

Lessons on engaging with the private sector to strengthen climate resilience in the Philippines

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Abstract

In the Republic of the Philippines (the Philippines hereafter), as one of the most disaster-prone countries in the world, many private sector actors already see the increasing impacts of climate change as a major threat to their businesses. Businesses and households are experiencing a number of typhoons annually and are being highly exposed to the impacts of a changing climate (e.g. sea level rise). Yet, those actors, especially micro, small and medium enterprises (MSMEs), still face significant challenges to understanding how the impacts of climate change may influence their business's profitability and continuity over time, and how they can manage climate risks.

This case study focuses on how the national government, local government units (LGUs) and development co-operation providers have been engaging with private sector actors, and other non-state actors, to address the constraints they face and strengthen their resilience to the negative impacts of climate change. Making the private sector, especially micro, small and medium enterprises (MSMEs), resilient to external shocks has significant implications for economic growth in the Philippines, where 99% of the total registered business are MSMEs.

The paper identifies good practices and draws lessons from the experience of the governmental entities of the Philippines and development co-operation providers in supporting MSMEs for climate resilience. The study examines institutional arrangements, policy framework, available information and data, financial mechanisms, and the role of development co-operation providers.

Foreword

This case study is an annex to an OECD Development Co-operation working paper, *Lessons on engaging with the private sector to strengthen climate resilience in Guatemala, the Philippines and Senegal* (Casado-Asensio, Kato and Shin, 2021^[1]). Both papers informed the OECD report, *Strengthening Climate Resilience: Guidance for Governments and Development Co-operation*, developed under the Development Assistance Committee (DAC) and the Environment Policy Committee of the OECD (<https://oe.cd/climate-resilience>). This paper is based on desk research and builds upon the conclusions of an OECD mission to the Philippines, November and December 2019, where OECD officials held about 15 meetings with a range of stakeholders, including governmental and non-governmental actors at national and sub-national levels, the private sector, academia, and bilateral and multilateral providers of development co-operation.

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Abbreviations and acronyms

ADB	Asian Development Bank
ARISE	Private Sector Alliance for Disaster Resilient Societies
CSR	Corporate social responsibility
DRRM	Disaster risk reduction and management
GDP	Gross domestic product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Corporation for International Co-operation)
LGU	Local government unit
MSME	Micro, small and medium enterprises
NEDA	National Economic Development Authority
OECD	Organisation for Economic Co-operation and Development
PAGASA	National Agency for Civil Aviation and Meteorology
PCCI	Philippine Chamber of Commerce and Industry
PCIC	Philippine Crop Insurance Corporation
PIRA	Philippines Insurers and Reinsurers Association
SB Corp	Small Business Corporation

Executive summary

Climate change adaptation, disaster risk reduction and management (DRRM) and the development of the MSME sector are all central priorities for the Philippines' development agenda. The government has made great strides in developing various institutional arrangements and policies to take these three policy agendas forward. Many actors from the private sector, particularly large enterprises, are also co-leading initiatives to build business resilience, often in partnership with the public sector as well as academia, civil society organisations and religious institutions.

Businesses of many MSMEs are embedded within the communities where they operate. The specific climate risks and vulnerability of each community therefore highlight the importance of local-level institutions and networks. They provide an important basis for planning and implementing concrete measures to build climate resilience of the MSMEs, which fit local needs and capacities. Interviews conducted for this study have suggested that, while many public and private-sector actors recognise the importance of local-level action, scope remains for improving ways in which local MSMEs can further engage in policy dialogue and project development on climate resilience. For instance, a more streamlined procedure for MSMEs to participate in Local DRRM Council meetings could facilitate closer exchange between the Council and MSMEs about the climate hazards they face, their support needs, and broader business circumstances that affect their vulnerability to climate change.

Where relevant, the government and development co-operation can further engage the local chambers of commerce to complement the role of national-level institutions (e.g. the Philippine Chamber of Commerce and Industry, and the Philippine Disaster Resilience Foundation). This can enable greater outreach to local MSMEs and provide them with business resilience training through collaboration with local government units (LGUs) and other local business networks.

A high-level conceptual convergence of policies across climate change adaptation, DRRM and MSME development already exists in the Philippines, which is commendable. Progress on coherent implementation of these policies, especially at the local level, however, varies markedly across policy areas and among different LGUs. Business continuity plans (BCP), for instance, have already been promoted through various public and private initiatives and are helping businesses to better prepare for disruptions after disasters. Yet, introducing regulatory incentives for businesses to consider long-term climate risks within their business operations is still at an early stage.

Climate and weather-related data and information are key enablers for decision making on any interventions related to climate resilience. In the Philippines, both public and private-sector institutions have provided a range of services to support production and dissemination of such data and information. There are also multiple examples of complementarity between private and public initiatives and platforms in this area.

Despite the progress, producing the sufficient amount of downscaled data on climate hazards, and information on vulnerability at the local level, and making them available remain a substantial challenge for the country. Development co-operation and the government need to continue and scale up their efforts to improve the quality, quantity and accessibility of climate and weather data and information relevant to

the decision-making processes of MSME users. This applies to both long-term climate projections and short- or medium-term forecasts (e.g. three to six months ahead for better disaster preparedness). Emerging initiatives, such as the GeoRiskPH and LGU-level Community-based Monitoring System (CBMS) and other data-sharing institutional arrangements, can also offer opportunities to enhance the quality and accessibility of the data and information.

The government has established multiple mechanisms for financing climate and disaster risk management by households, MSMEs and a broader range of stakeholders. These financing mechanisms include: the National Disaster Risk Reduction and Management Fund (NDRRMF), the Local Disaster Risk Reduction and Management Fund (LDRRMF) and the People's Survival Fund. Some public funding is also channelled through state-owned financial institutions such as the Land Bank of the Philippines and the Small Business Corporation.

Opportunities to integrate climate resilience consideration into public financial management in support of MSME sector development exist in various areas. For instance, integrating climate resilience considerations into the "mainstream" development projects of vulnerable sectors (e.g. agriculture, tourism industry, coastal management, watershed management) can help to convert successful pilot activities into scaled-up projects that can engage a broader range of MSMEs. Introducing an MSME-related budget tagging system could also make it easier for relevant government agencies that support MSMEs to identify financing gaps in MSME development and facilitate collaboration for bridging the gaps. Philguarantee – the government-owned guarantee corporation – could also consider possibilities to provide credit enhancement through LGUs to mobilise private-sector investment in technologies and infrastructure in support of climate resilience.

Development co-operation is supporting MSME climate resilience and can provide further assistance with the incorporation of long-term climate risk management into business continuity plans. Development co-operation providers could also use their expertise and experience in conducting assessments of climate risk for and vulnerability of MSMEs, enhancing climate data and information systems and developing MSME-specific financial products within and outside the Philippines.

Development co-operation could also invest in medium and long-term climate projections and associated training to help MSMEs better understand potential long-term impacts of climate change on their business opportunities and livelihoods in different regions. Development co-operation providers could also enhance their engagement with the academia and private-sector networks. Such support can build capacity of MSMEs and LGUs to conduct climate risk assessment and to better access the domestic funding that is available but largely unused (e.g. the People's Survival Fund, lending programmes offered by the Land Bank of the Philippines and SB Corp).

1 How to enhance engagement with the private sector to build climate resilience in the Philippines

Findings and way forward to building climate resilience in the Philippines

Making the private sector, especially MSMEs, resilient to external shocks has significant implications for economic growth in the Republic of the Philippines (the Philippines) where 99% of the total registered businesses are MSMEs (MSMED Council, 2018^[2]). Natural hazards and climate change are among the greatest threats to businesses and households in the country. The Philippines has been hit by a number of typhoons and other disasters every year and highly exposed to the negative impacts of climate change, such as sea level rise.

Climate change adaptation, disaster risk reduction and management (DRRM) and the development of the MSME sector are all central priorities for the Philippines' development agenda. The government has made great strides in developing various institutional arrangements and policies to take these three policy agendas forward. Many actors from the private sector, large enterprises in particular, are also co-leading initiatives to build business resilience, often in partnership with the public sector. An increasing number of MSMEs themselves are becoming aware of the climate risks to their business operations, whilst such an awareness has not yet sufficiently translated into actual action on the ground.

This case study examines various approaches that the public and private sectors in the Philippines are taking to strengthen the resilience of MSMEs to climate risks. Despite various commitments and initiatives by the public and private sectors relevant to the resilience of MSMEs in the country, a range of assessments have highlighted the challenges to implement concrete measures on the ground – e.g. (CCC, 2019^[3]; HLURB, n.d.^[4]; iPrepare Business facility, 2017^[5]; OECD, 2020^[6]). Building on those challenges, this study focuses on opportunities for further improvement in the following areas: institutional arrangements; development and implementation of policies; and enhancement of and access to enabling factors such as information, finance and capacity development. The study also examines the role of development co-operation in helping countries seize such opportunities.

Institutional arrangements

Institutional arrangements for strengthening MSMEs' climate resilience in the Philippines are characterised by multi-sectoral networks. These create an "ecosystem" of top-down and bottom-up institutional arrangements and initiatives by various public and private sector actors as well as academia, civil society organisations and religious institutions (e.g. church groups). For instance, the MSME Resilience Core Group is one of the most prominent public-private networks, which develops national-level strategies for MSMEs' resilience. Another public-private network is the National Resilience Council, which supports science- and technology-based capacity development at the local level, complementing the

strategy-focused activities of the Resilience Core Group (NRC, 2018^[7]). There are also government bodies that are responsible for each of the three policy areas: the Department of Trade and Industry (for MSME development), the National Disaster Risk Reduction and Management Council (for DRRM) and the Climate Change Commission (for climate change adaptation) (ADPC and DTI, 2016^[8]; OECD, 2020^[6]).

Businesses of many MSMEs are embedded within the communities where they operate. The specific climate risks and vulnerability of each community therefore highlight the importance of local-level institutions and networks to plan and implement concrete measures for building climate resilience of MSMEs, which fit local needs and capacities. These institutions include the local government units (LGUs), local chambers of commerce, community-level business associations, civil society organisations and local research institutions. State universities and colleges could also support local businesses and LGUs in capacity development for climate resilience (e.g. by serving as an agriculture extension school).

Interviews conducted for this study have suggested that, while many public- and private-sector actors recognise the importance of local-level action, there remains scope for improving ways in which local MSMEs can be further engaged in policy dialogue and project development on climate resilience. For instance, many business representatives find it burdensome to go through the accreditation process to participate in meetings of Local Disaster Risk Reduction and Management (DRRM) Councils. Such transaction costs may have inhibited their engagement in local-level DRRM planning and actions. Possible ways to further improving the institutional arrangements for enhancing climate resilience of MSMEs could be to:

- Identify potential areas where national-level government bodies with local presence (e.g. the Department of the Interior and Local Government, the Department of Agriculture, etc.) can enhance “vertical” co-ordination for strengthening MSMEs’ climate resilience, building on existing institutional arrangements (e.g. the departments’ own local offices) and guidance tools (e.g. guides on Comprehensive Development Plans and Comprehensive Land-Use Plans).
- Enhance the capacity of local DRRM officers and other local leaders in facilitating community participation in policy dialogues on the key policy agendas (MSME development, climate resilience and DRRM): Relevant local institutions may include, but are not limited to, local business associations, co-operatives, civil society organisations, as well as Regional, Local and Barangay DRRM Committees.
- Where relevant, further engage the local chambers of commerce to complement the role of national-level institutions (e.g. the Philippine Chamber of Commerce and Industry and the Philippine Disaster Resilience Foundation) in order to better reach out to local MSMEs and provide them with training on business resilience through collaboration with LGUs and other local business networks.
- Review the accreditation processes for MSMEs to participate in Local DRRM Council meetings to facilitate exchange between the Council and MSMEs about climate hazards they are exposed to, their support needs, and broader business circumstances that affect their vulnerability to climate change.
- Pursue deeper collaboration between academic networks and the private sector, which can offer a great potential to strengthen resilience of MSMEs to climate risks. Examples include universities and research institutes that participate in the Philippine Academic Society for Climate and Disaster Resilience).
- Help local MSMEs better organise themselves so that they can also more effectively co-ordinate with governmental institutions such as LGUs and regional offices of the Philippines Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) to access weather and climate data and information, and translate them into practical actions.

Policy frameworks

There is already a high-level conceptual convergence of policies across climate change adaptation, DRRM and MSME development in the Philippines, which is commendable (CCC, 2019^[3]; GOV.PH, 2010^[9]; MSMED Council, 2018^[2]). Progress on coherent implementation especially at the local level, however, varies markedly across policy areas and among different LGUs. Business continuity plans (BCP), for instance, have already been promoted through various public and private initiatives and are helping businesses to better prepare for disruptions after disasters. Yet, introducing regulatory incentives for businesses to consider long-term climate risks within their business operations is still at an early stage (OECD, 2020^[6]). The challenges faced in policy implementation also include parallel strategies, action plans, tools and reporting mechanisms. Capacity constraints particularly at the local level is another major challenge, while LGU staff is often overloaded to work on a range of policy agendas with limited resources (CCC, 2019^[3]; ADPC and DTI, 2016^[8]).

