INSTITUTE FOR CLIMATE AND SUSTAINABLE CITIES

Climate and Disaster Risk Finance and Insurance in the Philippines

PERSPECTIVES FROM THE SECTORAL CONSULTATIONS

CLIMATE AND DISASTER RISK FINANCE AND INSURANCE IN THE PHILIPPINES:
Perspectives from the Sectoral Consultations

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Introduction

Complemented with risk management, climate and disaster risk finance and insurance (CDRFI) mechanisms are essential long-term climate adaptation options. CDRFI, which is widely applicable and beneficial in developing vulnerable countries such as the Philippines, highlights the economic benefits that serve as adaptive social protection (ASP), or reduction of risks brought by climate change impacts, for the government, private sector, and communities.

The Philippines has been among the top countries experiencing long-term climate risks and extreme weather events with an annual average economic losses of US$ 3.179 billion[1] from 2000 to 2019 (Eckstein et al., 2021). Long-term climate risks and extreme weather events constantly affect the socioeconomic activities in agriculture, forestry, and fisheries (AFF). Coincidently, the AFF sector is among the three major economic sectors in the country, contributed the least to total gross domestic product (GDP) with 8.4% in the second quarter of year 2022[2].

Projected economic losses in the Philippines' agriculture and fisheries sectors

The agriculture sector is prone to several adverse effects of extreme weather events, such as increasing temperatures and changes in rainfall patterns. Such impacts result in the reduction of crop yields and crop losses, thereby translating to reduced profit (Department of Science and Technology - Philippine Atmospheric, Geophysical and Astronomical Services Administration [DOST-PAGASA] et al., 2021). According to interlinked modeling systems on climate, crop, and economic models, "agricultural food commodity prices are projected to increase in 2030 and 2050 due to climate change, making food commodities less accessible especially for poor people" (Rosegrant et al., 2016; Rosegrant and Sombilla, 2019).

Furthermore, experts noted that by using this projection, the "economic welfare"[3] of the Philippine agriculture sector can also be modeled. Results project a total welfare loss to the Philippines

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[1] *Estimated PHP 159 Billion, conversion based on the December 2019 average Foreign Exchange rate of the Banko Sentral ng Pilipinas (BSP). Authors used the 2019 rate to match the end year (2000 to 2019) of the average economic loss as cited above. (https://www.bsp.gov.ph/statistics/rerb/27%20Dec%202019.pdf)*

[2] *The three major economic sectors in the Philippines include the (1) Agricuture, forestry, and fisheries (AFF), (2) Industry, and (3) Services all posted positive growths in the second quarter of 2022 with 0.2 percent, 6.3 percent, and 9.1 percent, respectively. (https://psa.gov.ph/national-accounts)*

[3] *Economic welfare as measured by consumer and producer surplus is used to assess and evaluate the effects of changes in market conditions, including changes in demand, supply, price, and quantity. (Economic Online, 2021 retrieved from https://www.economicsonline.co.uk/Definitions/Economic_welfare.html*

of US$16.72 billion over the 40-year period or US$ 418 million per year (in net present value). Of this amount, a net welfare loss to the agricultural sector of PHP 18.81 billion per year is attributed to climate change (Rosegrant et al., 2016). The study emphasizes that unfortunately, the cost of the projected welfare loss affects consumers, especially poor communities that may have limited access to food commodities as well as producers who are mostly smallholder farmers in the country.

Scientists reviewed that in terms of socioeconomic losses and damages such as "(i) annual cost of economic damage caused by the sum of coastal flooding and river flooding, (ii) dry land loss, (iii) salinity intrusion, and (iv) human migration relative to GDP are projected to be high in the Philippines, and that by 2100, damage cost represents 0.31% of GDP under B1 and 0.28% of GDP under A2[4]" (David et al. in Cruz et al., 2017). These socioeconomic projections, according to scientists, are caused by continuous impacts of rising sea levels resulting in saltwater intrusion, coastal and river flooding, and human migration in the rural and urban areas. Aside from the impacts of climate change, losses and damages are also dependent on the community's capacity to adapt to these impacts (Oscar M. Lopez Center for Climate Change Adaptation and Disaster Risk Management Foundation, Inc., 2017). One drawback is that despite the diversity and vastness of the country's marine resources and their role in human survival and quality of life, the marine economy has received relatively scant attention in national development plans and programs, with public investments in the agriculture sector being generally biased toward crops, specifically rice (Monsod et al., 2021).

TABLE 1: LONG-TERM CLIMATE RISK INDEX (CRI): THE 10 COUNTRIES MOST AFFECTED FROM 2000 TO 2019 ANNUAL AVERAGES (ECKSTEIN ET AL., 2021)[5]

