FOCUS ON PREVENTION
Increasing SME Uptake of Disaster Risk Reduction:
Recommendations for Policymakers, Financiers and the Broader Business Community
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Increasing SME uptake of disaster risk reduction: recommendations for policymakers, financiers and the broader business community
SMEs are critical to the global economy but disproportionately vulnerable to disasters. SMEs support 50% of global GDP and play an outsized role in supporting livelihoods of vulnerable populations. They are also, however, highly vulnerable to disasters, bearing around 75% of losses experienced by businesses after disaster strikes. SME losses often spill over into the economy, causing further hardship for vulnerable groups and socially detrimental adaptive strategies, such as increased child labour.

In part this reflects a lack of preventative action or disaster risk reduction (DRR) measures by SMEs. The disproportionate share of risks borne by SMEs in part reflects their concentration both in high-hazard regions in the Global South and in high-vulnerability sectors, such as agriculture. It also reflects relatively low uptake of DRR interventions by SMEs compared to larger firms - SME uptake of DRR measures is 10-20% lower than larger firms. This means losses from any given event tend to be proportionally greater for SMEs. For example, yield losses from droughts are around five times larger for smallholders than they are for commercial farms exposed to the same event.
Low uptake of DRR by SMEs is driven by four key factors:\textsuperscript{10}

- **Lack of access to finance for investment in DRR**, with both lenders and borrowers lacking experience in financing these projects.

- **Barriers to DRR through adoption of new business models**. This includes a lack of infrastructure to support digitisation through technologies such as cloud computing, as well as tax and regulatory barriers to international trade that inhibit geographic diversification.

- **Asymmetric contractual relationships**. Informal contracts, that are widespread across the agri-food sector, offer insufficient security for SMEs to invest in DRR, while incomplete or weakly enforced contracts, that are common more generally, can disincentivise DRR by allowing larger firms to discretionally pass on disaster risk to SMEs while appropriating rents from DRR through bargaining power.

- **Low uptake of preventative risk management and business continuity planning**.\textsuperscript{11} Only 20-30\% of SMEs have a written business continuity plan (BCP) in place and those that do tend not to focus on aspects that can facilitate DRR, such as integration with enterprise risk management (ERM) and strategic foresight and scenario analysis approaches.

\textsuperscript{10} Similar challenges to DRR were identified in UNDRR (2020b)

\textsuperscript{11} Note: Across the literature, BCP is interchangeably used for business continuity plan and business continuity planning. For clarity, in this publication we use BCP for business continuity plan.
Stakeholders in government, finance and business have key roles to play in reducing barriers to DRR adoption. These stakeholders have the financial capacity, expertise and relationships to disseminate best practice among groups of SMEs, as well as to provide supporting resources. Moreover, they have the convening power to encourage the partnerships required to effect certain DRR measures. In many cases, all parties stand to gain from contractual or policy incentives to adopt DRR: lenders, insurers and corporate counterparties all share in risk reduction benefits, while governments can promote inclusive and resilient development and save costs of emergency relief. This report identifies measures that can be taken by policymakers, financiers and the broader business community to promote SME resilience. Figure 1 below summarises the recommendations, segmented by stakeholder group and by barrier addressed.

1. Policymakers can play a central role in rectifying a large number of the market and government failures that give rise to the barriers described above. In so doing they can promote broader public policy objectives including more effective competition and innovation, more resilient livelihoods for vulnerable groups and reduced post-disaster relief and recovery costs. Key interventions include:

   a. **Kickstarting the market for financing DRR by increasing the flows of public and concessional finance, removing regulatory barriers to private finance, and enhancing the capacity of local financial institutions to appraise DRR investments.** In the Global South, donors and multilaterals can contribute to this by mainstreaming prevention across their portfolios.

   b. **Encouraging the adoption of resilient business models by providing supporting infrastructure such as telecommunications, enhancing SME capacity and awareness, and supporting SMEs to diversify geographically.**

   c. **Promoting more efficient contracting models by addressing power balances,** for instance through low-cost dispute resolution, and improving SME capacity to understand contracts and bargain collectively.