While this study examines the ensemble of MSMEs, the difference in size, sector and location among them may require support of the government and development co-operation to be tailored to the capacities and priorities of different groups of MSMEs. Further, promoting policy reforms in support of integrating informal micro and small businesses into the formal sector can enable them to benefit from formal support mechanisms for the resilience of MSMEs. Such support may include subsidies for certain technologies that aim at MSMEs' climate resilience, training on business continuity management, among others. Examples of potential entry points to consider MSMEs' climate resilience in policy frameworks could be to:

- Further strengthen capacities of LGUs to implement and enforce existing regulatory measures such as land-use management and environmental protection: They can serve as a basis to incentivise the private sector to engage in activities to enhance climate resilience, and allocate funding to such activities.
- Link the Green Jobs Act with the policies on MSME development and climate resilience, leveraging (e.g.) the collaboration between the Climate Change Commission, the Department of Labour and Employment and the International Labour Organization to identify the business opportunities of managing climate risks.
- Strengthen monitoring and evaluation to better understand how MSMEs are engaging in climate resilient actions and apply the learning to improve policies and programmes. For instance, there have been a number of training programmes on BCPs but many of them have not followed up on how many MSMEs actually set up a budget for and operationalise the BCPs.

Data and information

Both public and private-sector institutions provide extensive climate- and weather-related data and information in the Philippines. There are already multiple examples of complementarity between private and public initiatives and platforms in this area. PAGASA is the national hydrological and meteorological agency of the country. WeatherPhilippines, a non-profit organisation founded by large company networks, had provided short-term weather forecast (Aboitiz, 2020^[10]). Upon the recent closure of WeatherPhilippines, PAGASA is in charge of providing both short- to medium-term forecasts and long-term climate projections. The short-term forecast also helps to deploy humanitarian aid before the extreme climate event even strikes. The recently launched GeoRiskPH initiative can also set a model for the government, LGUs and academia to collaborate on data collection and information sharing. The collaboration could enable MSMEs to make better informed decisions related to managing climate and disaster risks (World Bank, 2020^[11]).

Separate from GeoRiskPH, the recently created Community-based Monitoring System (CBMS) would allow local communities to collect, process and validate locally specific data (PSA, 2019^[12]). The Philippine Statistics Authority leads CBMS implementation while the Department of Information and Communications

Technology is tasked with developing data-sharing institutional arrangements, and the DILG with regularly disseminating outcomes of CBMS-related activities.

Despite the abovementioned progress, there remains limited availability of downscaled data on climate hazards, and information on vulnerability at the local level (CCC, 2019^[3]). Such data and information could help LGUs identify areas that are highly vulnerable and communities prone to climate and geophysical risks. More granular weather forecasts can help LGUs respond to extreme climate events and develop and improve relevant regulations over time (e.g. on land use management). Further, MSMEs, LGUs and insurance companies often lack historical data (e.g. past rainfalls, crop yields, economic losses to businesses). Even where such data has been collected, many companies, especially MSMEs, have difficulties in accessing the data or using it for generating information to adjust their business operations in order to manage climate and disaster risks. Apart from climate- and weather-related data, the availability of information on MSMEs themselves (e.g. their assets and operations) and on their vulnerabilities (e.g. location of the MSMEs and their adaptive capacities) remains limited.

Development co-operation and the government can also further invest in medium- and long-term climate projections to help MSMEs better understand potential long-term impacts of climate change on their business opportunities and livelihoods in different regions. For example, how current crop yields may be affected, or which marketable crops and agriculture technologies are likely to be better suited to future climate conditions. This way, farmers and agriculture associations can start exploring opportunities accordingly. Such analysis would also include market research to ensure that what can be grown has a market, or that new markets can be cultivated.

Climate-related data and information can be most effective when they complement the traditional knowledge and perceptions of MSMEs as well as information on their socio-economic circumstances. Not all MSMEs may be receptive to using climate-related information, if the information provided by the government or other institutions is not consistent with their own experience of past weather events, or when those MSMEs are not used to using such information. Notwithstanding, there are several proposed ways forward to enhancing weather and climate data and information in support of the resilience of MSMEs, which could be to:

- Improve the quality, quantity and accessibility of climate and weather data and information that are relevant to the decision making processes by MSME users: as both long-term climate projections and short or medium term forecasts (e.g. three to six months ahead for better disaster preparedness)
- Leverage on emerging initiatives such as the GeoRiskPH and LGU-level Community-based Monitoring System (CBMS) and other data-sharing institutional arrangements, to enhance the quality and accessibility of the data and information.
- Enhance information on MSMEs' operations, locations and assets as a basis for assessing their vulnerability and planning specific action, which can complement historical data on past weather events and future climate projections. This could happen through the collaboration between, for example, the Department of Trade and Industry, LGUs, Local and Barangay DRRM Committees, local business communities and civil society.
- Strengthen the capacity of local research institutions, and local business communities to generate local-level information which can be combined with information provided by the national-level institutions, academia, and large enterprises.

Finance

While MSMEs often use their own savings and the support of family members and friends for recovery from disasters, the government has been funding a number of initiatives to support MSMEs to manage climate and disaster risks. The government has established a mixture of arrangements for financing climate

and disaster risk management. They include: the National Disaster Risk Reduction and Management Fund (NDRRMF), the Local Disaster Risk Reduction and Management Fund (LDRRMF) and the People's Survival Fund (OECD, 2020^[6]). These budgetary instruments support, for instance, the provision of social safety nets and market-based instruments such as crop insurance, development of business continuity plans, and technical assistance for climate risk and vulnerability assessment. Some public funding is also channelled through state-owned financial institutions such as the Land Bank of the Philippines and the Small Business Corporation (SB Corp.) (LANDBANK, 2018^[13]; SB Corp, n.d.^[14]).

Challenges to scaling up finance for long-term measures for climate resilience span wide areas. They include limited awareness of climate and disaster risks among MSMEs, their lack of knowledge regarding financial solutions for these risks, as well as low capacity in developing the competent funding proposals. More generally, limited public budget has hindered the scaling up of the government projects or capacity development activities beyond their pilot phase. The availability of public funding is likely to be further constrained by the need for the country's recovery effort from the health and economic impacts of the COVID-19 pandemic. Philguarantee, could explore opportunities for credit enhancement for LGUs in order to catalyse private-sector investment in climate-resilience technologies and infrastructure in support of climate resilience (e.g. water supply and sanitation) (Climate Bonds Initiative, 2020^[15]).

Possible ways forward to mobilising and scaling up finance to support MSMEs in building their resilience could be to:

- Identify, and prioritise public funding to, the common grounds between policies for MSMEs' climate resilience and other policy agendas, including economic recovery from the COVID-19 pandemic, improvement of agriculture-sector productivity, or the creation of green jobs:
- Integrate climate resilience considerations into the "mainstream" development projects of the vulnerable sectors (e.g. agriculture, tourism industry, coastal management, watershed management) to convert successful pilot activities into scaled-up projects that can engage a broader range of MSMEs.
- Introduce a MSME-related budget tagging system, which aims to make it easier for relevant government agencies that support MSMEs to identify financing gaps in MSME development and facilitate collaboration for bridging the gaps.
- Explore ways in which Philguarantee provide credit enhancement through LGUs to catalyse private-sector investment in technologies and infrastructure in support of climate resilience
- Enhance existing and potential partnerships between development co-operation providers and domestic financial institutions (e.g. public and commercial banks and insurance companies) to develop, test and disseminate financial products tailored to MSMEs' action on climate resilience, including affordable debt instruments and insurance products.
- Make use of potential mobile applications and online platforms to improve MSMEs' access to finance for climate resilience, while also building the capacity of traditional channels (e.g. *sari-sari* stores – see Box 3.2) to reach micro businesses with little or no access to banks.
- Enhance enabling environments for further dissemination of (micro) insurance for MSMEs as part of comprehensive management of climate risks. Possible approaches include financial inclusion policies, legal requirements for certain MSMEs to purchase insurance products, development of open-source models, and data generation needed for the models, among others.
- Link climate risk considerations with the country's on-going efforts on financial education to build a knowledge base of MSMEs and households about credible financial solutions for enhancing climate resilience.

Development co-operation

Bilateral and multilateral providers of development co-operation play a crucial role in supporting the Philippines in enhancing climate resilience. More than 60% of bilateral and multilateral adaptation-related development finance targeted DRRM over the period between 2012 and 2018 (OECD, 2020_[16]). The support provided takes different forms such as technical assistance (e.g. policy development, capacity building, and enhancement of data and information systems); pilots of new initiatives (e.g. development of parametric insurance); provision of grants and loans in case of disasters through disaster risk financing mechanisms (e.g. contingent credit lines and humanitarian aid); and lending for investment projects.

One challenge that remains in the Philippines is converting the outcomes of past and on-going capacity building and pilot activities into broader projects in order to support MSME resilience at scale (e.g. investment projects, scaled up training activities). Many capacity-building and pilot activities supported by development co-operation providers often have relatively short timeframes, which often makes it difficult for the effectiveness of the interventions to sustain (OECD, 2020_[6]).

Development co-operation providers in the Philippines do communicate and co-ordinate with each other, and the National Economic Development Authority (NEDA) also serves as a focal point for development co-operation. Yet, it is often challenging to ensure coherence across development co-operation initiatives on the ground. For instance, different objectives and timeframes of development co-operation providers active within the same community often makes it challenging for LGUs to co-ordinate those support activities. While the Climate Change Commission had organised formal donor co-ordination meetings in the past, it hosts rather informal, ad-hoc meetings at the time of writing. Although such ad-hoc meetings are useful for the co-ordination of government and development co-operation providers, it could also be worth reviving formal donor meetings. In doing so, the scope of the meetings could be expanded to include issues around climate resilience of MSMEs, for example through the participation of appropriate institutions such as MSME Resilience Core Group, the National Resilience Council, the Climate Change Commission, NEDA, among others.

Finally, initiatives by business networks in the Philippines recognise climate risks in their efforts to enhance MSMEs' resilience to disasters. However, many of the initiatives are mainly focused on post-disaster business continuity management. Development co-operation is supporting MSME climate resilience and can further support with the incorporation of long-term climate risk management into not only business continuity plans but also a broader range of business operations of MSMEs. For example, development co-operation providers could use their expertise and experience in (e.g.) conducting climate risk and vulnerability assessments, enhancing climate data and information systems and developing MSME-specific financial products within and outside the Philippines. Possible areas where development co-operation can further support the resilience of MSMEs to climate risks could be to:

- Ensure that development co-operation efforts are aligned with local-level processes, priorities, and political commitments related to the country's climate-related and broader development objectives.
- Consider reviving the Climate Change Commission's regular donor co-ordination meetings on climate change adaptation and DRRM, and possibly also engage those who work on MSME sector development in such meetings.
- Help LGUs and local business communities to build capacity in collaboration with the academia and private-sector networks. Such support can build capacity of MSMEs and LGUs to conduct climate risk assessment and to better access the domestic funding that is available but largely unused (e.g. the People's Survival Fund, lending programmes offered by the Land Bank of the Philippines and SB Corp).

