

RESILENT LEVEL COODS

INTRODUCTION

Disasters cause substantial losses not only in lives but also in livelihoods. Chronic disasters cause the adverse impacts of these losses to accumulate by not allowing affected households to rebuild their livelihoods and recover. The accumulated negative impacts of recurring disasters on household livelihoods have long-term effects, reinforcing intergenerational transmission of poverty and pushing poor households further into greater vulnerability.

Years of work on reducing disaster risks among high-risk communities in the Philippines are bearing fruit in terms of saving lives. Equal attention must be given to saving livelihoods in order to achieve household and community resilience. This study documents the various experiences of households and communities that, sustaining serious losses particularly from the Bopha disaster in 2012 and Haiyan in 2013, have emerged successful in adopting strategies that would protect their livelihood assets and capacities from anticipated recurring disasters. From the lessons and good practices, in the context of largely rural and agricultural communities, the strategies in achieving resilience in livelihoods are identified.





In December 2012 Typhoon Bopha ravaged the southern part of the Philippines, affecting 6.2 million people. The typhoon hit a region rarely visited by typhoons. The direct economic cost of Bopha was placed at over USD 780 million, representing around 0.3 percent of the nation's gross domestic product (WFP, 2013).

Before Typhoon Bopha, livelihoods in the affected region consisted of subsistence agriculture and small livestock- and poultry-raising, augmented with income from various labor opportunities, mostly in commercial agricultural plantation (WFP, 2013). Monocropping was a widely practiced agriculture technique, with perennials such as banana, coconut, falcata, palm oil, and rubber as the main crops grown. Most households resorted to borrowing money at the start of each planting season to be able to continue crop production.

Typhoon Bopha destroyed crops and livelihood assets, resulting in reduced household incomes and compromised access to food. Agriculture as the primary source of livelihood declined by 23 percent, poultry and livestock by 18 percent, and fishing by 26 percent. Some 12 percent of households experienced a total loss of income (DSWD, 2013).

Households had to apply a variety of strategies, many of them negative and some with irreversible impact, to cope with the loss of livelihoods. These strategies include relying on less preferred but less expensive food, reducing the number or portion of meals, reducing expenditures

on other living costs, accepting emergency food assistance and food from friends and relatives, borrowing money, and spending savings (DSWD, 2013).

In November 2013, a year after Bopha, Typhoon Haiyan devastated central Philippines, affecting 14.1 million people, including 4.8 million who are poor (OCHA, 2013). The National Economic and Development Authority placed the total amount of losses and damage at USD12.9 billion, or 0.9 percent of the country's gross domestic product (PDI, 2013).

In areas most heavily affected by Haiyan, industry comprises 50 percent of the economy, while agriculture and services comprise 33 percent and 16 percent respectively. In urban areas, salaried and skilled employment, daily labor, and wholesale / retail trade are the main sources of income. In rural areas, fishing and agriculture are the primary sources of livelihood. Principal crops in the most badly affected regions were coconut (73 percent of crop area), palay / rice (16 percent of crop area), and corn (4 percent of crop area) (OCHA, 2013). A coconut sapling requires six years to start bearing fruit and a further two years to reach full production.

Some 5.9 million workers lost their livelihoods and their income sources were destroyed, lost, or disrupted because of the typhoon. On average, incomes in all affected employment sectors were reduced by 50 percent. Some 29 percent of farming households reported that their livelihoods were completely destroyed, while 74 percent of



fishing communities indicated that their main income source was severely affected by the typhoon (OCHA, 2013).

Damage to livelihoods resulted not only in already limited income sources becoming further diminished, but also in households losing one or more of their food sources. To cope with the loss of livelihoods and to meet their critical needs, households resort to a number of coping strategies, including negative ones such as the sale of remaining assets, reduced food consumption, sending family members elsewhere for work, child labor or begging (OCHA, 2013). A study by Antilla-Hughes and Hsiang (2013) concluded that typhoons depress household incomes and expenditure. Expenses on education, health and food are reduced, with food expenditure reduced for up to three years.

The government has estimated that the cumulative impact of recurring disasters on the economy is at 0.5 to 0.6 percent of GDP annually. This could reduce economic growth by 0.3 to 0.4 percentage points. It also noted that following disasters, school drop-out rates, mental and psychological issues, outbreak of communicable diseases, and malnutrition have also increased, reinforcing intergenerational transmission of poverty (NEDA, 2017).