CRI 2000-2019 (1999-2018)	Country	CRI SCORE	Fatalities	Fatalities per 100,000 inhabitants	Losses in million US$ PPP	Losses per unit GDP in %	Number of events (2000-2019)
1 (1)	Puerto Rico	7.17	149.85	4.12	4,149.98	3.66	24
2 (2)	Myanmar	10.00	7,056.45	14.35	1,512.11	0.80	57
3 (3)	Haiti	13.67	274.05	2.78	392.54	2.30	80
4 (4)	Philippines	18.17	859.35	0.93	3,179.12	0.54	317
5 (14)	Mozambique	25.83	125.40	0.52	303.03	1.33	57
6 (20)	The Bahamas	27.67	5.35	1.56	426.88	3.81	13
7 (7)	Bangladesh	28.33	572.50	0.38	1,860.04	0.41	185
8 (5)	Pakistan	29.00	502.45	0.30	3,771.91	0.52	173
9 (8)	Thailand	29.83	137.75	0.21	7,719.15	0.82	146
10 (9)	Nepal	31.33	217.15	0.82	233.06	0.39	191

[4] Under the B1 scenario, 0.7% of the population in the Philippines will be affected by annual flooding in 2100 owing to a projected relative sea level rise of about 0.31 m. Under the A2 scenario with 0.45 m, Western Visayas (228,800 people flooded) and National Capital Region (357,600 people flooded) will be most vulnerable in 2100. It should be noted that the scenarios used in this analysis are actually less than what is currently being observed by satellite data for the Philippines. Satellite data provide a 30-year trend of 4.5–8.5 cm per decade that translates to 0.45–0.85 m by 2100 (Strassburg et al., 2015; David et al. in Cruz et al., 2017).

[5] The indicator "absolute losses in US$" is identified by purchasing power parity (PPP) because using this figure expresses more appropriately how people are actually affected by the loss of US$ 1 than by using nominal exchange rates. PPP is a currency exchange rate that permits a comparison of, for instance, national GDPs, by incorporating price differences between countries. This means that a farmer in India can buy more crops with US$ 1 than a farmer in the USA with the same amount of money. Thus, the real consequences of the same nominal damage are much higher in India. For most countries, US$ values according to exchange rates must therefore be multiplied by a factor bigger than one (Eckstein et al., 2021).

State of play of CDRFI in the Philippines

The Philippine Republic Act 10121, otherwise known as the National Disaster Risk Reduction and Management Act of 2010, provides a legal basis for CDRFI as a finance policy for risk transfer mechanism (RTM). Among these RTMs are sovereign disaster risk transfers, state-supported large-scale agriculture and private sector agriculture insurance programs, and disaster risk insurance (Deutsche Gesellschaft für Internationale Zusammenarbeit [GIZ], 2020). These factors constitute the CDRFI system in the Philippines, which leans toward post-disaster risk financing based on indemnity. Lansigan (2015) stated that there are also several operational and implementation-related issues that hinder the use of more objective insurance products. An example of this is the challenge of institutionalizing pilot index-based insurance mechanisms in the country owing to its low acceptance, unaffordability, and need for technical features. The use of index-based insurance is still seen as an initial step toward innovating insurance mechanisms that include climate-induced losses and damages based on weather indices and climate projections.

The Institute for Climate and Sustainable Cities and the West Flanders Synergy Project convened a roundtable discussion in April 2019 to initially explore the state of play of CDRFI. The discussion focused on the viability of weather index-based insurance (WII) as an RTM for the agriculture sector. It also generally outlined the key players of insurance-related RTMs, which include indemnity-based, crop revenue, and weather index-based approaches. The challenges of leveling the playing field for these products to be marketable while being acceptable and affordable to farmers were also conferred during the roundtable discussion. However, WII products are still seen as too technical and expensive and are thus unattractive to smallholder beneficiaries.

Expanding the state of play

The Philippines, a member of the Climate Vulnerable Forum (CVF) and the Vulnerable 20 (V20) Group of Finance Ministers and a country experiencing the brunt of climate extremes, can be an active voice in leveraging demand-side engagements needed to ensure that new and timely financial resources are mobilized and affordability barriers are addressed through time-bound subsidization strategies[6]. This study takes off from the previous state of play discussions and looks into the current developments of CDRFI as a climate policy in the Philippines. Insights and recommendations from online sectoral consultations conducted in November 2021[7] are considered in this study.

This study recommends conducting a policy reviews on CDRFI in the Philippines. It is recognized that the government is in the most strategic position to address the challenges identified from the consultations. Further, the presence of and access to premium and capital support are integral to implementing CDRFI mechanisms and ensuring their sustainability. Most pilot programs implemented by the government and the private sector often stop at the pilot stage

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[6] *In the 6th InsuResilience High-level Consultative Group (HLCG) Meeting, the German G7 Presidency shared its vision for establishing the Global Shield against Climate Risks, a mechanism to ensure a more sustained, coherent, and systematic global CDRFI approach. In the same meeting, the V20 Group of Finance Ministers underlined that the Global Shield should also make sure to include V20 representation in the global governance process to ensure the demand-side engagement, which is central to success and needs to be matched with coordination among delivery partners in the Program Alliance as service providers. (https://www.insuresilience.org/wp-content/uploads/2022/04/HLCG-Co-Chairs-Conclusions-6th-Meeting-virtual-7-April-2022.pdf)*

[7] *Key stakeholders include government agencies, non-government and people's organizations, academe, private sectors, MSMEs, cooperatives, development sector partners, local government units, and other entities working or developing mechanisms on CDRFI-related initiatives in the Philippines.*

because of the lack of capacity, readiness to enhance programs and, most importantly, the lack of continuing financial support.