2 Climate risks for the private sector in the Philippines

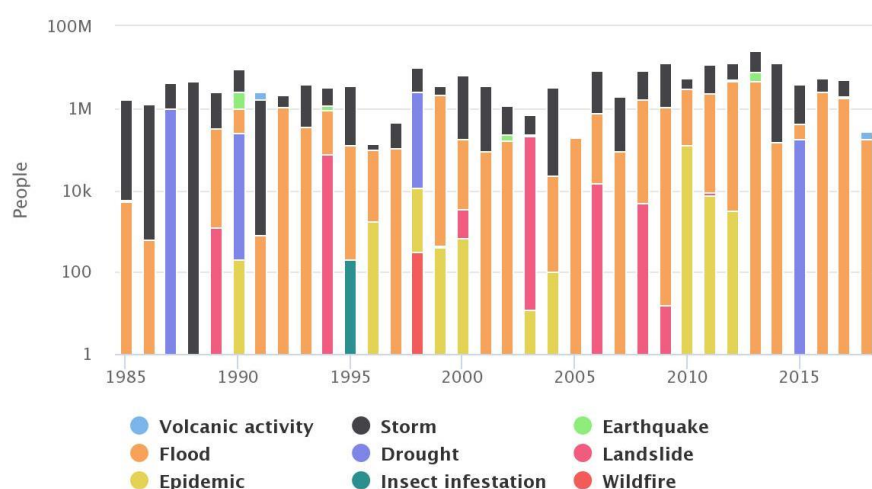
Context and objectives of the study

The Philippines is one of the most disaster-prone countries in the world. Businesses and households are experiencing a number of typhoons annually and being highly exposed to the impacts of a changing climate (e.g. sea level rise). Climate-related hazards such as floods, droughts, tropical storms, landslides and mudslides frequently hit the Philippines, as do other natural hazards such as earthquakes and volcanic eruption (Figure 2.1). In 2020, for instance, a total of 19 named typhoons hit the country, of which Typhoon Goni is considered as the strongest land-falling tropical cyclone in world recorded history (Masters, 2020^[17]). Moreover, the Philippines has a highly localised climate and a high annual and regional variability in precipitation. The Philippines consists of over 7 000 islands in three island groups: Luzon, Visayas and Mindanao. Mean annual rainfall is 960 mm in southeast Mindanao, while it is over 4 000 mm in central Luzon. El Niño events occur irregularly every 2-7 years, which reduce rainfall and weaken cyclone activity. La Niña events occur less frequently but increase heavy rainfall and cyclone activity (USAID, 2017^[18]). For further details of the context of climate and disaster risks in the Philippines, see also ADPC and DTI (2016^[8]), OECD (2020^[6]), World Bank (n.d.^[19]), among others.

Although disasters can cause devastating impacts on all groups of the society in the Philippines, they have led to significant negative economic consequences on businesses, especially micro-, small- and medium enterprises (MSMEs) (ADPC and DTI, 2016^[8]). For example, Typhoons Ketsana (Ondoy) and Parma (Pepeng) in 2009 caused PHP 111.4 billion (about USD 2.2 billion) in damage and production losses in the private sector, with micro and small enterprises being the most affected (Ballesteros and Domingo, 2015^[20]). In light of the country's significant vulnerabilities, strengthening resilience to climate and disaster risks is one of the strategic priorities of the Philippines, and there is a general understanding of the urgency to work on this policy agenda (OECD, 2020^[6]).

Figure 2.1. Natural Hazards in the Philippines 1985-2018

Number of people affected



Note: Flooding in the Philippines includes the consequences of severe typhoons (tropical storm) and heavy rainfalls, exacerbated by land use change.

Source: World Bank Group (n.d.^[19]), Vulnerability: Philippines – World Bank Climate Change Knowledge Portal, <https://climateknowledgeportal.worldbank.org/country/philippines/vulnerability>.

This case study examines how the government of the Philippines and development co-operation providers collaborate with the private sector to strengthen resilience of MSMEs in order to manage negative impacts of climate change and variability. The study also explores how MSMEs and the private-sector institutions have been working to manage known risks of climate change, and where opportunities for further improving such efforts exist.

Despite public and private commitments and initiatives to promote climate resilience of businesses in the country, several assessments have highlighted the challenges in the implementation of concrete measures on the ground (CCC, 2019^[3]; OECD, 2020^[6]). This study focuses on challenges in the following areas: multi-level governance arrangements; co-ordination, development and enforcement of policies; and enhancement of and access to enabling factors such as information, finance and capacity development. The study also examines the role of development co-operation in supporting the country with addressing these challenges. Two questions on building MSME climate resilience guide the study:

- How can the government and development co-operation support and engage MSMEs, especially smaller and informal ones, in strengthening resilience to external shocks?
- How can the effort to strengthen the MSME resilience (currently focused more on business continuity management and ex-post responses) further incorporate considerations on long-term climate risks into MSME resilience that is currently focused on business continuity management and ex-post responses?

Climate risks for MSMEs in the Philippines, in the context of this report, includes the short- to long-term risks on their businesses, people and assets, which are caused by climate variability and change. Strengthening climate resilience of MSMEs, hence, requires reduced exposure to climate-related hazards and increased capacity to adapt to climate change or transfer such risks (iPrepare Business facility, 2017^[5]).

In this study, climate resilience of MSME refers to the MSMEs' ability to anticipate, reduce, accommodate, or recover from the effects of a hazardous event or trend caused by climate change in a timely and efficient manner, based on IPCC (2014^[21]). The scope of the study also covers options for dealing with residual risks which remain even after efforts for climate change adaptation are made. Such options to foster climate resilience through managing residual risks include, among others, climate and disaster risk financial instruments and mechanisms as well as social safety net schemes (GIZ, 2017^[22]). For further information on the key concepts underpinning this study see Box 2.1.

Box 2.1. What does private sector engagement mean?

In this study, "**Private sector engagement** means activities that involve the active participation of private enterprises for development outcomes. This includes **private sector collaboration and partnerships**, as well as **private sector development** activities in the Philippines where private enterprises are actively involved beneficiaries.

Private sector collaboration and partnerships are direct collaborations between governments, development co-operation providers and the private sector to promote the twin goals of achieving a business' given objective while meeting development outcomes.

Private sector development means activities carried out by governments and development co-operation providers with the objective of promoting the development of the private sector in developing countries. This includes activities to create an enabling surrounding for private sector growth, such as promoting a conducive policy environment, addressing market imperfections (e.g. through value chain development) and direct firm-level interventions (e.g. capacity building, access to finance and market).

Source: Crishna Morgado and Lasfargues (2017^[23]), *Engaging the Private Sector for Green Growth and Climate Action: An Overview of Development Co-Operation Efforts*, <https://doi.org/10.1787/85b52daf-en>.

MSMEs are a key driver for the Philippines' socio-economic growth and recovery from the economic disruption due to the COVID-19 pandemic

Making MSMEs resilient has a significant implication for the Philippines' economic growth, as they make up over 99% of all enterprises and generating nearly two-thirds of total employment (MSMED Council, 2018^[2]). MSMEs can play a key role in reducing high inequality and poverty levels. This is highly relevant to the Philippines where 13.1% of the population lives under international poverty levels (OECD/ERIA, 2018^[24]).

Service, agriculture and industry sectors significantly contribute to the Philippine economy, and largely consist of MSMEs, many of which are particularly vulnerable to climate change and disasters (e.g. tourism and agriculture). The services sector contributes to around 60% of the GDP and employs over a third of the population in the private sector and developed expertise in business process outsourcing and tourism (OECD/ERIA, 2018^[24]). The agriculture sector contributes to 14% of the GDP and employs over a third of the population in the Philippines (World Bank Group, n.d.^[25]). The industry sector employs around 16% of the workforce (USAID, 2017^[18]).

The COVID-19 pandemic has highlighted the vulnerability of the society in the Philippines and most countries across the world, and demonstrated the need for economies to strengthen their resilience to different types of external shocks (OECD, 2020^[26]). Beyond the devastating health emergency, the consequences of the pandemic have severely disrupted the global economy, including the Philippines. Unemployment rates in the country had steadily decreased over the past decade (5.3% in January 2020), but has marked 17.7% - the highest unemployment rate on record - following the economic shutdown due to the COVID-19 pandemic (Rivas, 2020^[27]). The negative economic impact is enormous at every level, but most affected are the poorer parts of society who also tend to be the most vulnerable to negative impacts of climate change.

Enhancing resilience of MSMEs is recognised as part of the country's private-sector development, but challenges still remain

The private sector in the Philippines and relevant government bodies are aware of climate and disaster risks to MSMEs due to their past experience with business disruptions, and large economic and non-economic losses caused by climate and non-climate related hazards. The Department of Trade and Industry (DTI) considers the impacts of climate change and disasters to be one of the greatest challenges faced by the MSME sector in the country (MSME Resilience Core Group, 2020^[28]). A study shows¹ that 60% of MSMEs considered typhoons to be the biggest risk to their businesses and 29% of them pointed to floods (iPrepare Business facility, 2017^[29]). The same study reveals that nearly 70% of MSMEs had experience in which their employees could not go to work due to disasters while about half of the MSMEs could not deliver products to market, or had their facilities or equipment damaged (iPrepare Business facility, 2017^[29]).

There have already been a number of important initiatives in the Philippines by various actors in the public and private sectors to engage MSMEs in strengthening their resilience. These initiatives support, for instance, the promotion of post-disaster business continuity management, climate risk assessments and climate adaptation measures. Further, enhancing resilience of MSMEs is closely linked with enhancing resilience of communities and local economies where the MSMEs are based. This means that overall policies and efforts to help communities become more climate resilient can also help to strengthen resilience of MSMEs to climate risks (iPrepare Business facility, 2017^[5]). Making MSMEs resilient therefore requires empowerment of the local government units who implement and enforce the necessary policy measures, and local networks that foster collaboration for related initiatives by public- and private-sector actors.

Despite the perceived climate risks and the related initiatives, MSMEs' uptake of specific measures remains limited due to several reasons. They include a greater level of resource constraint faced by MSMEs than larger companies to developing and implementing measures to build resilience, or a lack of capacity and information to understand and manage climate risks. MSMEs also tend to have insufficient financial savings to fall back on in times of crisis or to purchase risk transfer instruments such as insurance, or limited access to credits to invest in risk reduction measures (OECD, 2020^[6]; MSME Resilience Core Group, 2020^[28]).

¹ Based on a survey conducted by DTI and the Asian Disaster Preparedness Centre (ADPC) to which 385 MSMEs responded (iPrepare Business facility, 2017^[29]).

MSMEs are diverse, and smaller, informal MSMEs are even more vulnerable to climate and disaster risks.

Of the total number of registered enterprises operating in the Philippines, 89.6% were micro-sized, 5% were small, 4% were medium-sized, and 0.4% were large in 2016 (OECD/ERIA, 2018^[24]). Half of the Philippine MSMEs are concentrated in the three richest and most populated regions, National Capital Region, Calabarzon, and Central Luzon (OECD/ERIA, 2018^[24]). Disasters may not always force businesses to stop their operations, but when they do, the durations of stoppage often vary among different sizes of enterprises. For instance, while no medium and large enterprises reported more than 3 months of business stoppage, 86% of those who reported more than 3 months of business stoppage were micro enterprises (iPrepare Business facility, 2017^[29]).

Many MSMEs are informal, which makes it even harder for the government and development co-operation to encourage them to take actions for strengthening climate resilience. Informal businesses and communities are often located in areas with higher exposures to hazards (e.g. coastal areas in Metro Manila) while they have even more limited access to many formal mechanisms for climate and disaster risk resilience. This further augments vulnerability of the informal sector to disasters (Morin, Ahmad and Warnitchai, 2016^[30]). The Philippine Statistics Authority (PSA) reported 998 342 MSMEs in 2018 (DTI, n.d.^[31]). The actual number of MSMEs, however, may be much higher considering the informal enterprises that are not captured in the formal registry. As of 2017, the PSA estimates that the number of self-employed workers across the country, who are not registered in the “formal” sector, is around 14.3 million, or around 35.1% of the total workforce (Angara, 2019^[32]).

Section 3 deals with different approaches to further engage the private-sector, MSMEs in particular, in strengthening their resilience to climate and disaster risks. The following sections examine four components: governance arrangements, policy frameworks, data and information, and finance with the aim of understanding opportunities for and challenges to greater engagement of the private sector in building climate resilience.

3 Institutional arrangements for facilitating private sector engagement in the Philippines

Since Typhoon Yolanda in 2013, there has been a growing number of partnerships between the public and private sectors to plan for and implement disaster risk reduction and management (DRRM) as well as climate adaptation actions for MSMEs in the Philippines. A range of institutions are involved in these partnerships to varying extents, including MSMEs, large enterprises, national and sub-national governments, development co-operation providers, civil society organisations, philanthropies, and academic institutions, among others. Association of Southeast Asian Nations (ASEAN)-level partnerships actively interact with Philippine national government as well as private-led networks for MSME resilience.

Institutional arrangements for adaptation and DRRM already exist, offering also a potential to strengthen climate resilience of MSMEs in a more coherent way.

Institutional arrangements for strengthening MSMEs' climate resilience in the Philippines are characterised by multi-sectoral networks. These create an "ecosystem" of top-down and bottom-up governance arrangements and initiatives by various public and private sector actors, as well as academia, civil society organisations and religious institutions. Each of those actors have their primary focus on climate change, DRRM or MSME-sector development, or a combination of those.

The Bureau of Small and Medium Enterprise Development (BSMED) within the **Department of Trade and Industry (DTI)** is the main body responsible for development of the MSME sector. Among other things, the BSMED is mandated to help establish the much needed environment as well as opportunities conducive to the growth and development of the MSME sector. Further, it provides recommendations to the President and the Congress on all policy matters affecting MSMEs (Peñaloga, 2019^[33]).