Accounting for the impacts of disasters in 2013, the government has revised its original target to halve the official poverty rate from 34.4 percent in 1991 to 17.2 percent by 2015, to between 18 to 20 percent by 2016. Poverty

incidence among Filipinos rose 1.2 percentage points to 25.8 percent in the first half of 2014 from the same period in 2013. Eastern Visayas, the region hardest hit by Haiyan, recorded the largest increase, with the poverty rate growing from 41.2 to 55.7 percent (Bowen, 2015; AP, 2013). Chronic and increasing frequent disasters result in huge losses in terms of direct economic costs, reduced economic growth, and increased poverty. At the household level, livelihoods are destroyed and access to food jeopardized. Households are forced to adopt negative coping strategies, with some having irreversible impact. Households have yet to recover from one disaster when another disaster strikes, hindering recovery. The uninterrupted cycle of disasters and livelihood loss reduces households to perpetual poverty and vulnerability.

In order to break the cycle, households and communities need to protect their livelihoods from future losses by building resilience. With households adopting resilient livelihood strategies, losses will be avoided or reduced, and there will be less of a need to resort to negative coping strategies. Households will become less vulnerable to the impacts of climate change and recurring natural hazards.

RESILIENT LIVELIHOOD STRATEGIES

Resilient livelihoods as a practice has evolved through various humanitarian actions in response to typhoons Bopha and Haiyan, with theoretical and practical contribution from other humanitarian and disaster risk reduction, climate change adaptation, and ecosystem management and restoration (also referred to as integrated risk management) projects. Households can make their livelihoods more resilient by adopting strategies to diversify, protect, and strengthen livelihood assets and capacities.

Livelihood diversification is defined as a strategy of households of having diverse capacities and assets and engaging in diverse activities to support their means of living. A household whose primary means of living is agriculture can also engage in fishing, retail trade, or daily labor as additional livelihood activities. Growing a variety of crops, as opposed to the practice of monocropping, is also an example of livelihood diversification.

Protection means taking active measures to safeguard livelihood assets from sustaining damage from natural hazards and climate change impacts, as well as to ensure that livelihood activities do not contribute to exacerbating environmental and other risks. Risk-informed household and community livelihood strategies are examples of protective measures.

Strengthening livelihoods includes measures such as building the technical capacities of households in relevant themes such as sustainable agriculture, financial management, organization development, and dialogue capacity in order to mobilize government support.

Diversification

Crop diversification through relay cropping

To support the recovery of people most affected by Typhoon Bopha, households targeted were those in either geographically isolated and depressed areas or in coastal areas and have low coping capacities and with poor health and nutrition. Indigenous people and households with members who are sick, have functioning limitations, and are pregnant/lactating were prioritized. Single/women-headed households and households with malnourished children were also given priority.

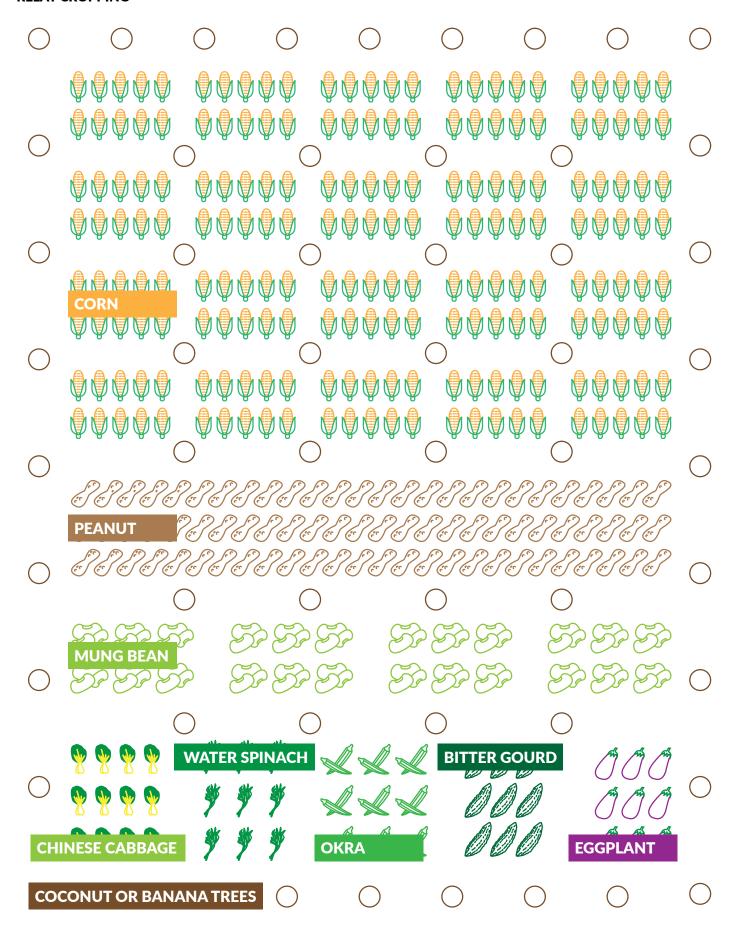
Livelihood recovery assistance consisted of distribution of seeds, basic farm tools, and cash to be spent on food and other basic household needs. Distribution of cash was conditional on participation in the local practice called lusong, a form of mutual aid. Land preparation of individual farm lots and of community demonstration farms was carried out through lusong.