   d. **By promoting prevention-focused business continuity planning, policymakers provide a critical entry point for DRR uptake that can improve SME resilience.** Globally, most SMEs adopt reactive approaches to disaster risk management – for example by laying off staff or selling capital assets in the event of a disaster. Such reactive approaches tend to lead to higher overall losses as well as slower recovery times, which could be mitigated by prevention-focused BCP. The business continuity planning can encourage small businesses to think systematically about sources and costs of risks. This in turn promotes the development of strategies that effectively balance reactive and preventative approaches to risk.
Increasing the uptake of business continuity planning that supports prevention by mainstreaming prevention in business continuity planning definitions, funding BCP dissemination activities, building knowledge-sharing platforms and providing BCP-contingent incentives. Policymakers can use the current momentum to establish an emphasis on prevention in business continuity planning definitions and providing the corresponding guidance, tailored to SMEs. Building on standards recently developed by the ILO for SMEs, a new BCP framework could entail:

- Broadening BCP objectives to comprise prevention, in particular through integrating ERM standards
- Proposing scenario-based risk assessment to identify causal sources of vulnerability
- Prompting SMEs to consider DRR options to eliminate identified sources of vulnerability
- Seeking partnerships through which DRR can be implemented.

2. Financiers have a role in channeling investment into DRR and in incentivising risk-reduction. This is likely to require some innovation to deliver financial instruments that are affordable and tailored to SME needs. It may, for example, include greater use of incentives, through access to lending or insurance premium payments, that are tied to established DRR practices. Additionally, financiers can create incentives to increase the establishment of a BCP. Analogously to stimulating DDR uptake, they can offer BCP-contingent incentives via lower insurance premiums and conditionality on financial and insurance products.

3. The broader business community can enhance SME resilience by fostering the adoption of new contractual models and more resilient business models, ultimately reducing risks along supply chains. Large corporations can encourage resilience through contractual incentives, building capacity among small suppliers, providing access to digital platforms, and adopting contracting practices such as drafting in local language, that build confidence for SMEs to invest.

Large businesses can encourage business continuity planning adoption along their supply chain through sharing best-practices, building up the required capabilities and providing contractual incentives. For instance, they can disseminate approaches for strategic foresight, scenario analysis and scenario planning as well as risk-related information (e.g. intersecting hazards
and their cumulative impact) and tools (e.g. MaRS Startup Toolkit in Canada) for risk assessment and decision support. Moreover, businesses can build capacity among SMEs through provision of training and provide incentives through offering BCP-contingent contracts (e.g. price guarantees, financing for DRR).

In terms of next steps, pilots of sector-specific guidance and institutional models will show how recommendations in this report can be taken forward in various contexts. There is a lack of evidence on precisely what solutions will work under which conditions. Pilot studies in representative settings are therefore required. Once models have been established and tested in the field, it can be relatively cheap to adapt these to other settings. High hazard, low-middle income regions, such as Asia and the Caribbean, not only exemplify many of the key challenges identified in this report, they also have a large number of SMEs, most of which do not have BCPs or carry out DRR. These regions are also likely to be more receptive to pilot studies – they have widespread recognition of the importance of DRR, established specialist BCP providers, and sector-specific convening groups that can play a key role in ensuring pilot studies gain initial traction and have sustained impact. Pilot studies can be implemented by UNDRR’s private sector initiative ARISE with support from the broader business community, policymakers, or the finance community.
### Critical conditions for DRR uptake

<table>
<thead>
<tr>
<th>Policymakers</th>
<th>Financiers</th>
<th>Broader business community</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOs, standards organisations, government and public bodies, NGOs</td>
<td>Insurers, lenders, providers of concessional finance</td>
<td>Large corporations, business consortiums and chambers, BCP vendors and providers</td>
</tr>
</tbody>
</table>

#### Access to finance

**Kickstart market for DRR finance**
- Increase public and donor flows
- Remove barriers to private finance
- Enhance the capacity of local financial institutions to appraise investments

**Channel increased investment into DRR**
- Provide incentives for DRR investments
- Develop affordable instruments tailored to SME needs

#### Resilient business models

**Support uptake of resilient business model**
- Provide supporting infrastructure
- Enhance SME capacity and awareness
- Reduce barriers to trade
- Provide incentives for the uptake of digital technologies