BSMED, together with the **Philippine Chamber of Commerce and Industry (PCCI)**, co-ordinates the **MSME Resilience Core Group (MSME RCG)** that is the prominent public-private network within the institutional arrangements for MSMEs' resilience in the country (See Box 3.1). Members of the MSME RCG also include the Office of Civil Defense (OCD); the Philippine Disaster Resilience Foundation (PDRF); the Philippine Exporters Confederation (PHILEXPORT); the Asia-Pacific Alliance for Disaster Management Philippines (A-PAD); the Employers' Confederation of the Philippines (ECOP); the Asian Disaster Preparedness Centre (ADPC) and the Global Initiative on Disaster Risk Management (GIDRM).

MSME RCG was established to develop the National Roadmap for MSME Disaster Resilience (detailed in Section 4). Stakeholders point out that it serves as the main co-ordinator of actions to enhance resilience of MSMEs to climate and disaster risks, best placed to lobby for MSME resilience. On the one hand, MSME RCG itself focuses more on strategy-level actions, such as strategic planning and policy formulations. On the other hand, the abovementioned members of the group and their partners implement measures to support the resilience of MSMEs according to the tasks identified in the national roadmap. MSME RCG

also hosted the National Summit on Strengthening MSME Disaster Resilience in Pasay City in 2019 where business leaders and key representatives from the government, humanitarian sector and business sector discussed and exchanged experience in their efforts towards disaster preparedness for MSMEs (PDRF, 2019^[34]). MSME RCG launched an MSME Guide to Disaster Resilience (MSME Resilience Core Group, 2020^[28]), the first disaster preparedness and business continuity guidebook for enterprise owners in the Philippines (Continuity Central, 2019^[35]).

The National Resilience Council (NRC), launched in 2017, also co-ordinates actions on resilience building by various actors in the public and private sectors in the country (NRC, n.d.^[36]). NRC complements MSME RCG through its science and technology-based actions focusing on capacity development of Local Government Units, or LGUs (i.e. provinces, cities/ municipalities and barangays) (NRC, n.d.^[36]). NRC's membership includes partners from the business sector, which provide technical advice and platforms (national, regional, global) for NRC's private-public partnership (PPP) initiatives and policy advocacies. One of the NRC's most notable contributions is the development of the Resilient Local Government Systems Scorecard (also known as the NRC Scorecard) as detailed in Section 4.

While there is no written mandate on the complementarity between the MSME RCG and the NRC, DTI has forged separate partnerships with each. With MSME RCG, DTI focuses on support MSMEs in enhancing business resilience, while with NRC, it focuses on development of internal capacities of LGUs, local chiefs and LGU officials in supporting MSMEs. Currently, NRC supports DTI and SM Supermalls, Secretariat to ARISE Philippines, for Advancing Learning of Enterprises towards Resilience and Transformation (ALERT).

The Philippine Disaster Resilience Foundation (PDRF) is the Philippines' major private-sector vehicle for disaster risk reduction and management (PDRF, n.d.^[37]). Part of both MSME RCG and NRC, PDRF is recognised as an important umbrella organisation that co-ordinates the private sector activities on disaster preparedness, relief and recovery and business continuity plan training (see also Box 3.1). When disasters strike, LGUs may request PDRF for food, water, generator sets or even power restoration. Instead of LGUs asking individual companies, PDRF matches the companies' competencies and co-ordinates their supports. If a company's core competency is related to food, it would give food; if it is in logistics, it could supply trucks or air-based aids while a company in fuel sector could provide fuels for such supports.

The presence of these multiple actors taking initiatives and implementing projects is certainly a positive sign of progress the country has been making on strengthening MSMEs' climate resilience. At the same time, the complexity in the division of labour and responsibilities is also causing certain challenges. For instance, it is hard to have an overview of how different institutions and networks interact and can further complement each other. This challenge also constrains a coherent implementation of DRRM and climate change adaptation as highlighted in studies, including the government's assessment report on the National Climate Change Action Plan (CCC, 2019^[3]; OECD, 2020^[6]). The assessment highlights that the complexity in the division of responsibilities and the weak co-ordination among institutional stakeholders made it difficult for the government (especially the National Disaster Risk Reduction and Management Council) to achieve its DRRM and climate objectives (CCC, 2019^[3]).

The private sector has also organised various forums on resilience of businesses, which facilitated discussion among MSMEs and other stakeholders on approaches to strengthening their resilience to climate risks. Such forums also provide an important function for co-ordination among national and sub-national level initiatives in support of building MSMEs' resilience. DTI has also organised 13 regional and six provincial forums on MSME resilience between 2016 and 2018, in which nearly 3 500 MSMEs participated. Those MSME resilience forums provided stakeholders from the public and private sectors with opportunities to exchange knowledge, information and good practices (e.g. on hazards and risks in the particular regions, private-public programmes on business continuity planning and management, specific financial instruments such as insurance) (Llanes, 2019^[38]).

Such networks and forums on MSMEs resilience, as mentioned above, have brought substantial benefit in awareness raising, capacity development and information exchange, while many of them tend to have a stronger focus on disaster risk reduction. To enhance their co-benefits for climate change adaptation, the networks and forums could benefit from further engagement with actors working on climate change such as **the Climate Change Commission (CCC)** and others whose work is strongly related to climate change adaptation. Those stakeholders could also include the Land Bank of the Philippines (LANDBANK) as one of the country's public banks and direct access entity to the Green Climate Fund, the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), and development co-operation providers, among others.

Box 3.1. MSME Resilience Core Group: Setting national strategic vision for MSME disaster resilience

Launched after the Memorandum of Understanding at the National Business Forum in Makati in July 2016 (GIDRM, 2017^[39]), the MSME Resilience Core Group was formed to follow up on Asian Disaster Preparedness Centre (ADPC)'s ASEAN project "Strengthening the Disaster Resilience of Small and Medium Enterprises in Asia". ADPC, in a partnership with the Integrated Disaster Risk Management Fund of the Asian Development Bank (ADB) and GIZ Global Initiative on Disaster Risk Management (GIDRM), launched the iPrepare Business facility initiative with the focus on the Philippines, Indonesia, Thailand and Viet Nam (iPrepare Business, n.d.^[40]). In each country, ADPC provides technical support and partners with the in-country actors to adapt the iPrepare Business facility model so each country can have a roadmap adapted to its situation. The partnership between DTI and ADPC ended in 2015, but DTI localised the project in the Philippines through MSME RCG that oversees the processes and initiatives, which demonstrates strong country ownership by the Philippines in pursuit of MSMEs' resilience to disaster risks.

The Philippine Disaster Resilience Foundation (PDRF) is a key member of MSME Resilience Core Group. As the MSME Resilience Core Group focuses on the policy side, there can be a great potential for the group to explore the use of the Emergency Operations Centre. The centre is focused on immediate response and relief operations. This implies potential scope for further improvement in the collaboration between the Emergency Operations Centre and the MSME Resilience Core Group to provide support for more comprehensive climate risk management.

Strengthening networks of public and private actors offers great potential to enhance needed actions to build resilience at the local level

LGUs are the frontline agency responsible for planning and implementation of local-level action on climate change adaptation, DRRM and MSME sector development (GOV.PH, 2012^[41]; OECD, 2020^[6]) along with other local-level development agendas. Regional Disaster Risk Reduction and Management Councils (RDRRMCs) and Local Disaster Risk Reduction and Management Councils (LDRRMCs) are an important channel through which national-level initiatives translate into local-level action to enhance MSMEs' resilience to disaster risks. RDRRMCs and LDRRMCs are established under the National Disaster Risk Reduction and Management Council (NDRRMC) and can be participated by representatives of private-sector entities along with government bodies and CSOs (DRRNetPhils, 2010^[42]). Taking advantage of their local presence, RDRRMCs and LDRRMCs are indeed already promoting business continuity planning and management, particularly for MSMEs through an increasing engagement with the private sector (OCD, 2016^[43]).

Barangay DRRM Committees (BDRRMC) are also established at the barangay level (i.e. the village-level administration unit) through the Barangay Development Councils. As barangay is the smallest unit of administration, BDRRMCs can be an important source of information on vulnerability of the communities, including on socio-economic situations of the local communities, their businesses and livelihoods, and location of physical resources as well as their capacities (FAO, 2014^[44]).

LGUs, however, often face a major challenge to implementation of policies on climate change, DRRM and MSME development at the local level, mainly due to a lack of institutional, technical, and financial capacity. For instance, while disaster risk management at the local level is the responsibility of LGUs, many of them still lack functional or viable Local Disaster Risk Reduction and Management Offices (LDRRMOs). Even in LGUs where LDRRMOs already exist, their quality and capacities are still highly uneven (LANDBANK, 2019^[45]).

Capacitating local stakeholders and facilitating their progress through stakeholder engagement fall mostly under the LDRRMOs' responsibility, yet they themselves still need capacity building in the area of facilitation of community participation and introduction of some technical solutions (e.g. development of early warning systems) (LANDBANK, 2019^[45]). One possible entry point to supporting MSME disaster resilience initiatives in LGUs could be the Public-Private Partnership Centre (PPP Centre) which can intervene through advisory services, technical assistance and capacity development to LGUs to prepare and develop PPP projects.

The Department of the Interior and Local Government (DILG) have a great potential to offer a conducive role in facilitating the national and sub-national level implementation of measures for MSME resilience. As of 2019, the DILG is not yet formally a part of MSME RCG, but the Department's greater involvement can benefit resilience building by LGUs and MSMEs, given the presence of its local offices, its influence on the policy planning by LGUs, and various existing guidance tools the department has prepared. Such guidance documents have been provided on, for instance, the Comprehensive Development Plans (providing entry points for mainstreaming climate change adaptation and DRRM) and on the formulation of Local Climate Change Action Plans (DILG, 2017^[46]).

Greater engagement of the private sector in the policy-making process at the local level can contribute to the government providing enabling environments for strengthening MSMEs' climate resilience. Representatives of businesses are entitled to participate in meetings of Local DRRM Councils, but stakeholder interviews revealed that in many LGUs, MSMEs do not fully take advantage of this opportunity, or exercise their rights to vote on local-level decisions on DRRM policies. Business representatives often consider the accreditations process to be burdensome, according to a stakeholder interview. A study shows that less than a third of MSMEs have participated in Barangay or Local DRRM Councils (iPrepare Business facility, 2017^[29])

Academia and research institutions are also making considerable contributions to building the resilience in the Philippines, including that of MSMEs. For example, the Resilience Institute of the University of Philippines (UP) was established in 2016 to conduct research on climate change and DRRM. The institute also provides LGUs with training on local climate change action plans and comprehensive land use plans with the communities (Bagayas, 2019^[47]). The academia can support evidence-based development of policies and programmes for both national and local levels. It can help capacitate local DRRM officers and local community members as well as MSMEs to use available hazard maps, early warning systems and other DRRM and resilience related tools.

Deepened collaboration between academic networks and the private sector have a great potential to strengthen resilience of MSMEs against climate risks. Several examples of such collaboration already exist. The UP Institute of Small-Scale Industries (UP ISSI) combines their academic expertise in small business development and that in DRRM. UP ISSI has published Smart Business Guide on How to Prepare a Business Continuity Plan and HANDA Manual: Business Continuity Planning for MSMEs (UP ISSI, 2019^[48]). Since 2014, UP ISSI has provided training on business continuity planning for MSMEs, often in collaboration with various MSME partners such as the PDRF (iPrepare Business facility, 2017^[29]). In the context of COVID-19 recovery, the Philippine Academic Society for Climate and Disaster Resilience collaborates with the Start Network, a network of CSOs, in conducting an online forum series on social protection and humanitarian action (PASCDR, 2020^[49]).

Private-sector networks are already extensive but can be further leveraged to enhance action by MSMEs on climate resilience

The private sector in the Philippines has developed extensive networks that provide a platform for collaboration among actors from different sectors. For instance, an increasing number of MSMEs and large companies have made agreements with LGUs in which businesses will provide the needed supplies, equipment, and stockpiles to local communities in cases of emergency.

The network of the Philippine Chamber of Commerce and Industry (PCCI) and the local Chambers of Commerce and Industry can also provide a valuable channel through which tailored approaches to enhance resilience of local businesses can be pursued. PCCI, among other private-sector actors, has signed the Manila Declaration in 2015 whereby committing itself to helping communities increase their resilience to the impacts of climate change while embedding environmental sustainability into business processes (Villamejor-Mendoza, 2019^[50]). While PCCI has already been proactively collaborating with a number of networks and institutions (e.g. MSME RCG, PDRF, ARISE), further engagement of the local chambers can increasingly enhance the PCCI's catalytic role in reaching out to MSMEs at the local level and provide training by collaborating with LGUs and other local business networks.