Prior to Typhoon Bopha, the farmers commonly practiced monocropping. However, perennial cash crops such as coconut, falcata, banana, or rubber would require years before becoming economically productive; thus, delaying livelihood recovery. Crop diversification through relay cropping was introduced as an alternative. To encourage the farmers to adopt this practice, seeds of fast-maturing vegetables (pechay and upland kangkong, slower-maturing ampalaya/bitter gourd, okra, monggo, eggplant), white corn and peanuts, as well as heirloom/traditional rice seed varieties were provided. Community members planted locally sourced seedlings of banana and coconut, and of root crops such as sweet potato, taro, and cassava as their counterpart. Planting the root crops, which are disaster-resistant, was particularly encouraged.

Each household cultivated one-half hectare of land, subdivided into smaller plots and planted with crops grown from the diverse seed varieties distributed and complemented with locally sourced seedlings. This scale of the production is adequate to meet the food requirements of a household until the next season. It is designed to be small so that households can afford the inputs, especially when external support is no longer available. It is also the average size of land that a poor household can rent. In addition, the application of relay cropping in a one-half hectare of farm will allow a household to maintain the farm without resorting to hiring farm labor.

In the initial clearing of farmlands, done through lusong, it took at least 10 persons to clear each half-hectare of land. Subsequent clearing would already be manageable, as the parcels of land are prepared and planted in different times because grown crops have different periods of maturation.

RELAY CROPPING



Diversification of livelihoods

To support livelihood recovery of vulnerable households most affected by Typhoon Haiyan, cash grants were distributed. Building on the lessons from Bopha, in addition to crop diversification, plans to engage in other livelihood activities were encouraged and supported. These livelihood activities include backyard livestock farming, poultry raising, retail trading, transport services (pedicabs), operation of land preparation and planting machinery such as hand tractors, and operation of post-harvest facilities such as rice and corn mills, among others.

Households were assisted in preparing simple livelihood plans, which showed the feasibility of proposed activities. Households were also guided so that there will be no overcrowding of investments in specific livelihood activities, such as in retail stores, that would result in poor returns.

Household-level livelihood activities and group activities were supported. Part of the cash grant was allocated for household-level activities such as relay cropping. A bigger part of the cash grant was pooled by group members in order to acquire livelihood assets that individual households could otherwise not afford to obtain. Examples of group livelihood activities are vegetable organic farming; procurement and management of farm and livelihood assets such as corn mills, rice mills, and farm machinery; pedicab operating; rice trading and retail trade (agrivet supplies and basic commodities); livestock farming (hogs); poultry raising (chicken); and carabao drafting for farm labor.

The reintroduction of heirloom or traditional rice varieties that was started in disaster recovery projects for Typhoon Bopha communities was enhanced in Haiyan-affected areas. Communities established trial farms to determine which traditional rice varieties would thrive most in local conditions. After several cycles, communities have already identified the suitable varieties and scaled up production. A seed bank was also established, ensuring that growing traditional rice varieties would be sustained.



Six years after typhoon Bopha, community members of Barangay Ban-ao, Baganga, Davao Oriental continue to produce upland rice intercropped with coconut (left photo).



In Barangay Bayabas, Dagami municipality, located in the region most affected by typhoon Haiyan, members of a livelihood group have successfully established their trial farm, scaled up production and set up a seedbank.