**Support resilient business models by sharing infrastructure**

#### Efficient contracts

**Address power imbalances in contractual arrangements**

**Adopt efficient contracting models**

#### BCP update

**Facilitate uptake of BCP supporting prevention**
- Mainstream prevention into BCP definitions
- Build SME capacity
- Provide incentives for uptake

**Provide incentives for adoption of BCP supporting prevention**

**Mainstream BCP along the value chain**
- Disseminate best practices
- Provide incentives through contracts

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*Source: UNDRR*
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1 Introduction

SMEs are critical to the global economy but are also disproportionately vulnerable to hazards. In part, this reflects a lack of preventative action or disaster risk reduction (DRR). SMEs support 50% of global GDP and play an outsized role in supporting livelihoods of vulnerable populations. However, SMEs are also highly vulnerable to disasters, bearing around 75% of losses experienced by businesses. The disproportionate share of risks borne by SMEs in part reflects their concentration in high-hazard regions in the Global South and high-vulnerability sectors such as agriculture. It also reflects a relatively low uptake of DRR interventions compared to larger firms in the same sectors, which means losses from any given event tend to be proportionally greater for SMEs. For example, coffee yield losses from droughts in Ethiopia are around five times larger for smallholders who lack investment in DRR than they are for commercial farms exposed to the same event (see Box 8, Appendix I.iii).

Despite proven benefits, SMEs underinvest in DRR activities. Investment in DRR has high payoffs through reduced impact and faster recovery times: for example, a nature-based solution (NbS) programme in Cameroon increased yields for 58% of farmers and improved their crops’ resilience to drought (see Box 14, Appendix I.iv). Moreover, a high-level analysis produced for this study suggests that adoption of DRR measures can reduce disaster losses for SMEs by up to a third globally. The estimates vary by sector with a reduction of up to 28% in construction, 30% in wholesale and retail trade, 31% in manufacturing and 35% in agriculture. However, despite a strong general business case, SMEs underinvest in DRR, with uptake between 10% and 20% less than other firms, depending on the sector and region. The gap is the largest in the construction and utilities sectors with 16% less DRR uptake on average globally by SMEs. Africa and Asia are the regions most touched by this disparity, with SMEs undertaking, respectively, 20% and 17% less DRR than larger firms across sectors in those regions.

12 World Bank defines small businesses as having between 5 to 19 employees, medium businesses as having between 20-99 employees, and large businesses as having more than 100 employees (The World Bank, n.d.).
This report aims to set an agenda for policymakers, larger businesses and financiers to enable the more widespread adoption of DRR practices by SMEs. It focuses on opportunities where there is mutual benefit to SMEs and these stakeholders, through increased supply chain resilience, reduced counterparty risks and more rapid, sustainable or inclusive economic development. The evidence presented here consolidates literature, case study evidence, stakeholder interviews and a workshop, as well as some bespoke modelling. It complements other outputs from the same programme of work that focus on SME-led efforts to increase DRR through enhanced business continuity planning as well as a more general business case for increased DRR by SMEs (e.g. UNDRR, 2020b)

The remainder of the report is structured as follows:

- Section 2 identifies necessary conditions for SMEs to undertake DRR and existing barriers thereto.

- Section 3 sets out ways for policymakers, financiers and businesses to address three key barriers, namely lack of access to finance, lack of resilient business models and lack of efficient contracts.

- Section 4 introduces the current business continuity planning standards, assesses the business continuity planning practices undertaken by SMEs, and identifies improvement opportunities.

- Section 5 presents recommendations for policymakers, financiers and the broader business community to encourage the uptake of business continuity planning, including a six-step guide for developing a prevention-focused BCP.

- Section 6 presents overall conclusions and outlines specific next steps to be taken by each stakeholder group to implement the outlined recommendations.

- Annex summarises the evidence base for recommendations, based on in-depth case studies across sectors and regions to support the recommendations in the report. It also provides a categorisation of actors for each stakeholder group and provides definitions key terms.
2  Barriers to SME uptake of DRR

Literature and research suggest that four critical conditions are required for SMEs to carry out DRR, namely access to finance, the adoption of resilient business models, efficient contracts and business continuity planning (see Figure 2). However, in many cases, SME lack access to finance for investment in DRR (Section 2.1), tend to have less digitalized and diversified, thus less resilient, business models (Section 2.2), are disincentivised to take up DRR by weak and inefficient contracts (Section 2.3) and lack the awareness of BCP’s benefits, as well as the capacity and the incentives to create a BCP (Section 2.4). These barriers to SME uptake of DRR will be discussed in detail in the following.