The Private Sector Alliance for Disaster Resilience Societies Philippines (ARISE) aims to create risk-resilient societies by enhancing the capacities of the private sector through collaboration with the public sector and other stakeholders (ARISE Philippines, 2019^[51]). In its annual Top Leaders Forums, ARISE Philippines brings together large enterprises, MSMEs, government bodies and relevant stakeholders in order to discuss and share various issues related to disaster resilience. The 2019 Top Leaders Forum specifically highlighted MSME disaster resilience (Manila Bulletin, 2019^[52]). Major enterprises such as SM Prime Holdings, Ayala and Aboitiz collaborate through ARISE and PDRF, but also on individual level. SM Supermalls, for instance, use Aboitiz Foundation's Weather Philippines data for preparing a Business Continuity Plan (BCP) for their shopping malls and tenants.

Church-related networks such as Caritas International and the Christian Aid, play an important role in getting the communities involved in climate resilience, building on their experience and programmes in humanitarian aid and disaster responses. For example, Cardinal Luis Antonio Tagle, the Roman Catholic Archbishop of Manila, already acts as a co-chair and trustee of the PDRF. Caritas Philippines has already been carrying out multiple programmes related to promoting climate change adaptation and DRRM (Caritas Philippines, n.d.^[53]).

Box 3.2. Sari-sari stores for local resilience and female empowerment

Typically run by women from their homes, *sari-sari* stores are one of the smallest MSME business units. These small retail shops are prevalent all around the Philippines with over one million outlets. Despite the rise in hypermarkets and convenience stores, *sari-sari* stores are one of the key distribution outlets for food and beverages and provide an important source of income for many families.

Sari-sari stores often go beyond simple retail outlets and provide places where community members socialise (Go, 2019^[54]) (Nielsen, 2014^[55]). Engaging *sari-sari* stores can help empower women. Coca Cola Philippines and the Technical Education and Skills Development Authority (TESDA) launched the “Sari-Sari Store Training and Access to Resources (STAR) Program” in 2014 as many women running *sari-sari* stores have not had access to formal business training. While it does not specify on climate resilience until now, a new module with the topic could be further developed building on its business and life skills training and aid to help women access to finance and financial services (TESDA, n.d.^[56]).

Private sector actors have pointed to the important role *sari-sari* stores can play in transitioning from enhanced community quarantine to a barangay-level quarantine in “The CEO Checklist for COVID-19” online forum organised by Go Negosyo in April. *Sari-sari* stores often carry the most essential goods and by bringing the necessary goods to the local barangay, residents can minimise their movements and get what is the most necessary to them (Tayao-Juego, 2020^[57]). Deeply embedded in their local communities, *sari-sari* stores can be a key player in local resilience, including local climate resilience.

Institutions supporting MSMEs can incorporate or reinforce climate resilience in their mandates

Incorporating or reinforcing resilience aspects in the mandates of existing institutions that support MSMEs can be an efficient and effective way of engaging the private sector in strengthening climate resilience. For instance, regional and provincial SME Development Councils, established to support local MSMEs through trainings and provision of guidance, could also include climate resilience aspects in their mandates, and partner with local businesses associations to promote concrete measures. As another example, Negosyo Centres, established by the Go Negosyo Act (RA 10644), have been in place to directly support MSMEs with a range of business-related issues throughout the country (e.g. providing free one-on-one business advisory services to MSMEs (GoNegosyo, 2015^[58])).

DTI and PDRF, through Negosyo Centres, already provide trainings on BCPs, which can potentially be used as a pragmatic way of incorporating risks of climate-related disruptions on MSMEs’ assets, business operations, supply chain, logistics and transport, and their people. The incorporation of climate risk management into BCPs is likely to require additional tools and trainers with different skills, which should be addressed through national-level initiatives (e.g. using the recently adopted MSME Guide to Disaster Resilience (MSME Resilience Core Group, 2020^[28])). Apart from BCP trainings, Negosyo Centres can also facilitate the formalisation process of the informal businesses by supporting them in, for instance, documentation (DTI, n.d.^[59]). The Negosyo Centres can also provide a venue that facilitates exchange between LGUs and businesses since LGUs and the private sector are encouraged to assign personnel to support the Negosyo Centres (GoNegosyo, 2015^[58]).

Box 3.3. Role of the private sector in supporting financially struggling MSMEs in compounded climate, disaster and health risks: The case of COVID-19

MSMEs with limited financial savings to spare are particularly vulnerable to disasters. The COVID-19 crisis and two rounds of “enhanced community quarantine” measures in Metro Manila make it difficult for MSMEs to continue their businesses. Even if the MSMEs may be categorised as essential services, the government provision requires them to provide for protective equipment and clothing that may be too costly to sustain the already limited business operations.

In response to COVID-19, top business groups, together with Philippine Disaster Resilience Foundation (PDRF) and Caritas Manila, fundraised PHP 1.62 billion (about USD 32.5 million) for Project Ugnayan to support economically vulnerable communities affected by the enhanced community quarantine in Greater Metro Manila (PDRF, 2020^[60]). Project Ugnayan aims to deliver grocery vouchers to families and particularly microenterprises for whom personal and enterprises financial difficulties are inseparable. The private sector thus complements the government’s financial actions such as Small Business Corporation’s PHP 1 billion (USD 20 million) Enterprise Rehabilitation Financing loan fund under DTI’s guidance (SB Corp, 2020^[61]), a price freeze of basic necessities following DTI-DA-DOH’s Joint Memorandum Circular No. 2020-01 “Price Freeze under a State of Calamity in the Philippines due to the Coronavirus Disease 2019” and the grace period for residential and commercial rent as per DTI Memorandum Circular 20-12, among other interventions. (IMF, 2020^[62]), (GOV.PH, 2020^[63])

To help MSMEs recover in an unprecedented situation, PDRF in collaboration with key stakeholders have held about 10 online forums since April 2020, and the National MSME Resilience e-Forum in July 2020. PDRF is also taking blended learning approach, maximising the use of cell phones. PDRF, UNDP and UN Office for the Coordination of Humanitarian Affairs (OCHA) and the Connecting Business initiative (CBI) launched Synergising Recovery Initiatives, Knowledge, and Adaptation Practices for MSMEs (SIKAP), an Online COVID-19 Business Recovery Hub for MSMEs. Government agencies, including DTI, Department of Labour and Employment, Department of Agriculture and DOST, have collaborated with PDRF for the trainings, webinars and introducing loan programs targeting MSMEs. SIKAP can act as a platform for LGUs to reach out to MSMEs and to share best practices at LGU level, according to stakeholder interview (GOV.PH, 2020^[64]).

Such swift and flexible action by the private sector and religious networks show the importance of the private sector engagement in emergency situations. However, such effective action is only possible when co-ordination of roles and different partners is organised before disasters hit, which further supports the move towards preparedness for better MSME climate resilience.

Note: Department of Trade and Industry (DTI), Department of Agriculture (DA), Department of Health (DOH).

4 Policy frameworks to enable private sector engagement in building climate resilience

Climate change adaptation, disaster risk reduction and management (DRRM) and the development of micro, small and medium enterprises (MSMEs) are among the central priorities for the Philippines' development agenda. Over the past decade, there has been a great progress made on the development of related policies to these priorities, which directly or indirectly help MSMEs to strengthen climate resilience in the country, as summarised in Table 4.1. Those policies are also interlinked with other administrative planning frameworks at the national, provincial and municipality levels with significant implications for enhancement of MSMEs' resilience. These frameworks include: Comprehensive Development Plans, Municipal Investment Plans, Comprehensive Land Use Plans and Zoning Ordinance, among others (Lech and Leppert, 2017^[65]; OECD, 2020^[6])

There has been high-level conceptual convergence on climate adaptation and DRRM policies as well as institutional arrangements in the Philippines, which is commendable (OECD, 2020^[6]). Practical guides for mainstreaming climate adaptation and DRRM into other policy agendas have also been prepared (e.g. for the Comprehensive Land Use Plan) (HLURB, n.d.^[4]). Nevertheless, the implementation of those policies face several challenges due to parallel strategies, action plans, tools and reporting mechanisms, as well as capacity constraints particularly at the local level as detailed by CCC (2019^[3]) and the OECD (2020^[6])

Links between MSME sector development, climate action and DRRM have also been established, but the progress on implementation of actual measures to strengthen MSMEs' climate resilience varies markedly between different areas of action. Business continuity plans (BCPs), for instance, have already been promoted through policies, various public and private initiatives and are helping businesses to better prepare for disruptions after disasters. Yet, the development of regulatory frameworks that can provide incentives for MSMEs to consider long-term climate risks within their business operations is still at an early stage.

Table 4.1. Relevant policies and frameworks for MSME climate resilience

Policy	Year	Leading body	Main objectives	Relevance to MSME climate resilience
Development of MSME sector				
Magna Carta for Small Enterprises (RA 6977)	Passed in 1991; amended in 1997 and 2008	DTI	<ul style="list-style-type: none"> Encourage the establishment, growth and development of MSMEs and promote countryside industrialisation, by defining institutional support systems for MSMEs Create SME Development Council (later amended as the MSMED Council) which co-ordinates and reviews national efforts to support MSMEs. Require all lending institutions to allocate minimum 8% of their total loan portfolio to MSMEs 	Despite no specific mention of climate risks, the created legal frameworks and support systems for MSMEs can be an important enabler of climate resilience.
Barangay Micro Business Enterprise Act (RA 9178)	2002	DTI	<ul style="list-style-type: none"> Provide support to rural micro enterprises through incentives and benefit schemes and increase formalisation of informal sector 	No specific mention of climate risks, but special considerations for micro businesses' needs can help them become more resilient.
Go Negosyo Act (RA 10644)	2002	DTI	<ul style="list-style-type: none"> Reduce regional inequalities, including increased access to public services Create Negosyo centres, business support centres at national, provincial, city and municipal levels Establish a start-up fund for MSMEs 	No specific mention of climate risks, but Negosyo Centers' partnership with LGUs, local chambers of commerce and others can offer a space where support to MSMEs in climate resilience can be delivered (e.g. training).
MSME Development Plan	2011-2016 2017-2022	DTI	<ul style="list-style-type: none"> Support "more globally competitive MSMEs that are regionally integrated, resilient, sustainable and innovative" (2017-2022) Recognise impacts of climate change and disaster recovery as one of the main challenges MSMEs face (MSMED Council, 2018^[21]) Mention the possibility of establishing special financing facilities (2017-2022) 	Mention of business resilience in shared community disaster risks and business continuity risks and encourages MSMEs to adopt BCP (2017-2022), an update from 2011-2016 MSMED which does not mention DRRM or business continuity or resilience (Ballesteros and Domingo, 2015 ^[20])
Project Repeal: The Philippines' Anti-Red Tape Challenge	2016-Present	DTI and Anti-Red Tape Authority (ARTA)	<ul style="list-style-type: none"> Review existing policies and regulatory systems and formulate policy recommendations to create an environment for ease of doing business (DAP, 2020^[66]) 	No specific mention of climate resilience but aims to break down business barriers and remove contradictory laws
Disaster risk reduction and management				
Disaster Risk Reduction and Management Act (RA 10121)	2010	Department of National Defense (DND) as secretariat and DILG, DSWD, DOST and	<ul style="list-style-type: none"> Strengthen the national and LGU institutional capacity for DRRM and to build local community disaster resilience, including to climate change risks 	A "holistic, comprehensive, integrated, and proactive" approach to climate disasters is highlighted. One representative of the private sector can be selected in each

		NEDA as vice chairs	<ul style="list-style-type: none"> Establish the National DRRM Council in charge of creating the National DRRM Plan Integrate DRR into broader development processes Mandate LGUs to develop local DRRM plans (OECD, 2020^[65]) 	Local DRRM Council (LANDBANK, 2019 ^[45])
National Disaster Risk Reduction and Management Framework (NDRRMF)	2011	National DRRM Council (with Office of Civil Defense as the Secretariat)	<ul style="list-style-type: none"> Build “safer, adaptive and disaster-resilient Filipino communities towards sustainable development” by taking a comprehensive, all hazards, multi-sectoral, inter-agency and community-based approach Mainstream DRR in national, regional, provincial Physical Framework Plans, CDP, CLUP Promote DRR and CCA-sensitive management, disaster-resilient infrastructure, local awareness raising, drills and exercises, contingency planning, networking (OECD, 2020^[65]) 	Connection between disaster prevention, mitigation, preparedness and CCA is highlighted (GOV.PH, n.d. ^[67])
National Disaster Risk Reduction and Management Plan 2011-2028	2011-2028	National Disaster Risk Management Council (with OCD as Secretariat)	<ul style="list-style-type: none"> Mainstream DRR and CCA in development processes (policies, budget, etc.) in light of National DRRM Framework and DRRM Act Promotes community-level capacity building efforts, disaster-resilient infrastructure, community-based vulnerability and risk assessments (OECD, 2020^[65]) 	Private-public partnership is highlighted as a non-monetary resource for enhanced community disaster resilience which helps MSMEs
Climate change and green growth				
Climate Change Act (RA 9729)	2009	Climate Change Commission (CCC)	<ul style="list-style-type: none"> Establish CCC as an independent and autonomous body responsible for policy-making body on climate change actions and programs (CCC, 2011^[68]) Create National Framework Strategy on Climate Change (CC) to be reviewed every three years, as well as National CC Action Plan Require LGUs to develop Local CC Action Plans (OECD, 2020^[65]) 	DTI and representatives from the business sector participate in the CCC Advisory Board PIA's role in disseminating information on CC, local vulnerability and risks is recognised. Need for co-ordination with various sectors, including corporate sectors is highlighted
National Framework Strategy on Climate Change 2010–2022	2010-2022	CCC	<ul style="list-style-type: none"> Build community adaptive capacity, increase the climate resilience of natural ecosystems and optimise mitigation opportunities (CCC, 2011^[68]) Enhance vulnerability and adaptation assessments Enhance monitoring, forecasting and warning systems Mainstream climate and DRR-based planning and promote various tools for DRRM (OECD, 2020^[65]) (CCC, 2010^[69]). 	Strategise to facilitate the private sector's adaptation and mitigation, and recognise private sector as an important means of implementation