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Protection

Risk-informed livelihood plans

Livelihood plans are informed by the result of the risk assessments conducted by the community. Risk assessments are standard activities introduced to the community to inform other activities of the village such as contingency planning, risk reduction planning, household and community livelihoods, shelter, and water supply, sanitation, and hygiene (WASH), among others. For livelihoods, household and community members are asked to identify hazards that could inflict damage on their livelihoods and to incorporate measures that would reduce the impact of those hazards. Examples of risk reduction measures include ensuring that assets are not located in hazard-prone areas; and community contingency plans include mechanisms for securing livelihood assets. Households and community members are also asked to look into their livelihood plans to see whether activities could exacerbate existing risks or create new ones. Once risks were identified, they incorporated the corresponding risk reduction measures in their livelihood plans.

Harnessing ecosystem services to reduce risks

In the municipalities of Talacogon in Agusan del Sur and Maragusan in Compostela Valley, resilient livelihood activities and mitigation activities (e.g. water systems that incorporate risk reduction measures) were supported on the condition that communities will undertake ecosystem restoration activities. After receiving training on riparian forest buffers, communities carried out the reforestation of riparian buffer zones. This activity aimed to improve the condition of the riparian zones so that the riparian forest's ecosystem service of regulating flood and riverbank erosion would be enhanced. In the long term, lives and livelihoods will be better protected from floods and erosion.



In Talacogon, communities have reported high survival rates of the endemic tree species planted and they have already completed a second round of tree-planting activities. In Maragusan, the municipal government has established a nursery for endemic tree species to ensure availability of seedlings—an important sustainability measure.



Strengthening

Technical and financial management capacity-building

In addition to the distribution of cash and/or farm inputs such as seeds, farm machinery, and post-harvest facilities, capacity-building activities were carried out to strengthen the knowledge and skills of community members so that they can effectively manage the material inputs provided to them. These activities include:

- Full training or at least a one-day orientation on integrated risk management (disaster risk reduction, climate change adaptation, and ecosystem management and restoration)
- Facilitation of community risk assessment
- Sustainable agriculture including organic farming
- Project cycle management and financial management
- Organization development and leadership training

Provision of livelihood assets towards the establishment of a community enterprise

Acquisition of livelihood assets and establishment of community enterprises were facilitated through the pooling of household resources, such as part of cash transfers. Acquisition of assets and establishment of community enterprises were undertaken as a component of a community-agreed livelihood plan. Members procured the assets themselves, with assistance from project staff. For farm machinery and post-harvest facilities like corn mills and rice mills, after-sales service and availability of repair parts were ensured. Select members were trained to operate the assets that would be acquired. Community members also adopted a management and sustainability plan such as the pricing of the service and/or commodity that the enterprise offers to members as well as non-members, and allocation of adequate budget for maintenance and repairs.



Community Organizing

Organization is an essential component in resilient livelihoods. Every opportunity is taken to strengthen community organization, which is not difficult considering that in any part of the country, the tradition of mutual aid—bayanihan in Tagalog, ub-ubbo in the Cordilleras, tagbo among the Waray, and lusong in Mindanao—is still practiced. Strengthening resilience builds on this pervasive social capital.

In communities where members were not organized, they were encouraged to form livelihood work groups that later on evolved into community enterprise groups, or full-fledged farmers' organizations. In some instances, such as in the villages of Bayabas, Poponton, Plaridel, and Maca-alang in Dagami municipality, Leyte farmer groups have become formal, registered organizations; thus, qualifying them to access financial and technical support from mandated government agencies like the Department of Agriculture.



Through the livelihood working groups, members realized that work, especially in the context of recovery from disaster, became easier. The method of pooling resources to acquire community assets and to establish community enterprises was also designed to strengthen community cohesion and organization. Should the group decide to work toward formalizing their organization, they were assisted in going through the process of registration.

Capacity-building inputs, such as project cycle management, financial management, and leadership and organizational development trainings helped strengthen the bond among members and reinforced their organizational capacities.



Engaging local government units in dialogue for support

Local government authorities and national government agencies are key stakeholders in creating resilient livelihoods. The government has the mandate and resources that disaster-affected communities do not possess to make livelihoods more resilient. In all phases of the project cycle, government, especially local authorities, are engaged to provide material, financial, technical, and policy support to community initiatives in resilient livelihoods. The local chief executive is regularly appraised of the activities being undertaken. Specific departments are engaged for their support. In particular, these are the municipal agriculture office, the municipal environment and natural resources office, and the planning office, among others, as well as the local Sanggunian or council, which is responsible for

approving plans and budget allocations. Engaging local government is important since projects end while local governments stay, placing them in the best position to support the sustainability of resilient livelihood initiatives.