Figure 2  Summary of barriers to the planning and implementation of DRR activities by SMEs

<table>
<thead>
<tr>
<th>Critical prerequisites</th>
<th>Access to finance</th>
<th>Adoption of resilient business models</th>
<th>Efficient contracting</th>
<th>Business continuity planning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers in the broader environment</td>
<td>Inadequate support for DRR by providers of concessional finance* (developing countries)</td>
<td>Lack of supporting infrastructure (e.g. Africa)</td>
<td>Lack of incentives for larger firms to engage in fairer contracts (e.g. agriculture)</td>
<td>Lack of policy incentives</td>
</tr>
<tr>
<td></td>
<td>Weak channels for distribution</td>
<td>Weak policy incentives and regulatory barriers (e.g. Africa, Latin America)</td>
<td>Absence of legal protection for SMEs</td>
<td></td>
</tr>
<tr>
<td>Barriers at the SME-level</td>
<td>Low SME capacity</td>
<td>Low SME capacity (e.g. agriculture, construction)</td>
<td>Lack of accessibility</td>
<td>Lack of awareness</td>
</tr>
<tr>
<td></td>
<td>Lack of awareness</td>
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</table>

Source: UNDRR

Note: Providers of concessional finance refers to countries and regional organisations (e.g. EU) donating aid, as well as international aid agencies/organisations (e.g. Red Cross).
Many DRR interventions involve upfront investment, which for SMEs often requires external finance. Many DRR measures involve increased capital spending or investment in order to reduce disaster risk which may occur over the longer term. However, SMEs have lower internal reserves than larger companies. For example, a survey in the United States revealed that about 75% of SMEs had two months or less of cash reserves (Bartik et al., 2020). Therefore, many SMEs will only be able to invest in DRR measures if they can access finance to invest at reasonable cost.

Moreover, SMEs have less access to finance than larger companies, especially in developing countries. Financing in aggregate terms for SMEs is limited in comparison to commercial debt for large firms and therefore poses a constraint on SME activity. Globally, SMEs rank financing constraints as the biggest obstacle to growth, while larger firms place it only fifth (The World Bank, n.d.), and survey evidence suggests almost 20% of SMEs in the EU are unable to access loans to support planned activity (European Commission, 2020). The situation is more acute in developing countries, where World Bank Enterprise Surveys reveal that in low-income countries, on average, 36% of businesses with 20 to 99 employees rate access to finance as a major constraint to current operations, compared to 15% of businesses in high income countries (The World Bank, n.d.). In rural areas, many SMEs rely on microfinance institutions for finance, which may provide finance at a higher cost and in a less secure way given weak regulation (The Economist, 2020).

Public and concessional finance (e.g. from international or aid organisations) has not been focused on DRR, nor given appropriate weight to its importance to SMEs. Concessional financing for DRR has been relatively low: support for disaster prevention and preparedness together made up less than 5% of concessional finance for disaster risk management from member countries of the Development Assistance Committee (DAC) between 2011 and 2015, with a declining share over time (see Figure 3). Moreover, providers of concessional finance typically categorise DRR activities within their humanitarian rather than sustainable development portfolios (Watson et al., 2015). This can lead to a prioritisation of spending towards countries with high mortality risks, as opposed to poorer, particularly drought-prone countries, where the role of DRR in promoting inclusive growth is of greater importance (Watson et al., 2015). All of this suggests DRR for SMEs is currently underprioritised.
**Figure 3** Countries spend relatively little on disaster risk reduction

![Graph showing spending on humanitarian aid by sector from 2011 to 2015](image)

**Note:** Spending in US$ billion 2017 prices. ‘Total humanitarian aid’ refers to the level of spending across the three areas of disaster risk management presented in the figure: disaster prevention and preparedness; reconstruction, relief and rehabilitation; and emergency response.