National Climate Change Action Plan 2011-2028	2011-2028	CCC	<ul style="list-style-type: none"> Specify national and local implementation mechanisms coherent with the Framework Define strategic priorities along thematic outcomes Identify sectors of concern: food, water, ecosystem and environment stability, human security, sustainable energy, knowledge and capacity development Cross-cutting priorities: gender and development, technology transfer, education, capacity building (CCC, 2011^[68]) (OECD, 2020^[6]) 	The Plan encourage private-sector participation for mitigation. It refers to MSME business continuity and resilience, and includes climate-related programmes in eco-towns, CC-adaptive housing and land-use, climate-smart industries and services (Ballesteros and Domingo, 2015 ^[20])
Green Jobs Act (RA 10771)	2016	Department of Labor and Employment	<ul style="list-style-type: none"> Mandate DOLE to co-ordinate with other government agencies (including DTI, DENR, DOST, DOT) to develop National Green Jobs Human Resource Development Plan Provide incentives to encourage business enterprises to generate and sustain green jobs, as certified by the Climate Change Commission. Incentivise to develop green jobs that also contribute to social justice and sustainable development. 	DOLE together with PSA maintains a database of green careers, professions and skills, list of emerging business enterprises that generate and sustain green jobs. While not directly related to MSMEs, such database could inform MSME climate resilience activities.

Note: Micro, Small and Medium Enterprises (MSMEs), Small and Medium Enterprises (SMEs), Department of Trade and Industry (DTI), Micro Small and Medium Enterprise Development (MSMED) Council, Local Government Units (LGUs), Department of the Interior and Local Government (DILG), Department of Social Welfare and Development (DSWD), Philippine Information Agency (PIA), Department of Labour and Employment (DOLE); Philippine Statistics Authority (PSA)

Source: CCC (2011^[68]), National Climate Change Action Plan 2011-2028, <http://climate.emb.gov.ph/wp-content/uploads/2016/06/NCCAP-1.pdf>; GOV.PH (2018^[70]), Department of Labour and Employment, <http://dole12.org/greenjobsact/2018/08/08/philippine-green-jobs-act-approved/>.

The two national level policy frameworks on climate change adaptation and DRRM acknowledge the importance of engaging MSMEs in resilience building. Two of the guiding principles of the National Framework Strategy of Climate Change 2010-2022, for example, point at the importance of the private sector engagement as below (CCC, 2010^[69]).

- Forming multi-stakeholder participation and partnerships in climate change initiatives with the private sector, civil society organisations, local governments, among others, especially those most vulnerable to climate change impacts (Guiding principle 2.13)
- Promoting and supporting policy and incentive mechanisms to facilitate private sector participation in addressing adaptation and mitigation objectives (Guiding principle 2.14)

Moreover, the Framework Strategy also outlines private sector's participation in river basin management as part of the adaptation pillar, and also in the cross-cutting strategy for knowledge management and information, education and communication (10.2) and investment for implementation (11.3) (CCC, 2010^[69]).

The National Disaster Risk Reduction and Management Plan (NDRRMP) 2011-2028 highlights the importance of co-ordination among a broad variety of stakeholders, which is led by the Development of the Interior and Local Government (DILG), as one of the key thematic areas of disaster preparedness. Another thematic area, disaster rehabilitation and recovery, relates to MSMEs' resilience to climate risks where OCD leads assessment of damages, losses and needs (NDRRMC, n.d.^[71]). Although business continuity is founded on how well enterprises address disaster mitigation, prevention and preparedness issues, its operational definition lies within the disaster response phase.

The MSME Resilience Core Group issued the Roadmap for Strengthening the Disaster-Resilience of MSMEs (the Roadmap) in 2017 to support the relevant agencies and organisations in identifying ways forward to enhance MSMEs' resilience to disasters. The development of the Roadmap was partly driven by a lack of coherence between DRRM, climate adaptation and private-sector development policies to provide the necessary support to MSMEs. The Roadmap is therefore intended to incorporate resilience into the relevant national plans and legislative frameworks, such as the 2017-2022 MSME Development Plan (ADPC and DTI, 2016^[8]). The Roadmap clarifies priority areas, identifies relevant actors and outlines potential approaches or pilot initiatives. It consists of the following four thematic components, each with key actions, relevant actors and timeline:

- Enhancing MSME access to general and disaster risk data
- Disaster risk reduction and management (DRRM), and business continuity management awareness training
- Tailored risk financing for MSMEs
- MSME inclusion in DRRM and climate change adaptation policy, planning and local institutions (iPrepare Business, n.d.^[40])

Linking policies for MSMEs development with those for climate resilience

Within the existing policies on business sector development, there are multiple potential entry points that can enable the government and development co-operation to further engage the private sector in strengthening climate and disaster risk resilience. Such mainstreaming can provide the national government, Local Government Unites (LGUs) and the private sector with opportunities for efficient approaches to enhancing both the productivity of their business operations and their climate resilience.

The NCCAP and the NDRRMP provide the framework for LGUs in developing their local CCA Plans (LCCAP) and local DRRM plans (LDRRMP), which can also inform the policy processes to build climate resilience of MSMEs at the local level. Yet, financial and capacity constraints as well as varying levels of political commitments by LGU managements often pose barriers to implementation of LCCAPs and LDRRMPs by LGUs and their engagement with the private sector in actions.

Both the government and the private sector initiatives, as well as academia, have been promoting business continuity plans (BCPs) for MSMEs in the Philippines, which is a useful entry point to respond to climate-related disasters (See also Box 4.1). MSME Guide to Disaster Resilience (2020^[28]), a product of the MSME Resilience Core Group (RCG), provides a template for all the public and private networks as well as academia to train MSMEs on developing BCPs.

Currently, the focus of business continuity management is mainly on disaster preparedness and recovery. A greater level of consideration for climate change adaptation within BCPs can however greatly benefit the efforts for the government to help MSMEs build long-term climate resilience. The elaboration of BCPs in light of the objectives of climate risk management can be done through further engagement. The Business Continuity Managers Association of the Philippines (BCMAP), in collaboration with the Disaster Recovery International Institute (DRII) and ARISE Philippines, organised the first Business Continuity Summit: “Business Uninterrupted” with 150 participants (BCMAP, 2018^[72]). The Summit facilitated participants to discuss business continuity practices and resources in the country.

Business permitting processes may provide another opportunity for government bodies, such as DTI, DILG, CCC and OCD in collaboration with LGUs, to explore possible integration of climate resilience consideration into business permits. LGUs hold the authority to issue business permits annually under Barangay Micro Business Enterprises Act of 2002 (RA9178). Providing LGUs with clear guidance on how to link business permits with climate resilience considerations such as land-use regulations and promotion of BCPs could help LGUs seize the opportunity. For instance, an enhanced LGU Guidebook on the Formulation of Local Climate Change Action Plan (LCCAP), prepared by DILG, could contribute to linking business permits to climate resilience by providing elements and indicators on climate action at the LGU level (DILG, 2017^[46]). Similar input can be gained from Local Disaster Risk Reduction and Management Plans (LDRRMPs). According to stakeholders consulted under this study, some LGUs already issue business permits conditional upon BCPs, which can be considered good practice. LGUs also fund capacity-building training programs to the local MSMEs,

The Green Jobs Act could also strengthen the intersection between MSME development and climate resilience. The definition of “green jobs” in the Philippines’ Green Jobs Act focuses mostly on environmental protection, energy and resource efficiency and de-carbonisation. The existing collaboration between CCC and the International Labour Organization (ILO) in support of operationalising the Green Jobs Act could provide a good basis for promoting the private-sector engagement through identifying business opportunities emerging from the need for management of climate risks (CCC, 2017^[73]). Such opportunities may include creating incentives for LGUs, skills training, harmonising different policies regarding enterprise compliances, monitoring system, according to stakeholder interview. The CCC-ILO roundtables, multi-stakeholder consultations and joint policy development forums can offer an insight how the private sector approaches climate resilience building also as an opportunity to create employment (ILO, 2018^[74]; CCC, 2017^[73]). DTI is advocating green economic development of MSMEs, and one initiative is to ensure that the Shared Service Facilities (SSF) Project employs environment-sensitive strategies. Further support, including fiscal incentives to resilient enterprises, could also help spread good practices and standards.

Box 4.1. Support MSMEs with preparing business continuity plans and respond fast to disasters

MSME RCG points at a business continuity plan (BCP) as one of the key tools to disaster preparedness in the MSME Resilience Guide. Many large businesses rely on MSMEs as part of their supply chains, and it is often in their business interest to protect their supply chain. Some large businesses also request MSMEs that are part of their supply chain to develop BCPs and can provide training and support to do so. As part of CSR activities, large businesses also often provide training to MSMEs that are not part of their supply chain. Such a close relationship between larger businesses and smaller MSMEs can strengthen government, development co-operation and academia's BCP training efforts.

While BCPs can be an effective tool for building MSME climate resilience, there are some aspects of climate action which go beyond the traditional scope of BCP (BSI Group, 2017^[75]), as outlined below.

- Weather can also affect a business in more subtle ways such as reduced efficiency
- Some sectors (e.g. agriculture, water, etc.) are vulnerable to changes in climate averages (e.g. monthly or seasonal rainfall or mean daily maximum temperature averaged over a season or a month) as well as extreme weather events (EWEs)
- Climate change is not static, and assessments of climate risks may not have kept pace with these changes.
- Climate change requires a comprehensive response that takes into account future and changing threats as well as opportunities (e.g. in climate risk adaptation and climate risk management measures) and how these interact with business timescales.

Policy reforms in support of integrating informal micro and small businesses into the formal sector would not directly enhance their resilience but can facilitate their access to information on climate risks and options to manage them as well as related support mechanisms. The formalisation could also facilitate those businesses' compliance with regulations (e.g. land use, building codes, social protection of employees) (Ballesteros and Domingo, 2015^[20]). This in turn could increase climate and disaster resilience of MSMEs and the communities they belong to. The government recognises that the current high tax rates and significant administrative burden (e.g. preparation of documents) do not encourage micro and small businesses to become part of the formal sector (OECD/ERIA, 2018, p. 377^[24]).

Awards as a system of public recognition of good leadership and governance can also be an effective way to motivate good practices in private sector engagement in climate resilience building in the Philippines. Notable initiatives, such as the NDRRMC's awards called "Gawad Kalasag", provide acknowledgement for excellence in programmes, activities and projects that protect high risk communities against hazards and provide more capabilities in addressing vulnerabilities and coping from disasters (OECD, 2020^[6]). The National Resilience Council (NRC) also introduced the Resilient Local Government Systems Scorecard. LGUs can use this Scorecard to evaluate and show progress on their levels of resilience over time. The Scorecard is composed of five pillars and associated metrics: Leadership and Governance; Human Development; Local Economy; Infrastructure; and Environment (NRC, 2018^[76]).

5 Data and information for strengthening climate resilience of micro, small and medium enterprises

Availability of information has been improved, but greater accessibility and usability can further inform MSMEs' decision making toward climate resilience

The Philippines has made progress on developing and disseminating climate and disaster related information. The Department of Science and Technology (DOST) and its subsidiary institution, the Philippines Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), provide early warnings and weather forecasts, as well as a medium to long-term weather outlooks. PAGASA is currently working on moving from assessing hazards to assessing risks, implying a shift from passive weather forecasting to a multi-hazard impact-based early-warning system and forecasting which integrates climate information (OECD, 2020^[6]).