Despite the availability of climate finance sources from the national and local government, the study recommends further exploring the policy on premium and capital support that is applicable to government programs and mandates. In fact, the High-level Consultative Group of the InsuResilience Global Partnership (IGP), during its sixth meeting in April 2022, highlighted the "growing evidence that prearranged risk finance enables faster and more effective disaster response to affected communities and can lower the overall economic costs of disasters… should therefore be increased through significant expansion of funds for technical and financial assistance in vulnerable countries"[8].

CDRFI is a priority adaptation option to address the financial and socioeconomic impacts of climate and disaster risks. Hence, partnerships with nongovernment organizations (NGOs), private sector actors, and academe are necessary to provide technical and practical approaches. It is recommended to establish a Multi-Actor Partnership (MAP) with the aforementioned key stakeholders to continue the advocacy and policy development of CDRFI in the Philippines. In this way, areas for capacity building, especially for smallholder beneficiaries, can be identified. Losses and damages due to climate and disaster risks are unpredictable but can be managed if there is continuous engagement with key stakeholders. The principles of the ASP approach in climate and disaster risk management emphasizes enhancing the adaptive capacity of key stakeholders and should thus be incorporated into all levels of climate action.

Climate risk insurance is not a one-size-fits-all solution. It needs to be considered together with other financial mechanisms. Further, its analysis would go beyond economics[9]. It is associated with other public policy domains, such as disaster aid, risk finance, social protection, climate adaptation, and loss and damage (L&D) of climate change (Panda, A. and Surminski, S. 2020). Availability, accessibility, affordability, and sustainability are important contexts considered for the viability of CDRFI programs. The sectoral consultations with key stakeholders expound the importance of these contexts within the thematic areas that are relevant to social and financial adaptation measures for climate and disaster risk management.

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8 Strengthening the Global CDRFI Architecture. Recommendations by the InsuResilience HLCG during its meeting in March 2022. (https://www.insuresilience.org/wp-content/uploads/2022/04/Global-CDRFI-Architecture_IGP_Recommendations_HLCG_2022.pdf)

9 United Nations University Institute for Environment and Human Security (UNU-IEHS) (https://ehs.unu.edu/news/news/7-things-you-need-to-know-about-climate-risk-insurance-2.html)

Policy Principles of the Multi-actor Partnership (MAP) for CRDFI

This study explores CDRFI in the Philippines and identifies opportunities for policy development to leverage the aspects of economic benefits and ASP, which are integral to climate and disaster risk management. In addition, it recognizes the importance of emerging science and evidence-based approaches to potentially address the limitations of existing CDRFI mechanisms in the country.

Economic benefits of CDRFI

Climate risk management relates to adaptation strategies for reducing anticipated risks and to emergency measures for dealing with residual risks after adaptation (Botzen, W., et al., 2018). While investments in resilient infrastructure is vital, research and development are expected to be the long-term solutions.

Diversified schemes and flexible insurance can help cover various and changing or increasing risks (Lamond and Penning-Rowsell, 2014). Nonetheless, insurance is viewed as a short-term approach to address economic L&D beyond adaptation in climate vulnerable areas such as the Philippines. Insurance-related risk transfer is viewed as a reactive measure as it mainly compensates for the capital after the damage has occurred (Duus-Otterström, G. and Jagers, S.C., 2011). Insurance-related RTMs not only support recovery efforts but also cover prevention efforts through investment in resilient technology and practices (Surminski, S. and Oramas-Dorta, D. 2014; Ancog, R.C., 2020).

Although there are perceived benefits of investing in CDRFI, there are also barriers to evaluating existing mechanisms. Examples of these barriers are the ambiguity of data to be used and the lack of indicators to measure impacts. At the international level, empirical evidence to assess the benefits of insurance for target stakeholders is still insufficient (Panda, A. and Surminski, S. 2020). The same is true in the case of the Philippines as the documentation on the economic valuation of insurance benefits is limited. Local stakeholders have different ideas about what the benefits are in the context of CDRFI. In most cases, project reports and local government unit (LGU) documents are limited to the qualitative analysis of benefits and would often exclude gains expressed in financial terms. Despite the insufficient data, there are efforts to consider the economic benefits of CDRFI mechanisms.

CDRFI is particularly crucial for middle- to low-income countries because it is deemed as a significant mechanism to increase the financial safeguards of vulnerable communities. Communities have their own perception of CDRFI as a good opportunity for them to establish

better readiness to manage risks brought about by climate change. This study examines various financing mechanisms implemented at the local level in the country including, mainly but not limited to, insurance. To build the case for the benefits associated with CDRFI, it is important that the specific benefits are understood by and effectively demonstrated to the target communities. Experiences and accomplishments from other communities that benefitted from CDRFI mechanisms must be used to encourage stakeholders to explore available instruments to manage climate and disaster risk. However, it will be more comprehensive if the benefits can be further explained economically as the use of monetary terms can demonstrate the added value of availing financial instruments.

The need to improve the gathering and analysis of local data by maximizing the use of existing weather and climate information, especially from partners and experts, in creating the risk profile of the coverage areas.

Government agencies and private sectors should recognize the extensive knowledge of the academe on climate change impacts on agriculture and seek technical support and assistance to develop indices and GIUs for WII. Their expertise can aid in refining existing mechanisms on WII to ensure that implementation issues are carefully analyzed and systematically addressed.