**Source:** Canadian International Development Platform, 2017; OECD Development Assistance Committee, 2020

**Support from providers of concessional finance for DRR among SMEs depends on local financial institutions having the capacity to appraise DRR investments, which has yet to be developed.** Due to the smaller loan and investment sizes for SME deals, concessional finance is usually channelled via local financial institutions (e.g. local community credit unions, small banks) to achieve scale. However, local financial institutions often lack an understanding of context-specific vulnerabilities of SMEs and the benefits of DRR interventions, and therefore finance may not be channelled effectively to SMEs to support DRR investments. Interviewees reported that the fundamental barrier was a lack of understanding of the key SME-specific interventions that can be supported and the ways in which specific solutions (e.g. adaptation measures such as water efficient irrigation technology) can be appraised.
2.2 Adoption of resilient business models

SMEs can reduce disaster risk through reconfiguration of their business models. Such approaches go beyond protective measures to shield assets, production or transactions from disasters, and involve more fundamental shifts to new ways in which businesses operate, that reduce their exposure or vulnerability. Two important and connected ways in which SMEs can do this are:

- **Digitalisation**: the adoption of digital technologies, such as cloud computing can reduce businesses’ reliance on physical assets that may be exposed to disasters. There is also growing evidence that digitalisation can reduce vulnerability, by allowing firms to respond more nimbly to shocks (Teece, 2012). For example, a study in China among 518 SMEs demonstrates that digitalisation enabled SMEs to respond effectively to the COVID-19 public crisis by making use of their dynamic capabilities (Guo et al., 2020).

- **Geographic diversification**: diversification can reduce exposure to localised disasters such as floods and earthquakes. Digital technologies can play an important role in facilitating diversification for SMEs, for example in allowing home working across multiple jurisdictions.

The level of business model digitalisation and diversification is low among SMEs compared to larger firms. For example, in the European Union, less than 50% of SMEs used cloud computing in 2020, compared to 65% for large companies (Eurostat, 2021). Moreover, some sectors are significantly behind others. Figure 4 shows that SMEs in the transportation and construction sectors in Sweden have the lowest digitalisation index (The European Commission, 2017). On diversification, less than 3% of SMEs in all sectors export goods outside the continent (The European Commission, 2015; Eurostat, 2015).

![Figure 4 SMEs in the construction and transport sectors have the lowest digitalisation uptake in Sweden](image)

*Note: The results are based on a survey with 10,000 Swedish SMEs*

*Source: (The European Commission, 2017)*
The fact that SMEs do not adopt more resilient business models reflects a lack of supporting infrastructure, relatively low firm capacity and weak policy incentives.

SMEs disproportionately lack access to high quality infrastructure needed for digitalisation. This reflects the concentration of SMEs in low income countries and rural areas, where infrastructure is least developed (Mehrabi et al., 2020) and where levels of connection between smaller premises and households that host SMEs is relatively low (ITU, 2019). Even where SMEs have access to the internet, speed can be an issue: in the U.S, only 25% of households using the internet in hard-to-reach rural areas have high speed access, compared to more than 40% in urban areas (U.S. Senate Committee on Small Business & Entrepreneurship, 2021).

SMEs lack awareness of the benefits of resilient business models or the capacity to implement them. Many SMEs are not aware of options for digitalisation or the benefits that this can bring (Barann et al., 2019; Ulas, 2019). Even where they understand options, a lack of skills or knowledge in implementing or using technologies represents a barrier, particularly in developing countries (Kapurubandara and Lawson, 2008). As the technological landscape is constantly and rapidly changing, continuous learning and updating of technologies is a particular challenge for SMEs that face constraints on investment in assets and training.

Regulatory barriers and policy incentives further inhibit geographic diversification and digitalisation. Complex regulatory procedures or lack of supportive policy frameworks can create obstacles for SMEs to adopt new or resilient business models. Examples of this include:

- Complex tax treatment of cross-border activity: given the substantial fixed cost of compliance with regulatory requirements, SMEs are at a disadvantage with respect to larger enterprises. In the EU, it was highlighted that the lack of tax harmonisation remains one of the main obstacles faced by business when operating cross-border (European Commission, 2020). Tax administration in general is an issue across regions – with 15% to 28% of SMEs identifying it as a major constraint globally, though the issue is more prevalent in Sub-Saharan Africa and Latin America & Caribbean.