The capacity of community members to engage government in dialogue is also strengthened. This will give them confidence to approach government to seek assistance from a rights-based perspective. Many community members do not realize that they have the right to demand assistance from their government. Many government officials and employees also do not see service delivery as their constituents' human rights and the government's responsibility.

CHALLENGES

In some instances, the idea of pooling of resources and organizing working groups and community enterprises was met with initial resistance, with households placing top priority on spending cash transfers on immediate food needs. While indeed there are existing social capitals such as bayanihan that could be built on, there were some households that still preferred to have their own livelihood activities.

In Haiyan areas in particular, women insisted on livestock farming, which they can claim as their own. Hence, the combination of household-level livelihood activities and community enterprises was supported.

There are many stories of success but there are also stories of failure. A group reported that some of their members had withdrawn their financial share, forcing them to sell some tools to be able to return the share of withdrawing members. One group that invested in motorized tricycles is on the verge of breaking up, as some members insist on getting their shares to pursue their livelihoods individually, being not satisfied with the income generated through the group enterprise. Other groups either divided their shares to engage in individual livelihood activities or were completely dissolved because of management or personal issues. Nevertheless, while some group enterprises were less successful, household livelihoods were more successful.

There were also reservations related to organic farming. An abrupt shift to organic farming could result in a drop in farm production. It had been shown that even if the volume of production drops, the expenditures in organic agriculture are fewer, and therefore there would be no substantial drop in net income. However, community members were still wary. Demonstration or trial farms along with a gradual shift to organic farming, was part of the process of convincing those with reservations by presenting them evidence and actual experience.

Nature-based solutions such as reforestation have also met initial skepticism due to failed experiments in the past. Community ownership, when not established firmly, endangers maintenance and sustainability of these solutions. Past and current practices, such as promoting invasive tree species and paying for community participation in reforestation, also affect participatory and community-owned initiatives such as the reforestation of riparian buffer zones and denuded forest areas. Training on reforestation in riparian buffer zones, improving public awareness on ecosystems services, promoting participatory approaches, and engaging the support of local authorities have been introduced as solutions to the skepticism and lack of ownership.

Government support was not as forthcoming in some local government units (LGU). Leadership changes also set back community and LGU partnerships, or at least cause some temporary dislocation as a new set of leaders come into office. Capacity-building of communities and community-based organizations on dialogue or advocacy was introduced as a strategy that could have a long-term impact.

Adapting to climate change still needs to be strengthened. While communities and LGUs have increased their capacities to respond appropriately to short-term warnings by harvesting crops early or bringing livelihood assets to predetermined safe areas, adjusting livelihood activities to seasonal hazard events such as drought and to longer-term climate projection still has to be improved.

Land issues confront households and communities, dampening their initial successes in adopting resilient livelihood strategies. For example, some livelihood groups were asked to vacate the land that they have cultivated when the landowner witnessed their success in turning previous idle land into productive farms.



LESSONS LEARNED

Apply informed livelihood strategies with adequate risk information

Livelihood decisions must be based on an assessment of risks using tools that have proven useful such as livelihood assessment and seasonal calendar. The seasonal calendar provides particularly useful inputs for the cropping calendar. Appropriate risk reduction measures, informed by the risk assessment, must be incorporated in the livelihood plan so that assets are protected from hazards and climate risks. Actions to protect livelihoods from seasonal forecasts such as drought or dry spell, and from climate change, need to be further strengthened. Household- and enterprise-level risk reduction measures should be linked to barangay (village) risk reduction plans.

Encourage diversity of crops and livelihoods

Through diversification, households have a better chance of keeping livelihood assets intact following a hazard event. A variety of crops can be used, including disaster-resilient crops such as root crops. Root crops sustain less damage and can recover quickly from hazard events. This can mean that a household can still have food on the table after a disaster.

Diversification of livelihoods can be done by engaging in other livelihood activities, including non-agriculture-based livelihood activities. Identified alternative livelihood activities should be less prone to hazards, climate shocks, and other stresses.

The initial resistance to introduced technologies was addressed through a combination of strategies, including a gradual shift to the technology combined with other awareness-raising, knowledge-sharing, and community organizing activities. Creating and demonstrating evidence (e.g. trial farms) became an effective way of convincing households to adopt resilient livelihood strategies.

