share of the responsibility in proper solid waste management and the "pahina" (communal cleanup).

Since floods encumber their household economy, many households have to realize budget cuts on "unnecessary" expenses such as smoking expenses. A mother even said she had to reserve ten sacks of rice per harvest so that when a flood comes, the family would not go hungry.

Interconnectedness among the neighborhood makes way for the sharing of disaster risk reduction skills learned in DRRM trainings. Many volunteers now would push their way in waist-high (sometimes chest-high) floodwaters to carry an elderly or a child to higher grounds. Best practices are recognized and are emulated. Early warning systems are conveyed from one household to the other.

Noteworthy of these developments is the promotion of transformative capacities such as understanding the topmost contributor to risk; proactive attitudes towards disaster risk reduction; open mindedness to render selfless service for the good of the community. As a result, significant changes in community awareness and more active community participation in DRRM related activities were observed. There is now more awareness of eliminating waste disposal issues; more community members opt to be trained as volunteers in order to adopt self-help skills and to be of help to their neighbors, especially the vulnerable groups: elderlies, PWDs, and the children. People could have realized their responsibility, especially in safeguarding the family and their community in the event of a flood. They could have recognized that resilience is everyone's concern; that their family kept on growing in number and that each family member needed to develop self-help skills.

3.2 The practices, systems and approaches in governance that effectively build the resilience of the most vulnerable and marginalized children.

The Philippine Disaster Reduction and Management Act (RA 10121) promotes the development of capacities in disaster management. To this effect, the local government units were required to develop disaster risk reduction management plans that cover the four thematic areas of preparedness: prevention and mitigation, response, and recovery and rehabilitation.

At the municipality level, the Local Disaster Risk Reduction Management (LDRRM) plan was developed with the participation of all sectors of society, including children (who were represented by the school) and the Sangguniang Kabataan (SK) representative. An assembly was called for by the local DRRM officer to all sectoral representatives to ensure a participatory risk assessment of their respective areas. Priority hazards were identified, and the results were considered in identifying capacities to address these hazards. Hazard and capacity maps were then drawn and matched to identify insufficiencies that need to be addressed. Contingency plans were then formalized with corresponding budget requirements. These plans included capacity building activities through inclusive trainings and drills (flood drill, earthquake drill, evacuation drill, etc.). Other important elements of the LDRRM plan were then finalized. Committees were then organized for the implementation and in the monitoring and evaluation of the said plan.

Similar approaches and activities were translated at the barangay level. Due to the meager budget, resource persons from the municipal government and civic organizations were tapped for the said trainings. These resiliency building practices and approaches trickled down to the households, thereby capacitating the household members, including the children, especially those who are school-aged. Little as they may, they were given attention in the planning since they were able to identify some risks and capacities too. This was first a family practice that was forwarded to the Barangay Disaster Risk Reduction Management committee (BDRRMC) office for consideration.

In addition, DRRM is widely promoted in schools via different activities such as quarterly emergency drills, training of young volunteers, and the integration and mainstreaming of DRRM in the curriculum. Since most of the households are members of the 4Ps, they are also able to attend seminars related to disaster risk reduction, solid waste management, "Pera sa Basura", etc. These practices helped the families ensure the safety, food, and other needs of their children in times of flooding, thereby reducing the vulnerabilities of the young members of the households. In fact, built upon these practices, even the children now claim to be prepared for any circumstance of flood/storm.

Significant practices for the welfare of the children, such as those done in Bayabas, Surigao del Sur, are worthy of mention such as: Adopt-a-Child, where feeding activities are given to malnourished children of the barangay, especially after the occurrence of a disaster; capacity building for the youth in cooperation with the Barangay Council for the Protection of Children; "Pabasa sa Nutrisyon" Program for mothers which educates and trains mothers on the proper nutrition program for the children; and institution of games and story reading, play, and video showing in evacuation centers.

Furthermore, in the two barangays of Butuan City, prayer sessions are given as one of the child-centered activities in the evacuation centers. In Barangay Bonbon, the barangay chairperson gives priority to the youth. The functional programs for the youth include not only feeding programs but also counseling programs for parents and children for social consciousness; gang problems are attended to through a periodic dialog with the school-aged children. She even uses social media for updating the communities, especially those exposed to landslides; segregation of solid wastes at source is strictly implemented. There is also a learning center for the children in the barangay center; a scholarship fund is outsourced by the barangay council for deserving pupils. This gained them 10th place among 86 barangays in the city in the BCPC assessment.

3.3 The role of Save the Children Philippines in improving the resilience of the most marginalized, deprived children in hazard-prone areas of the locality.