> The lack of accurate local data the accuracy of weather indices in the current state of the climate is another crucial hurdle in increasing the viability of WII. Aside from PAGASA, , specifically members of the Synergy Program, have agro-met stations installed inside their campuses. The stations collect weather data that are fundamental to building local risk profiles as a basis of indices and GIUs. The optimal GIUs for agri-insurance through data interpolation that would best the absence of actual measurement hardware limitations are important references in aggregating useful and accurate data for implementation. In practice, scientists and researchers from academic institutions, such as , are involved in different research initiatives, such as Smarter Approaches to Reinvigorate Agriculture as an Industry in the Philippines (SARAI) Project, which has been working on reducing climate risks by providing agricultural stakeholders with site-specific crop advisories to maximize crop yields.

F.P. Lansigan, 2022 discussion from the RTM Forum of the Synergy Project in the Philippines, as documented in the report "State of Play of Risk Transfer Mechanism for Small Scale Farmers". https://icsc.ngo/portfolio-items/the-synergy-program-risk-transfer-mechanism/

Emerging science and evidence-based approaches

Research has always been an essential part of the planning process, which, in this case, is risk management planning. Historical data can be used to identify tradeoffs and synergies, including the possibility of sustained action to promote adaptation and facilitation of the prioritization of interventions (Engle, N. L. et al., 2014). Although climate change is a global issue, initiatives are usually more efficient if implemented at regional or local levels considering the differences in resources and the varying impacts of climate change to communities (Malone, 2009). To implement such initiatives, the availability of local climate knowledge (e.g., trends and impacts) is necessary (Fröde, A. et al., 2013).

Vulnerability assessments and post-disaster reports should be conducted and compiled by the local government or regional agency concerned and complemented by other scientific studies. To compare the various programs for each locality, one can set a standard to assess the differences in physical settings and cultural practices. There is also a need to integrate more scientific approaches to indemnity-based insurance programs not only to make them attractive to local stakeholders (e.g. farmers and fisherfolks) but also to make them affordable enough for LGUs (including provincial and regional offices) and other membership-based entities/ organizations (e.g., cooperatives, irrigators associations). In this way, financing schemes can be developed to assist citizens/members in protecting their assets, such as their crops and properties.

Adaptive social protection (ASP)

ASP[10] is an approach to reduce the negative impacts of global challenges and changes, such as poverty, food insecurity, and climate change, as well as their increased interaction with natural hazards, such as floods, hurricanes, or earthquakes. In the context of ASP in CDRFI, a MAP among sectors (mostly between the academe, development sector organizations, private insurance providers, and local governments) is crucial to guarantee the sustainability of programs and to ensure CDRFI mechanisms are acceptable and affordable for vulnerable communities. CDRFI programs tend to be less attractive to smallholders; hence, fewer are patronizing these services. This low level of patronage is due to the products' high premium, which is perceived as an additional spending burden rather than a climate adaptation investment for future financial and social security. These are common observations discussed during the sectoral consultations with the academe, private sector providers, and development sector partners.

The concept of ASP is also pursued by the Philippine Department of Social Welfare and Development (DSWD). According to the DSWD[11], one of the key strategies of implementation in building adaptive capacity is through the social protection (SP) alignment with disaster risk reduction (DRR), humanitarian assistance, and climate change adaptation (CCA). This approach is designed to enable lower-income households to manage risks and increase their resilience.

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[10] United Nations University–Institute for Environment and Human Security (2020). Five facts on adaptive social protection (ASP). Retrieved from https://ehs.unu.edu/news/news/five-facts-on-adaptive-social-protection-asp.html#:~:text=Adaptive%20Social%20Protection%20(ASP)%20is,as%20floods%2C%20hurricanes%20or%20earthquakes.

[11] DSWD Presentation. Philippines: Building Adaptive Capacity for Social Protection (https://www.unescap.org/sites/default/files/5_Hannah%20Giray%20Carcido_Philippines.pdf)