- Barriers to trade: for similar reasons, high tariffs and lengthy and complex customs procedures can deter SMEs from accessing foreign markets. While this seems to be an issue across regions, SMEs tend to find it most challenging in Sub-Saharan Africa and in the Middle East & North Africa, with 26% and 22% of SMEs identifying customs and trade regulation as a major constraint in those regions respectively (The World Bank, n.d.).

- Data access: access to data is a precondition to compete in a digital economy and grants greater innovation ability, but SMEs lack larger firms’ ability to access this data (SME United, 2020).
2.3 Efficient contracting

Contracts that clearly and efficiently allocate risk can incentivise DRR by SMEs. Efficient contracts between SMEs and their counterparts can support DRR in two key ways: first, by assigning ownership of risks, they can create incentives to adopt DRR; and, second, by providing stable contractual relationships, with secure revenue streams and protection from arbitrary exposure to extreme or uncontrollable risks, they can improve SMEs’ financial stability, facilitating investment in DRR.

However, many prevailing contractual arrangements are informal, incomplete or difficult for SMEs to enforce, disincentivising DRR.

- Informal contracting limits longer term planning for SMEs, including for DRR activities, and reduces access to finance. Such relationships are common in the developing world, but are also observed between SMEs and larger, more powerful firms in richer countries: for example, in the UK, major retailers have procured soft fruit from agricultural SMEs on a three-month basis with no formal contract (Jamieson et al., 2012).

- Incomplete contracts can allow more powerful counterparties to opportunistically pass on impacts of risks to SMEs, reducing the returns on DRR activities intended to reduce these risks. The same is true of complete contracts where clauses to prevent such opportunistic behaviour cannot be enforced. Incomplete or unenforceable contracts explain Unfair Trading Practices (UTPs), such as late payments that are a significant threat to SMEs, leading to one in four bankruptcies among SMEs in the EU (The European Commission, 2020). The role of UTPs in exacerbating disaster risk for SMEs is exemplified by the COVID-19 crisis, where late payments have increased substantially, for example by 44% and 80% in Belgium and Italy, respectively (The European Commission, 2020).

Inefficient contracting with SMEs stems from three key barriers.

- Low SME capacity: SMEs lack the expertise or bargaining power to negotiate efficient terms. For example, despite economic benefits of contract farming, many smallholder farmers drop out from contract schemes in Ghana, rather than bargaining for transparent or fairer terms. Where contracts are written in English and include several lengthy clauses, this can make the cost to smallholders of engaging prohibitive (Rumi & Quaim, 2020).

- Lack of incentives for larger firms to engage in fairer contracts: there is some evidence of larger enterprises investing to reduce their own vulnerability by strengthening the resilience of smaller businesses that are suppliers and partners (e.g. The Climate-Resilient Value Chains Leaders Platform), but there are few examples of such instances. Where value chains are opaque, as in many soft commodities, larger consumer facing firms face little reputational incentive to avoid self-serving opportunistic behaviour.

- Absence of legal protections for SMEs: weak or expensive legal procedures may deter SMEs from seeking redress due to a contractual breach. For example, according to the World Bank Doing Business 2020 results, the average time for resolving a commercial dispute through a local first-instance court is 653 days, and the average cost amounts to 33% of the claim (The World Bank, 2020).
2.4 Prevention-focused business continuity planning: integrating risk management and business continuity planning

Prevention-focused business continuity planning can be an “entry point” for DRR, but SME uptake is low and those BCPs in place are often too focused on recovery. Business continuity planning encourages companies to systematically analyse risk and hazards to their businesses and to identify strategic actions to “protect against, reduce the likelihood of occurrence, prepare for, respond to, and recover from disruptive incidents when they arise” (ISO, 2019). By encouraging the identification of preventive measures, including integration of BCP with Enterprise Risk Management (ERM) strategies, business continuity planning encourages companies to take up DRR. However, as a consequence of the low uptake and response and recovery focus of current BCPs, SMEs seem to underinvest in DRR measures. Literature suggests that the low BCP uptake is driven by three key factors: lack of accessible prevention-focused business continuity planning guidance (partially resulting from lack of SME capacity), lack of awareness of a BCP’s benefits, lack of incentives to undertake business continuity planning.