While PAGASA and other information providers produce weather and climate information, the uptake of such information remains limited. A study shows that many potential end-users, including MSMEs are not aware of what information is available and how it can be accessed (OECD, 2020^[6]). In some cases, the private sector networks and insurance companies, as well as government agencies working on MSMEs' resilience also face barriers to accessing information related to MSMEs' locations and business operations that may drive their vulnerabilities, or historical losses from past disasters. Such barriers to information access is often caused by confidentiality concerns. Limited comparability and usability are another challenge. For example, as raised in stakeholder interviews, farmers may not understand precipitation projections unless they are translated into their local languages, and linked with farm-level decision (i.e. to harvest or not). A layperson does not need to know all the technical details of the weather, but it may just come down to asking whether it will rain or not. Information overflow can make weather information less accessible. Also, many public sources of information are only available as downloadable pdf documents, which users find difficult to use for their decision-making processes (OECD, 2020^[6]).

Combining different types of information to better understand risks to MSMEs

In addressing climate change, historical information need to be complemented with projections of how trends might change in the future (OECD, 2015^[77]). In the Philippines, MSMEs and LGUs often face a lack of sufficiently downscaled historical data for example on past rainfall and crop yields. This leads to uncertainties for businesses and LGUs regarding purchasing equipment to prepare for climate change and disasters, adjusting business operations, buying insurance products. Historical data is also required to

prepare risk and vulnerability assessment to apply for certain funding sources such as the People's Survival Fund (see Section 6 for more information on the fund).

Academic institutions also play a crucial role in providing information on climate and disaster risks. For instance, the University of the Philippines Nationwide Operational Assessment of Hazards (UP NOAH), under the University of the Philippines Resilience Institute, is mandated to develop high-resolution hazard maps (UP NOAH Center, n.d.^[78]). UP NOAH also investigates hydro-meteorological hazards to improve stakeholders' capacity in disaster risk reduction and management in the country, assists other agencies working on hydro-meteorological hazards to promote community safety and collaborates with national and international institutions and organisations. NOAH Centre has conducted extensive research on disaster science, and comprehensive and multidisciplinary assessment of hazards (UP NOAH Center, n.d.^[78]). Using an open source tool called OpenStreetMap, UP NOAH provides hazards information designed for the benefit of LGU officials. The UP NOAH hazard maps are available to the general public. UP NOAH has collaborated with various public- and private-sector actors, including the Climate Change Commission, LGUs, the Aboitiz Foundation (UP NOAH Center, n.d.^[78]). The UP Resilience Institute and the UP Institute for Small-Scale Industries also support MSMEs to understand climate data and information through their research activities and training capacity building training programmes (e.g. on business continuity plans).

Apart from climate and weather-related data, stakeholders interviewed also stressed the need for information about MSMEs, including their operations, locations and assets as a basis for planning specific action. At the same time, DTI and other actors who support MSMEs (e.g. LGUs) often face difficulties because a large number of MSMEs are informal or constantly moving due to the nature of their businesses (DTI, n.d.^[31]). DTI uses the Client Profile and Monitoring System (CPMS) to gather quantitative information on existing and potential MSMEs. The CPMS is comprised of three modules: client profile, business profile and assistance provided. LGUs also have their own Community-based Monitoring System (CBMS), and every city and municipality is required to conduct regular synchronised data collection every three years. Led by the Philippine Statistics Authority, the CBMS is an organised technology-based system of collecting, processing and validating disaggregated data. The Department of Information and Communications Technology leads the development of data-sharing institutional arrangements, while the DILG is assigned to regularly disseminate information on CBMS related activities (PSA, 2019^[12]).

Different sector departments and agencies are working to cover different aspects of information about climate vulnerability of MSMEs. The Department of Agriculture (DA), for instance, uses a Climate-Risk Vulnerability Assessment Tool to assess climate-related hazards to and the adaptation capacity of farmers. As of November 2019, DA helped farmers apply the Tool in 17 provinces, while it aimed to have the rest of the provinces apply the Tool by the end of 2020. The Tool can help to address spatial and temporal variabilities and examine if adaptation and mitigation investments are cost-effective (CIAT, n.d.^[79]).

Data and information can be most effective when they are complementary to the traditional knowledge and perception held by MSMEs. Not all MSMEs may be receptive to use climate-related data and information, when the information provided by the government or other institutions are not consistent with their own experience of the past weather events in their communities. In one case, some local people believed that they avoided damages from a disaster event because of a church which was there and provided religious miracles, when in reality it was most likely that mangroves or coral reefs functioned as natural wave reducers that mitigated disaster, according to a stakeholder interview.

Exploring the feasibility and effectiveness of providing a centralised access to climate and disaster related data and information.

Stakeholders interviewed pointed out that different public- and private-sector actors often provide information on climate and disaster risks through different platforms, making it difficult for MSMEs to know where they can find information suited for their purposes. Recognising the need for making climate related

data and information more accessible, the government has launched the Geospatial Information Management and Analysis System for Hazards and Risk Assessment in the Philippines (GeoRiskPH) initiative (OECD, 2020^[6]; World Bank, 2020^[11]). It aims to place information needed in a one-stop shop format. The Philippine Institute of Volcanology and Seismology leads this initiative with the support of the DOST and in partnership with PAGASA, the National Mapping and Resource Information Authority, the Mine and Geosciences Bureau and the OCD.

Despite its current focus on geo-hazards (e.g. landslides, earthquakes, volcanoes), GeoRiskPH has a great potential to provide MSMEs and institutions that support them with centralised access to climate and disaster related information. GeoRiskPH has also started to develop web and mobile applications to deliver hazard and disaster exposure data (OECD, 2020^[6]).

GeoRiskPH can set a model for how different government agencies and departments as well as LGUs can collaborate on data collections and analysis as well as information sharing in order to support MSMEs in making more informed decisions on their climate and disaster risk management. Within national government agencies, DTI, NEDA, DILG, the Department of Human Settlement and Urban Development, the Department of Agriculture, the Department of Tourism, the NDRRMC, among others, may also benefit from the greater use of GeoRiskPH (World Bank, 2020^[11]). The COVID-19 pandemic has unearthed the problem that even within the government, the national government and LGUs do not have the same database on MSMEs, which resulted in problems in distributing financial supports to affected MSMEs, according to a stakeholder interview.

The role of the private sector in supporting the public sector with data and information

Networks between private-sector actors are key for collecting and using data to generate climate information for building MSMEs' resilience. Such networks also complement the role of public institutions, such as PAGASA. For instance, some large businesses in the Philippines, as part of corporate social responsibility (CSR) programmes or their supply chain protection, contribute to data collection and dissemination. The Shell Philippines Exploration BV, Aboitiz Group, Smart Communications, PLDT Inc., Globe Telecom and Honda Cars Philippines, for example, have launched initiatives for developing and enhancing early warning systems in LGUs. Their roles are particularly valuable for certain LGUs that do not have well-functioning early warning systems, thus face difficulties in helping MSMEs respond fast enough to disasters within their areas (UNDP and PBE, 2017^[80]).

The private sector also contributes to putting in place necessary hardware for collecting hydro-meteorological data and generating climate-related information. The Aboitiz Foundation, for instance, had installed 700 weather stations, mainly in provincial capitals. The WeatherPhilippines, established as a non-profit initiative of the Aboitiz Foundation, had automatic weather stations to provide short-term weather data individuals (to know what to do in the next hours). PAGASA on the other hand provides longer-term weather information (for the next few days) through its Doppler radars. This complementarity allowed MSMEs and individuals as well as private-public partnerships, such as ARISE and PDRF, to use information from both PAGASA and Weather Philippines with different time frames, facilitating more time-sensitive decision making, according to stakeholder interviews.

Providers of development co-operation and governments also collaborate with, and benefit from, initiatives by the private sector. Red Cross Philippines for instance, used weather data provided by WeatherPhilippines to deploy response units and supplies before climate disasters strike. UNDP Philippines is developing a project for potentially innovative solutions such as early warning systems for handicapped persons (e.g. those with hearing loss, visual impairment, etc.) to make evacuation centre more inclusive. PDRF is collaborating with PAGASA to develop a private-sector focused predictive response method, building upon Red Cross' approach which focuses on preventing further loss of life.

Once a disaster is forecasted, PDRF activates its Emergency Operations Centre and co-ordinates the private sector services (see Section 3).

Despite their widely recognised benefits, the continuity and scalability of such private-sector initiatives still faces a range of challenges. For instance, many of those initiatives are run as CSR programmes of large companies. While those CSR programmes were very helpful for a number of MSMEs and households to respond to extreme weather events and disasters, the replicability and scaling-up potential of these programmes by a wider range of private-sector actors (i.e. smaller companies) are often limited.

There is also a challenge for the continuity of initiatives led by the private sector, when their cost effectiveness is questioned. For instance, the WeatherPhilippines Foundation of the Aboitiz Group recently closed its services to provide weather information (WeatherPhilippines, 2020^[81]). In June 2020, the Aboitiz Group donated over 217 Automated Weather Stations sites and more than 250 weather technology assets to various government agencies such as PAGASA and the Department of Agriculture, LGUs as well as some non-government organisations, aiming to support the development of more community-based development projects (Aboitiz, 2020^[10]).

Box 5.1. Making use of social media for real-time information dissemination and interpretation

- Via user-friendly platforms, such as Facebook, which cover MSMEs that are not part of larger businesses' supply chains, MSMEs can see reports that are broken down in easy-to-understand local languages and infographics. Small farmers can send direct messages on this platform about when to apply fertiliser or when to harvest, and the typhoon specialist from Weather Philippines can answer directly.
- Through free mobile applications, the Aboitiz Foundation and other large companies (e.g. Smart) deliver climate data and information to the public, including MSMEs and government entities. Batingaw, a mobile application developed by the Smart Communications in co-operation with OCD and NDRRMC, sends geo-located information about disasters and, in case of emergency, step-by-step instructions to government agencies, organisations and individuals (Paunan, 2014^[82]).
- Using algorithm and big data to decipher social media (e.g. Twitter), the Aboitiz Foundation interprets the sentiments expressed live by different users to check live whether disaster help efforts are sufficient. For example, even if the rainfall is not intense, if the Aboitiz Foundation senses negative sentiment expressed, the Foundation can investigate further to see what is going on. It may be possible that despite the meagre rainfall, there might be damage or insufficient support.
- Hackathon on disaster risk reduction and management, which involves private-sector actors as well as DOST-Project NOAH (Nationwide Operational Assessment of Hazards) can help align Project NOAH's challenges with web and mobile applications to best mobilise the public before, during and after disasters (UP NOAH Center, 2016^[83]).

6 Finance for enhancing climate resilience of micro, small and medium enterprises

An increasing awareness of climate risks among MSMEs does not necessarily translate into MSMEs investing in climate resilience measures. MSMEs have been adapting their business operations to the changes in their business environments to maximise their profits. Yet, climate change is imposing additional technical challenges to such adjustments (e.g. understanding climate risks and accounting for uncertainties), while cost and benefit of adaptation are not always visible to private-sector actors. According to stakeholder interviews even when certain MSMEs are interested in investing in measures to strengthen climate resilience, they might not have the skills and resources necessary to, for instance, prepare documents for loan applications.

Once disasters hit, MSMEs may look to diverse internal and external sources of finance to recover from the impacts. A study shows that that over 60% of MSME respondents use their savings, and 27% use support from family and friends in order to cope with business disruptions and emergencies (iPrepare Business facility, 2017^[29]). Remittances, loans or gifts from relatives are also among the most important financial sources for MSMEs. Stakeholder interviews also revealed that, having lost significant assets due to calamity, many MSMEs often become hesitant to take on a commercial loan due to a fear for deeper indebtedness, implying the importance of insurance and social safety nets.

More generally, scaling up commercial lending to MSMEs in the Philippines still faces a number of challenges (OECD/ERIA, 2018^[24]) (iPrepare Business facility, 2017^[5]). For example, MSMEs may not qualify or may find it difficult to access commercial finance or public funds, since commercial banks consider risks associated with MSMEs too high to extend credits to them. The government has put in place a scheme that sets minimum amounts that commercial banks must lend to MSMEs, but many of the banks often choose to pay fines rather than lend to MSMEs (OECD/ERIA, 2018^[24]).

The government has set up multiple public funding mechanisms that target climate resilience

The government has established funding mechanisms that directly or indirectly target climate change adaptation and disaster risk management. The People's Survival Fund (PSF), for instance, aims to support LGUs and accredited community organisations to implement community-level adaptation activities especially in vulnerable LGUs, for example in water resource, land management and adaptive agriculture and fisheries practices (GOV.PH, n.d.^[84]) (CCC, 2019^[3]).

Through the Agricultural Credit Policy Council (ACPC), the Department of Agriculture provides the Climate Change Adaptation Financing Program (CCAFFP) as part of an integrated package of support services such as climate advisory, credit guarantee and insurance, for farmers and fisher folks (CCC, 2019^[3]). On the disaster recovery side, also through ACPC, the Department provides the Survival and Recovery (SURE) loan programme to support farmers and fisher folks recover their livelihoods after disasters (GOV.PH, n.d.^[85]) (see Table 6.1).