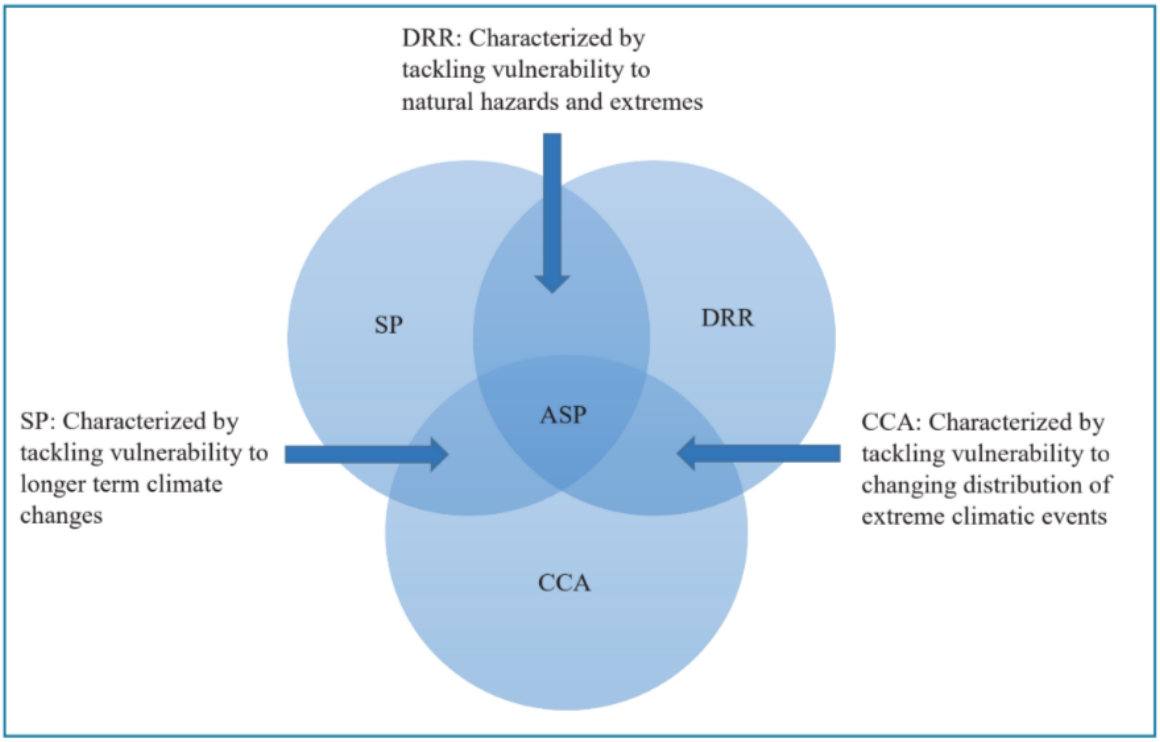

FIGURE: ADAPTIVE SOCIAL PROTECTION AS THE INTERSECTION OF SOCIAL PROTECTION, DISASTER RISK REDUCTION, AND CLIMATE CHANGE ADAPTATION (DAVIES ET AL., 2009)

Livelihood is currently not incorporated in CDRFI-related programs in the Philippines. Discussions with key stakeholders show that incorporating livelihood as a component of the CDRFI program will help smallholder beneficiaries elevate their understanding and appreciation of the program. Further, small-scale community-based CDRFI is more attractive to smallholder beneficiaries if the program includes capacity building, such as financial literacy. In this way, beneficiaries will understand the CDRFI program and eventually appreciate its benefits, such as economic, life-saving, or risk transfer benefits. An example of how capacity building can be injected to a CDRFI program is Oxfam Philippines' Inclusive and Affordable Financial Facilities for Resilient and Developed Filipinos (IAFFORD)[12]. IAFFORD includes access to financial services, financial training, and support for the innovation of financial products for insurance as well as loans.

Capacity-building initiatives for micro, small, and medium enterprises (MSMEs) also have positive implications with regard to ASP. As MSMEs are community providers of services and goods, their business continuity is important especially amid the risk of climate-induced disasters. One of the study's respondents from GIZ in the Philippines shared that Disaster Risk Management–Business Continuity Planning (DRM-BCP) is a capacity-building initiative for MSMEs that focuses on business continuity planning and insurance training operating on the principle of residual risks. By understanding what types of risk can be reduced, MSMEs are given an option to plan for reducing risk by insuring the residual risks. The DRM-BCP is a MAP of the Department of Trade and Industry's (DTI) Centers and its partners.

Further, technology transfer that uses new tools together with existing tools commonly accessed by the community is crucial to ensure continuous access to services and maintain the

[12] *The IAFFORD program is a digital financial inclusion project led by Oxfam in partnership with PayMaya and Visa and with support from the Australian Government (https://philippines.oxfam.org/latest/stories/power-savings)*

attractiveness of products. One example of this is the Building Resilient, Adaptive, and Disaster-Ready Communities (B-READY) project[13] of the People's Disaster Risk Resilience Network and the Visayas State University, which uses ATM cards as a means for farmers to access payout from forecast-based insurance in Salcedo, Eastern Samar. Circling back to Oxfam's IAFFORD program, the initiative includes developing a new risk assessment, micro-risk assessment for credit scoring using data analytics from cell phone calls and prepaid utilization to address the need to expedite access to financial services digitally. The payout serves as a seed fund for farmers to restart their livelihoods affected by disasters and to avail their needs, such as water, food, and materials for house repairs. Other client/member-oriented programs include those of private insurance providers', such as the 1 Cooperative Insurance System of the Philippines Life and General Insurance's (1CISP) DigiCoop and Cebuana Lhuillier's ClaimsRapido, which use adopted technology to ensure efficient transactions between the community cooperatives providing payouts and their clients/members.

Gender inclusion and culture considerations are also deemed as notable aspects of ASP. Oxfam's IAFFORD program was instrumental in the development of Shariah (Islamic law)-compliant insurance in the Bangsamoro Autonomous Region in Muslim Mindanao. The program was launched in Marawi to serve as a response for conflict- and disaster-affected areas and was also expanded to cover the Western Visayas region. A gendered analysis in the community assessment highlights the gender stereotype on women's role as financial managers in the community and in the family. The financial literacy initiatives of Oxfam Philippines invest in empowering women through decision making in terms of insurance and savings accounts ownership. According to an Oxfam Philippines' study, the country is still lagging behind in terms of ownership and decision making on financial products relative to other Southeast Asian countries. Further, equally recognizing the economical contribution of women along with their unpaid care work can strengthen their capacity as financial managers. In turn, this may contribute to ending possible triggers of gender-based violence as income loss is said to be among the stressors causing violence within the family.