Section 4 will provide more insights on current guidance on business continuity planning, on current uptake of business continuity planning, as well as on how to improve business continuity planning guidance, including through integration of BCP and ERM strategy and practice.
3 Opportunities for increasing SME uptake of DRR

Policymakers, financiers and the broader business community can enable more widespread adoption of DRR practices by SMEs. In particular, this can be done in a way that creates mutual benefits to SMEs and these other stakeholders, including through increased supply chain resilience, reduced counterparty risks, and more rapid, sustainable or inclusive economic development. For example, large automotive manufacturers tend to have highly globalised value chains where they mostly rely on SMEs as parts suppliers, meaning they are exposed to the disaster impact on SMEs in multiple locations around the world. By increasing SME resilience, large businesses therefore increase the resilience of their supply chain. This section sets out opportunities for policymakers (Section 3.1), financiers (Section 3.2) and the broader business community Section 3.3), larger businesses in particular, to promote SME uptake of DRR, considering ways in which each can address the identified key barriers to DRR, and substantiating them with evidence of their success.

The opportunities to address the fourth key barrier for SME uptake of DRR, namely lack of prevention-focused BCPs, will be presented in Section 5.

13 The stakeholder groups, namely policymakers, financiers and the broader business community are outline in Appendix I.
3.1 Policymakers

Policymakers can play a role in rectifying the market and government failures that give rise to many of the barriers described in Section 2. In doing so, they can promote more effective competition and innovation driven by SMEs, improve the resilience of firms that support vulnerable livelihoods, and reduce costs to the public and private sector post-disaster.

Policymakers can increase SME access to DRR finance by:

- **Increasing flows of public and concessional finance to DRR by SMEs (Key actors: international organisations, non-profit organisations).** As highlighted in Section 2.1, relatively little investment from these sources is directed towards DRR by SMEs; part of the solution can therefore be to increase these flows. This is a feature in some countries such as the Philippines and Indonesia, where domestic investment in DRR outstrips the development assistance for DRR and those investments indirectly benefit SMEs. The Philippines, for example, managed to mobilise US$ 797 million nationally for DRR finance between 2009-2011, compared to US$44 million in development assistance (Watson et al., 2015). At the same time, providers of concessional finance can increase their focus on DRR and mainstream prevention across their portfolios. International agreements (such as the Busan Partnership for Effective Development Cooperation) are paving the way to induce this shift (Fourth High-Level Forum on Aid Effectiveness, 2011). Some providers of concessional finance have also suggested creating regional funds to address the urgent need for low-cost resilience finance of small vulnerable economies (United Nations, 2020). Where private lenders are unwilling to invest in DRR benefits alone, public funding can achieve leverage by targeting DRR interventions that generate auxiliary revenue streams, such as carbon credits from nature-based solutions.

Example:
The Busan Partnership for Effective Development Cooperation facilitates concessional financing for risk prevention by directing the focus of development aid on sustainability.

- **Removing barriers to private finance for DRR (Key actors: governments and public bodies).** This could include changing the treatment of DRR investment by insurers, who bring significant expertise, but who are disincentivised by capital adequacy rules which can sometimes penalise long-term investments. For example, insurers in the EU have highlighted that the Solvency II Directive penalises long-term investments as a contradiction to the ongoing debates for longer-term investments (Marchal et al., 2019) creating co-benefits, while protecting ecosystem services in a context of changing climate patterns, with more frequent and extreme weather events. The reinsurance and insurance industries are increasingly cited as sectors that can play a role to help manage risks, by improving disaster risk reduction. Moreover, in developing countries, regulation has not kept pace with the growing complexity of the microfinance industry, and some lenders have started asking for land titles as collateral or charging extortionate rates. Enhanced regulation of microfinance providers can assist in developing a DRR market that is affordable to SMEs, since microfinance has enabled SMEs to, for example, invest in drought-resistant crops and improve irrigation systems. Finally, incentives can be provided to private actors to encourage the development of private finance.
Example:
In Jamaica, a regulatory act for microfinance reduces the risk of predatory lender behaviour (Jamaica Gleaner, 2021). The Act includes measures such as the outlawing of predatory lending practices, threats, and intimidation.