Organize the community

Community organizing is vital in resilience-building and integral in ensuring the sustainability of the achievements in strengthening resilient livelihoods. All opportunities must be taken to encourage community organizing and strengthen community organizations. Pooling of resources, formation of livelihood groups and community enterprises, and organizational capacity development initiatives contribute to community organizing. Organizing communities and turning them into capable organizations take time; thus, there is a need take every opportunity, as well as build the commitment of project staff to community organizing.

Build on existing social capitals

Existing social capitals are valuable livelihood assets. Traditional mutual aid practices are an example of a social capital that can be harnessed to strengthen livelihoods. They promote community cooperation that, at the practical level, makes livelihood activities easier and faster to carry out. It facilitates the adoption of resilient livelihood strategies by communities, supports organizing initiatives, and contributes to sustainability.

Pool community resources

Pooling of resources can also be traced to a form of traditional mutual aid practice. It allows communities and organizations to acquire assets such as community-owned post-harvest facilities that individual households can't afford to buy on their own. Relevant capacity-building activities and safeguards against mismanagement, particularly financial mismanagement, need to be put in place to ensure community resources are not dissipated. Mismanagement of the pooled resources could lead to community organizations' disintegration.





Apply sustainable agriculture and "working with nature" technologies

Sustainable agriculture and working with natural technologies are not new. They are long-time practices that have been proven effective. They are cost-efficient and effective, and are more sustainable in the long run. Communities must be convinced to adopt these technologies through various means of encouragement.

Strengthen through capacity building

Livelihood initiatives fail because of the lack or absence of appropriate capacity-building actions. Without capacity-building, community members might not have the required knowledge, skills, and appreciation of the essential principles and strategies in resilient livelihoods. In essence: specific livelihoods require specific trainings.

Trainings should include topics on organizational development, leadership, financial literacy, and financial management to build and strengthen the capacity of members and leaders. This will equip them with the essential attitude, knowledge, and skills in managing their organization's assets, including members and finances.

Leaders are especially crucial to livelihood groups since they set the direction and inspire members to strive more toward collective action. As their role in the organization is crucial, leaders should also be given sufficient capacity-building support. Management and conflict resolution are among the top leadership skills that can be developed. It is also important to develop and train second-generation leaders who will take on future leadership roles.

Engage local and national governments in dialogue for sustained support

The engagement of government in all phases of a project is essential in delivering quality assistance. It also enhances sustainability. Government can provide various types of support, from technical and financial to policy. In engaging with government, communities must bear in mind that a local government unit consists of different entities that can potentially extend assistance. Engagement is cultivated not only with the local chief executive or mayor but also with the heads of relevant departments such as disaster risk reduction and management office, agriculture, environment and natural resources, social welfare and development, engineering, planning, and budget, among others. It is also essential to connect with the Sanggunian or local legislature as they are the ones responsible for approving plans and budgets.

Households, livelihood groups, and community-based organizations must possess the ability to conduct dialogue and advocacy to be able to gain sustained access to various types of assets and capacities available at the local government unit. Households and local government units working together can sustain different initiatives in resilient livelihoods.

"Sustainable agriculture and working with natural technologies are not new. They are long-time practices that have been proven effective."

CONCLUSION

To build resilient livelihoods, households and communities must be able to diversify their activities and have adequate support in terms of assets that are protected from the damaging effects of natural hazards and other shocks and stresses. Resilient livelihoods also require strengthening by way of creating a wide range of capacities among households and communities: from technical and financial to organizational. Many of the livelihood capacities can be built and strengthened with minimal material resource inputs, though these may require greater investment in terms of non-material resources. One example is the time spent on helping households and communities strengthen their organizational capacities.

The experiences on, and successes in building resilient livelihoods among disaster-affected and high-risk communities have sufficiently accumulated. Reflection and learning with communities have established that the strategies of diversifying, protecting, and strengthening livelihoods can contribute to achieving resilience. Livelihood assets and capacities that have survived the test of chronic disasters, and livelihoods that have been sustained over the years, are proof that achieving resilience in livelihood is possible.

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This document on resilient livelihoods was based on the experiences and learnings of CARE and ACCORD during Washi, Bopha, and Haiyan emergency responses, Partners for Resilience, Proud of my Purok, and Strengthening Haiyan Recovery and Resilience through Inclusive and Climate-smart DRR projects.

