The aforementioned approaches represent opportunities under CDRFI-related programs, such as ASP that aims to lessen the financial burden of smallholder beneficiaries. However, despite the increase in acceptance of these programs, as mentioned above, the evident challenge lies in the sustainability of program implementation. This challenge is attributed to some NGO-driven programs that are implemented only during a certain period with no proper turnover to the local government and the barangay local government units (BLGUs). Moreover, there are some projects with no evaluation at the end to assess their effectiveness. The participants of the sectoral consultation stressed the importance of an active and continuous awareness-building process. An example of such is conducting a climate and disaster resilience forum for product promotion and advocacy not only to provide information but also to serve as an elbow room for implementers, including LGUs and BLGUs, to plan and align potential budget support for the continuity of the programs and innovate capacity-building mechanisms for the program. Such measures may ease the challenge of accessibility caused by high-cost premiums.

The current global pandemic poses challenges in accessing CDRFI mechanisms. Development and private sector providers have stressed the limited (for some, restricted) site visits to ensure that programs are continuously implemented. Small-scale financial mechanisms, such as cash transfers that have no strict required allocation, have been used for beneficiaries' expenses for basic COVID-19 response. Meanwhile, there are no available insurance or funding mechanisms

[13] *The B-READY Project is collaboration of a consortium of partners, namely, the Local Government of Salcedo, Eastern Samar; People's Disaster Risk Reduction Network; PayMaya Philippines; Global Parametrics; and Plan International under OXFAM Philippines' IAFFORD PROJECT (https://philippines.oxfam.org/latest/stories/b-ready-paradigm-shift)*

yet to meet the greater risk due to the pandemic (e.g., quarantine, hospitalization, livelihood) on top of climate-driven disasters that the Philippines is experiencing. The pandemic has increased the awareness about insurance, especially health insurance, and providers have had to adapt to these circumstances. One of the most prevailing challenges is for providers to design affordable products that will cater to the beneficiaries' needs. 1CISP and Cebuana Lhuillier were among the private sector providers who developed COVID-related insurance products. However, there is a gap in insurance products for MSMEs: there is no insurance product for businesses that were disrupted and forced to close due to the pandemic. Another identified challenge for insurance providers is the use of technology. This is best demonstrated during the pandemic wherein programs were pushed to be digitized, from processing to the actual delivery of services to the beneficiaries. Without the available tools or if tools are not mainstreamed down to the community level, beneficiaries are unable to easily renew their insurance policies and access their payouts.

Premium and capital support

Climate shocks, aggravated further by climate change, are said to affect poverty dynamics, thereby making the vulnerable even more vulnerable and sometimes destitute (Carter, M.R. & Janzen, S.A., 2018). To reach the most vulnerable, premium and capital support (PCS) is expected to be provided by the government (Carter, M.R. & Janzen, S.A., 2018 ; Panda, A. et al., 2021). Funding for assistance may be acquired by the government through grants or its own public budget (Fernández, R., n.d.). To ensure sustainability, the government should ensure the continuous provision of regular budgets in the national government or automatic appropriations in the government's revenue, such as in the local government's internal revenue allotment (IRA). The government may also engage in public–private partnerships for the programs' longevity. The sectoral consultations highlight the opportunities for PCS from existing and upcoming programs at the local and national levels. These, however, need government and private sector commitments. Collaboration with NGOs and the academe is also necessary to make such initiatives more effective and ensure a needs-based approach.

Local governments are in the best position to ensure that adaptation programs, including CDRFI initiatives, are sustained and accessible to smallholder beneficiaries. As discussed previously, the Philippines' DRRM law provides a legal basis for RTMs, such as disaster risk transfer and insurance as a financial policy. However, loosely stated, this can be an entry point for the use of the local governments' disaster fund. The 5% local disaster fund allocation (from the IRA of the LGUs) is among the funding sources that can be earmarked for PCS for existing or upcoming CDRFI programs of the local government and its partners.

Unlike the DRRM Law, the Climate Change Act of 2009 has no provisions for an annual budget allocation for LGUs' CCA and mitigation programs. However, it has been amended and is now Republic Act 10174, known as the People's Survival Fund (PSF) Act, which provides an allocation from the General Appropriations Act of at least PHP1 billion annually. Local governments can access the fund through the submission of a climate adaptation proposal to the PSF board, and CDRFI can be included as a priority project.

Further, additional funding allocation for local governments through the Mandanas–Garcia ruling is seen as a possible source of PCS. The ruling issued by the Philippine Supreme Court in 2018 mandates the national government, starting fiscal year 2022, to implement a "just share" not only on IRAs but also over national revenues consistent with the provisions of the 1987 Philippine Constitution. This "just share" aims to support local development programs, activities, and projects in key sectors. Despite these opportunities, local governments need to prioritize and ensure that resources are mobilized for CDRFI programs through annual planning and budgeting.