All these significant changes in the lives of the community people were observed after their CBDRRM plan had been improved. The local DRRM planners acknowledged the significant role of the Quality Assurance System (QAS) in improving their plans to make them more responsive and relevant to people's needs. Trainings conducted by SCP at the municipal level helped the planners to realize more commitment to the DRRM efforts. The said system had more detailed criteria that helped them look into the plan more comprehensively. More insights were gathered for the improvement of the plan and helped them realize some gaps in the previous plan. For example, some criteria in the QAS made them realize insufficiencies in meeting the needs during a flood; the focus on response during any disaster is more of reactive than proactive measures. Hence, they redirected their full efforts on quick response and modified it to include relevant plans for prevention and mitigation measures (such as dredging of rivers, periodic cleaning of the creeks and surroundings, periodic assessment of the functions of the different CBDRRM committees formed, and lately, the revisiting of their BDRRM plan).

4.0 Conclusion

The drive for community resilience is the call of the time. Local government units intensively and extensively relay this thrust to the households so that everybody can realize their role in the development of self-help skills and resilience measures that will lessen the devastations of natural disasters. More importantly, these measures will lead toward attaining the target of "Zero casualties." While the loss of properties may not be eliminated during occurrences of severe natural hazards, resilience measures may prevent the cost of a life, especially the vulnerable sector of society: the children, in particular.

Resilience is a matter of personal conviction. Some people claim to be resilient because they are well prepared for an upcoming hazard. They can anticipate what may probably happen at the onset of a hazard so that they are ready with measures to safeguard their household –regardless of whether they go to the evacuation center or they stay at home. Aside from prepared household members, there is an active social network and interconnectedness that help realize disaster prevention and disaster preparedness activities such as dredging of rivers and creeks, community cleanup activities, and adherence to proper waste management schemes.

Resiliency also has implications on the environment. Communities that claim to be resilient have practices that conserve the environment. Coastal town communities protect and maintain their mangrove plantations not only to safeguard the community against intense storms but also to help sustain the ailing ecological balance

Children are given the highest priority in resilient communities. Even before an upcoming natural hazard, children are already aware of what to do or where to go before, during, and after the calamity. These are not only taught in schools but also in homes which keep updated on the trends of the hazard over the different media. During a disaster, their safety is of major concern; their health is a top priority as it pains a household to have sick children in evacuation centers. At the evacuation centers, the emotional, mental, and spiritual needs of the children are accommodated.

Worthy of emulation are the practices of barangay officials aimed for the welfare of the children. Programs such as "Pera sa Basura," Pabasa sa Nutrisyon and Parent-Child Counseling, and "Pabasa sa barangay" are worthwhile initiatives that will surely help the children grow into resilient individuals, both natural disasters and real-life challenges.

Community resilience also has political implications. The cost of saving lives cannot be undervalued if a community desires to attain disaster resilience. Constrained by the government regulation of 5% of the total LGU budget deters the DRRRM planners from sufficiently providing the speediest measures in achieving a real state of disaster resiliency. These constraints, though, are met in some way by resourceful local government leaders. Outsourcing funding assistance for DRRM through Barangay Council resolutions is a good practice in disaster risk reduction, and, eventually, disaster resilience.

A resilient community bounces back after a disaster. Their strongest defense is preparedness. After an occurrence of a natural hazard, they engage themselves back to normal life. A raging flood or a strong storm is just an episode that is etched in their household history, just that. Everyone is expected to be fine for another series of ups and downs in life. Meeting everyday needs is a basic "struggle," and meeting more than they need is a blessing.

5.0 Recommendations

Communities have been well trained on disaster preparation and can develop some degree of functional self-help skills. They are well prepared on what to do before, during, and after a disaster. Yet the devastations of disaster overtake them, especially during severe natural hazards. Examination at how these communities reduce their exposure to disasters reveals that their prevention and mitigation mechanisms are still wanting. Sadly, this is due to budget constraints. Hence, an increase in government allocation for this area is thus imperative.

Strong linkages with CSOs, NGOs, and other organizations are also found to be significant contributors in the advancement of community resiliency. Sharing of best practices among community planners and benchmarking activities may be conducted for wide dissemination of such mechanisms.

Researches in agriculture have yet to realize success in identifying more disaster-resilient crops that may help disaster-stricken communities that rely on farming as their main livelihood.

Most significantly, sustainability measures must be established and practiced in the implementation, monitoring, and evaluation of DRRM plans, so that disaster resilience will become a way of life for the community.

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