The Land Bank of the Philippines (LANDBANK), a state-owned financial institution, supports MSMEs and LGUs with adopting measures for climate-resilient businesses through different funding programmes. They include the

Special Adaptation Facility for the Ecosystem and the Climate Resilient Agriculture Program that offers financing to climate change adaptation initiatives by promoting climate resilient agriculture as well as the Climate Change Resiliency Program that aims to help victims of climate events and disasters (LANDBANK, 2018^[13]). LANDBANK also acts as an accredited entity by the Green Climate Fund (GCF), including the implementation of DOST-PAGASA's project Multi-Hazard Impact-Based Forecasting and Early Warning System for the Philippines (LANDBANK, 2019^[45]). Accredited as a direct access entity, LANDBANK can directly access funding resources from the GCF to support their clients in pursuing climate resilience and low carbon business operations.

Attached to the Department of Trade and Industry (DTI), SB Corp is another government financial institution that focuses on supporting small businesses. Its Enterprise Rehabilitation Financing (ERF) Facility provides rehabilitation loans to small and medium enterprises after calamity. To make the fund more accessible, SB Corp adopted MSME-friendly policies for ERF, such as a longer grace period for interest and principal. SB Corp also supports its loan applicants through DTI's post disaster needs assessment (PDNA) and monthly project inspection in the first year of repayment (GOV.PH, 2018^[86]).

Introducing MSME budget tagging could allow the different actors supporting MSMEs, such as Department of Trade and Industry (DTI), Department of Social Welfare and Development (DSWD), Department of Agriculture (DA), Department of Science and Technology (DOST), Department of Tourism (DOT), to map out their activities for MSMEs and find areas of synergies and gaps to fill.

Table 6.1. Climate change adaptation and disaster risk financing & insurance for MSMEs in the Philippines

Entity	Name of the product	Product details
Department of Agriculture: Agricultural Credit Policy Council (DA-ACPC)	Survival and Recovery (SURE) Loan Assistance	Provide immediate relief to small farmers and fisher folks in calamity-affected areas to rehabilitate or regain livelihood activities
	Climate Change Adaptation Financing Program (CCAFCP)	Provides loans for climate-resilient farming and fishing practices, technologies and measures, as focal component of an integrated package of support services for farmers and fisher folk that include climate advisory, credit guarantee, insurance, market linkage, among others
Landbank of the Philippines: LBP CaReS (Calamity Rehabilitation Support Program)	Rehabilitation thru Loan Restructuring	Additional or new financing; loan take-out from other financial institutions
	Kaagapay sa Negosyo (KNegosyo): Credit Program for SMEs	To repair existing facilities or purchase new ones; to augment working capital requirement
	Lingkod Para sa Pabahay (LINGAP) : Credit Program for Homebuyers	Repair existing housing units or construct or purchase new ones
Development Bank of the Philippines:	Rehabilitation Program for Agriculture and Industry Responsiveness (REPAIR)	To expedite recovery and rebuilding process of calamity-stricken areas
SB Corp	Pondo sa Pagbabago at Pa-asenso (P3) Program: Equity Investment for Microenterprises of WIA/KIA (Wounded in Action/Killed in Action) Soldiers & Families in Marawi City	A sub-programme under the P3 Program to financially assist MSMEs owned by KIA/WIA soldiers or families affected by the 2017 Marawi siege
Bankers Assurance Corporation (provision of insurance) Cebuana Lhuillier Insurance Solutions (distribution)	Negosyo Care: Personal and Property Insurance specifically designed for MSMEs	Coverage: property insurance, burglary and robbery, accidental death, permanent disablement and dismemberment, accident medical reimbursement (AMR) money, securities, and payroll coverage
GIZ-Cebuana Lhuillier-AXA LIFE Implemented by GIZ Insured by AXA Philippines Distributed by: Cebuana Lhuillier Insurance Solutions	MicroBiz Protek Insurance	Coverage: fire and lightning, typhoon, flood, earthquake Extended coverage: smoke, falling aircraft, vehicle impact and explosion Aims to contribute to the financial stability and literacy of MSMEs that are vulnerable to natural and man-made disasters

Note: The financial products cover climate related as well as non-climate related disasters.

Source: MSME Resilience Core Group (2020^[28]) *MSME Guide to Disaster Resilience*, https://dtiwebfiles.s3-ap-southeast-1.amazonaws.com/e-library/Growing+a+Business/MSME+Guidebook_First+Edition+April+2020.pdf; GOV.PH (n.d.^[85]), Agricultural Credit Policy Council (ACPC), <http://acpc.gov.ph/sure/>; CCC (2019^[3]), Climate Change Commission (CCC), <https://climate.gov.ph>.

Linking financial education to private-sector engagement in climate resilience building

There is also an important role for financial education to play in improving knowledge of the private sector about financial solutions for enhancing climate resilience. Potential synergies between climate resilience building and financial education could be highlighted in the country's effort for financial inclusion. A number of initiatives have already been taken in financial education and inclusion. The LANDBANK's Financial Inclusion Caravan, for instance, reaches underserved individuals and communities in the periphery and rural areas, who are not familiar with formal financing systems. SB Corp and LANDBANK also join forces to promote financial literacy and capacity programmes for MSMEs to help them better access formal and appropriately priced loans (SB Corp, n.d.^[14]).

Consumer protection is also an important part of financial inclusion, since marketing new financial products without adequate explanations of their benefits and risks to potential beneficiaries might risk misconceptions or mistrusts from the target group addressed. Lacking adequate instructions, introducing a parametric crop insurance product in the Philippines has created a certain distrust of insurances. Farmers who had bought the parametric insurance did not understand why the payments were made differently among communities within the same area, even though the differentiated reimbursement was triggered by the predetermined parameters.

Financial education can be provided through various channels such as co-operatives, *sari-sari* stores and even established community-gathering spots such as church groups. They can play a conducive role in increasing awareness and basic understanding of financial products and services among businesses and individuals connected to them.

Engaging the private sector for providing and distributing financial solutions

On the supply side, the Philippines financial sector can benefit from an enhanced partnership with development co-operation providers and the government to develop, test and disseminate financial products tailored to MSMEs' action on climate resilience. For instance, insurance products can help businesses with more resilient and long-term development, especially when they are part of a comprehensive package of financial solutions for different phases of resilience building (e.g. debt instruments for preparation, grants for risk assessment as well as response and recovery, among others). Examples include DRRM-BCP-DRI checklist, developed by GIZ's Micro Disaster Risk Insurance for Micro, Small, and Medium Enterprises (MicroDRI) project and distributed at the Negosyo Centres, with the intention of encouraging insurance uptake among small businesses (MSME Resilience Core Group, 2020^[28]).

The Asian Development Bank (ADB) has partnered with the Philippine Insurers and Reinsurers Association (PIRA) and the Philippine Crop Insurance Corporation (PCIC) to explore how the private sector may enter the agricultural insurance market (ADB, 2017^[87]). This collaborative project has investigated whether the private sector entry would lead to an increase in the insurance uptake. A study shows that the penetration rate of PCIC's agriculture insurance programme for rice is around 10%. Stakeholder interviews and literature revealed several areas for improvement: low penetration rates, limited coverage of marginalised farmers, unclear rationale for subsidies for premiums and limited coverage of underserved regions especially those prone to tropical cyclones and flooding (Virola, 2017^[88]).

Currently, the MSMEs that need insurance are the ones that cannot afford it. Strengthened and centralised government intervention orchestrating the necessary legal adjustments and co-ordinating different government agencies that have different visions of MSME resilience is needed to make insurance accessible. Insurance companies are working with PAGASA for more granular information on risks, but they do not always have access to information on the exposure or historical losses that are necessary to price insurance products. Without an obligation for purchasing insurance, insurance companies also face challenges related to moral hazard whereby only the most at-risk would purchase and the risk cannot be spread across. An interview with the insurance industry suggested that insurance remains an after-thought for many actors engaged in MSME resilience and the insurance industry is yet to be systematically included in the landscape of networks of those working towards MSME resilience.

Sari-sari stores, neighbourhood convenience stores with over a million outlets all across the Philippines, are already playing a role in disseminating financial solutions, such as micro-insurance (UNDP and PBE, 2017^[80]) (Nielsen, 2014^[55]). Global Affairs Canada, for example, has collaborated with the *sari-sari* stores who were not only insured by the micro-insurance products, but also sold and disseminated them (Global Affairs Canada, 2019^[89]). Similarly, distributors of fertilisers and pesticides, co-operatives and church groups can be important channels of insurance distributions because local MSMEs form close links with these entities. However, these potential insurance distributors to be effective, they require capacity building, according to stakeholder interview.

Box 6.1. Potential use of mobile solutions for building climate resilience of MSMEs

Numerous mobile applications and platforms by enterprises of varying sizes help make finance more accessible for MSMEs in the Philippines. For instance, Cropital, a social enterprise, connects investors and farmers through its crowdfunding platform. Potential investors can browse farmers on the website and also learn about farming in the Philippines (Cropital, n.d.^[90]). Cropital educates the investors the particularities of farming, such as when farms generate cash flows to make repayment and returns on investment more transparent (PwC and MAP, 2019^[91]).

In collaboration with telecommunications operator Globe's GCash mobile money platform, the Union Bank of the Philippines helps microenterprises like the *sari-sari* stores have easier access to microfinance institutions through a digital platform called the Mobile Money Cash Management (MMCM). MMCM processed over 9 million real-time transactions worth PHP 19 billion for 300 000 'nanays' who can have a turnaround time of one day, compared to previously fourteen days. Especially for the *sari-sari* stores in remote areas with little or no access to banks, digitalised platforms also mean reducing "the cost of travelling, risk of holding cash, and the need to close shop for a day" (UNDP and PBE, 2017^[80]).

7 Role of development co-operation in engaging the private sector in building climate resilience

Given the limited government budget which deters the government from new initiatives and approaches, development co-operation has a special role to pilot new initiatives and help scale-up successful initiatives (OECD, 2020^[6]). Data reported to the OECD Development Assistance Committee shows that a significant share of bilateral and multilateral adaptation-related development finance also targets DRRM: disaster risk reduction (26% of total adaptation finance), multi-hazard response preparedness (20%) and immediate post-emergency reconstruction and rehabilitation (16%) over the period between 2012 and 2018 (OECD, 2020^[16]). In total, the abovementioned data shows that about USD 3.13 billion of development finance was committed by bilateral and multilateral providers to support climate change adaptation in the Philippines between 2012 and 2018 (OECD, 2020^[16]).

Ensuring coherence across different development co-operation projects across different policy objectives (e.g. climate change adaptation, disaster risk reduction, MSME development) remains a challenge especially at a local level (OECD, 2020^[6]). In some cases, providers of support may have different objectives and timeframes within the same community, which can make it challenging for local authorities to co-ordinate different activities.

The Climate Change Commission had formerly organised formal donor co-ordination meetings. As of 2020, the Commission hosts rather informal, ad-hoc meetings. Although such meetings do promote the co-ordination of government and development co-operation providers, it could be worth reviving formal meetings again to promote further co-ordination between development co-operation providers. In doing so, the scope could be expanded to include MSME development issues, for example through the participation of appropriate platforms such as the MSME Resilience Core Group, the National Resilience Council, the Climate Change Commission, NEDA, among others.

The Transforming Communities towards Resilient, Inclusive and Sustainable Tourism (TouRIST) programme, led by the Department of Tourism (DoT) and the World Bank, is an example of co-ordinating multi-stakeholders. Together with partners, DoT and the World Bank are working to implement a co-ordinated effort among different actors in five tourism destinations in the country. The collaborative project takes an integrated approach to tourism infrastructure, livelihood, disaster risk reduction and crisis management and tourism policy and regulation (Talavera, 2019^[92]). In tourism, different actors initiate and lead large scale infrastructure projects. Currently, there is lack of co-ordination which leads to different infrastructure to be completed at different time frames. Even if an airport is constructed, if the highways and roads are not yet constructed, the tourism project cannot properly take off.

At the local levels, the private sector and development co-operation are forging partnerships to capacitate MSMEs and those who support MSMEs. Another example is UNDP's Connecting Business initiative (CBI) that supports private sector networks in the Philippines, along with Côte d'Ivoire, Fiji, Haiti, Kenya, Madagascar, Mexico, Myanmar, Nigeria, Pacific, Sri Lanka, Turkey and Vanuatu (United Nations Partnerships for SDGs platform, n.d.^[93]). Together with the UNDP, the PDRF also hosted knowledge exchange with CBI partner networks in the Pacific and Southeast Asia at its Emergency Operations Centre (PDRF, 2019^[94]).

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