Meanwhile, the national government's existing and pilot programs may also provide PCS, but further policy review may be necessary. For instance, integrating the concept of CDRFI in government social protection programs, such as the DSWD's Pantawid Pamilyang Pilipino Program (commonly referred to as 4Ps) that provides grants to less fortunate households and DTI's Pondo sa Pagbabago at Pag-asenso (also known as P3) that provides loans for MSMEs. These programs may not only serve as a source of financial support but also increase the acceptance of CDRFI by beneficiaries.

The Philippine Catastrophe Insurance Fund (PCIF) is also seen as an essential PCS program as well as a mechanism to pool catastrophe risks. According to the Insurance Commission (IC), the proposal involves insurance companies ceding a portion of their catastrophe risk to the PCIF. In turn, the facility retrocedes back to the participating authorized insurance companies in accordance with their subscription to the PCIF. International reinsurance will also be purchased to ensure support for and wider coverage of risk pooling ("ambagan" to receive catastrophe risk). PCIF is a relatively new facility established in 2020, and its technical working group is continuously evaluating proposals on innovations to operationalize the facility.

Interagency and public–private collaborations can possibly adopt a policy on PCS. The same is true for IC's pilot agriculture insurance products, with private sectors participating initially in the regulatory sandbox. The Philippine Crop Insurance Corporation (PCIC) expressed willingness to enter into co-insurance with the private sector. This is considering the limitations on premium subsidy being primarily on the budget for the program. However, IC noted that there is still a need to check with the concerned government agencies about whether there are already approved agricultural insurance products. Further, fully subsidized insurance is already an option on the sandbox regulation issued by the IC. The PCIC is currently waiting for Pioneer Insurance, which will be participating in the public–private partnership co-insurance agreement wherein 70% will be taken by the partner and the remaining 30% by PCIC. With this pilot initiative, co-insurance is targeted to be a program that will be attractive to private insurers and encourage more players in the field to cover other high-value crops aside from rice and corn for commercial scale.

The national government is also in the best position to leverage PCS through international partnerships. The Disaster Risk Finance and Insurance (DRFI) program of the Department of Foreign Affairs (DOF) explores possibilities of PCS through the IGP. The outcome of the partnership encourages the principles of demand-driven setup and value for money. The DOF and its partners are currently working with experts who are conducting studies on how to implement the principles of PCS[14].

[14] *The IGP's SMART Premium and Capital Support Principles aim to provide evidence-based guidance on the conditions under which affordability and sustainability concerns for insurance solutions by vulnerable countries and people are best addressed through premium financing or capital support. More information can be read here: (https://www.insuresilience.org/wp-content/uploads/2022/07/SMART-Premium-and-Capital-Support_Policy-Note.pdf)*

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Challenges and Recommendations from the Sectoral Consultations

CDRFI is perceived as a mechanism to provide options for farmers and fisherfolks to access RTMs in the form of long-term financial investment and social security support that can be used to respond to, recover from, and even reduce the potential losses and damages from long-term climate risks. However, existing insurance and financing-related adaptation options in the Philippines would need innovation. There is also a need to improve programs and research on CDRFI to cater to other sectors affected by the impacts of climate change. Participants from the sectoral consultations identified several challenges and recommendations to address these barriers.

Need for data-centered and science-based mechanisms

There is a high agreement among the stakeholders with regard to the need for consolidated data and data sharing protocols. According to the discussion, there has been an observed hesitation in data sharing, especially because of market risks. This is observed particularly in agriculture-related data in the country. At the same time, the government and insurance sectors use different damage standards. The alignment of such standards would make it easier to promote and implement products such as damage insurance in the agriculture sector. Economic valuation is also important to drive evidence-based benefits and provide proof of concept that various CDRFI mechanisms actually work at the local level. This will strengthen the monitoring and evaluation strategies of program implementers and providers.

Through the focus group discussions conducted, the research participants provided first-hand experience regarding science-based approaches to CDRFI as well as some implementation issues. For example, local stakeholders are familiar with products of the PCIC, but they are unable to clearly explain to farmers the importance and implication of having their assets (e.g.,

crops) insured. Other modes of financing distribution have also been piloted, and they include ATM card-based mechanisms to deliver financial assistance. However, implementation has been discontinued because of the low adoption by the stakeholders. Another example is a project conducted in some areas of Isabela, Bukidnon, and Iloilo. For this project, the implementers had difficulty modeling and differentiating the risks being experienced by farmers and coming up with an objective scheme wherein one metric or index is measured to trigger the release of an insurance payout.

The need for an enabling policy environment for CDRFI

Policy interventions at different levels are needed to leverage an enabling environment for CDRFI. As discussed, current policies tend to create barriers. Many programs and initiatives do not go beyond the pilot testing level because of the lack of continuous funding support or the limited programmed policy under the government. Particularly for CDRFI initiatives at the local level, local government funds, which may be used for insurance premiums to cover climate and disaster-related risks, are limited and not readily available.

An example of this is the adoption of anticipatory insurance that is not a mandated allocation under the DRRM fund. The cited lack of guidance from the Commission on Audit or Department of the Interior and Local Government regarding the use of the DRRM fund for calamities is seen as one of the barriers that need to be addressed at the local level. Further, although insurance is computed based on the level of risks, the major driver for the high insurance premium cost is the government's documentary tax of about 24%. As a result, the insurance penetration rate in the country is low.

Cooperatives within the community are perceived as the most ideal distribution network for CDRFI because of their inherent business model. However, for some cooperatives, such as those providing credit and lending services, there is a need for a policy or memorandum that will allow them to include CDRFI in their mandates. There is also a need to engage with the Cooperative Development Authority of the Philippines to discuss a possible policy environment for the distribution of CDRFI as well as to leverage their role in the resilience building of their members in the local communities and MSMEs.

To sustain a program such as CDRFI, there is a strong need for the additional allocation of data gathering and analysis capacities, program enhancement, and capacity building for end users. Social preparation or readiness programs are important in initiating activities regardless of whether these are pilot ones or a continuation of existing ones. This comprises the expansion of CDRFI coverage to include other sectors and services, such as infrastructure, healthcare, and forestry.

In the context of boosting CDRFI financial literacy at different levels, successful readiness programs are identified not only to provide information but also to capacitate the communities. The increase in penetration rates in smallholder beneficiaries, the increase of LGUs' buy-in, and the increase in the provided support have been observed with the current initiatives of the private sector and development partners. Furthermore, these programs are drivers that strengthen the aspect of ASP; thus, readiness programs should be integrated into a CDRFI policy.

Where do we go from here?

According to the discussions from the sectoral consultations, this study recommends two action points:

Maximize collaboration with key stakeholders and institutions. A MAP is a chance to delegate work to fill in the gaps and address the challenges. Academic institutions play a crucial role in providing new evidence and analysis to support CDRFI research and the development of new products. Capacity building with smallholder beneficiaries, such as financial literacy programs, is seen as a key to a higher insurance penetration rate.

The less the stakeholders understand what the insurance is, what it is for, and what the benefits are, the more resistant they would be to invest. As they are the end users of CDRFI products, explaining and educating them is one thing but listening to their needs is another. Involving stakeholders is essential in understanding their needs and actually incorporating their suggestions in developing CDRFI programs. Doing these would later result in gaining their acceptance of these development initiatives. Considering the sociodemographic characteristics of the beneficiaries (e.g., mostly in the agriculture sector), simple and understandable programs should be crafted.

The private sector also plays an important role in developing its own CDRFI mechanisms in coordination with the government and local partners. Private insurers are willing to venture into CDRFI products, but there is a need for the whole insurance ecosystem to back them up. There is a perceived willingness to engage with key stakeholders in order to explore and develop their CDRFI products and related business plans.

A MAP on CDRFI in the Philippines can support the policy and outreach strategies of the national government's climate finance agenda. Particularly, the Sustainable Finance Roadmap sets out a comprehensive approach and effective strategies to facilitate the mainstreaming of sustainable finance in the country[15], including CDRFI mechanisms. Further, MAP can also support the government in international initiatives on sustainable finance, such as the Sustainable Finance

[15] *The Philippine Sustainable Finance Roadmap is an interagency process led by the DOF. According to the publication, the roadmap is designed to promote sustainable finance in the Philippines and to address climate change and other environmental and social risks. The roadmap will be built and aligned with the previous and current efforts of the government. (https://www.dof.gov.ph/wp-content/uploads/2021/10/ALCEP-Roadmap.pdf)*

Initiative[16], the Global Shield Facility[17], and IGP.

The government is in the best position to set the policy standards such as policy reform legislation, concrete finance road maps from national government agencies, and memorandum to guide LGUs in spending their allocated disaster fund and other funds that can be utilized for new CDRFI programs or for the continuity of pilot projects. The public and private sectors can work together in a way that the government can provide subsidies while the private sector can develop the insurance products directly targeting the CDRFI-related needs. Aside from subsidies, the government can revisit laws and ordinances to address possible barriers to CDRFI implementation.

At the international level, various organizations and institutions can be tapped by the government for external financial support. Additionally, the national government can identify programs or policies to leverage PCS from available resources to accelerate pre-arranged risk financing that is available at the national level and can be accessed by the local governments.

Therefore, opportunities for collaboration within the structures and mechanisms of the government must be established to identify concrete policy interventions and recommendations to address the current challenges and barriers that some can only be resolved through government intervention. This is an important step to be considered to ensure an enabling policy environment for CRDFI.

16 The SIF is envisaged as a Project Pipeline Development Facility that will assist the vulnerable developing country members of the V20 in scoping the financial protection needs of MSMEs in the context of climate change and facilitating concept and proposal development for submission to funding vehicles dedicated to disaster risk finance. As such, the SIF aims to mobilize international financial and technical assistance to stimulate domestic and regional private sector insurance industries to increase the application of climate-smart insurance products for MSMEs as well as the low-income and vulnerable people that rely on them. (https://climate-insurance.org/wp-content/uploads/2021/02/The-V20-led-SIF-at-a-Glance_January-2021.pdf)

17 The Global Shield aims to increase protection for poor and vulnerable people by substantially enhancing pre-arranged finance, insurance, and social protection mechanisms against disasters. (https://www.bmz.de/resource/blob/122148/dd6e2de2c73cc601344b1461cf62042b/global-shield-information-note-v20-g7-data.pdf)

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