Example:
In Japan, agricultural co-operatives that provide banking and insurance services to their members are eligible for a reduction in corporate tax rates (OECD, 2020c).

- Enhancing the capacity of local financial institutions (such as local credit unions and small banks) to appraise DRR investments (Key actors: international organisations, non-profit organisations, governments and public bodies). This is critical given the need to channel concessional finance through local financial institutions. It can be facilitated by developing a taxonomy of SME-specific DRR interventions by sector (such as the Adaptation Solutions Taxonomy produced by the Adaptation SME Accelerator Project) as well as by providing guidance to financial institutions on how these can be appraised.

Policymakers can also play a role in facilitating the uptake of more resilient business models by:

- Providing supporting infrastructure (Key actors: international organisations, non-profit organisations, governments and public bodies): governments have a key role in supporting infrastructure that can underpin resilient business models. This includes the provision of telecommunications infrastructure, in particular in low-income countries and rural areas, to enable SME uptake of new technologies.

Example:
The Infrastructure Consortium for Africa works to facilitate infrastructure development in the water, transport, energy and ICT sectors, through both regional programmes and country-specific initiatives (The Infrastructure Consortium for Africa, 2021).

- Enhancing SME capacity and awareness of benefits of resilient business models (Key actors: international organisations, non-profit organisations, governments and public bodies): policymakers can fund training to upskill SMEs, raise awareness of benefits of digital business models, and support knowledge-sharing networks.

Example:
The EU provides training on emerging technologies to upskill SMEs. Digital SkillUp is a programme funded by the EU Commission which makes basic knowledge on emerging technologies available and accessible to SMEs (European Digital SME Alliance, 2020). It aims to create an online training space that will offer learning content and opportunities on topics like Internet of Things (IoT), blockchain, robotics and automation, cybersecurity and trust.
• Providing support for SMEs to diversify geographically (Key actors: governments and public bodies): policymakers can reduce barriers by simplifying the tax treatment of cross-border trade (e.g. addressing the lack of tax harmonisation in the E.U.) and removing regulatory barriers to trade (e.g. in Sub-Saharan Africa, in the Middle East and in North Africa). More targeted support involves reducing the incidence of such barriers specifically to SMEs, such as the efforts by the European Commission described below.

**Example:**
The European Commission is committed to include dedicated SME chapters in all its trade agreements to address trade barriers that disproportionately affect SMEs, together with measures to enable SMEs to tap the benefits, such as connecting SMEs through international industry clusters (European Commission, 2020).

• Directly incentivising the uptake of digital technologies (Key actors: government and public bodies).

**Example:**
In the United States, the purchase of cybersecurity products is incentivised through tax relief by the government of Maryland.

**Example:**
In the UK, a back-to-business COVID-19 match-funding platform provides match-funding to SMEs investing in longer-term resilience measures (see Box 1) (London Gov, 2020). The scheme supported SMEs in expanding their operation online, investing in their future and adapting to safe, socially distant trading, effectively financing a digital transition.

Last but not least, policymakers can facilitate more efficient contracting models by addressing power imbalances (Key actors: governments and public bodies, non-profit organisations). This can include measures to improve SME capacity to understand contracts, supporting collective bargaining by small-holders, and offering efficient and low-cost dispute resolution to discourage opportunistic behaviour.

**Example:**
The Australian government funded a pilot in the agricultural sector to develop and deliver training materials for establishing cooperatives and competing more effectively in the supply chain (Australian Government, 2015; Van Caenegem et al., 2015).

**Example:**
The EU Late Payment Directive addresses unfair trading practices by reducing businesses-to-business transaction delays (European Commission, 2011).
3.2 Financiers

Financiers have opportunities to channel increased investment into DRR and to incentivise risk reducing practices by SMEs, through the terms of lending or insurance agreements. The opportunities presented here are led by the finance sector, spurred by the prospect of improved credit quality or reduced insurance claims. In addition, the financial sector will play an important role in policymaker-led initiatives to increase flows of investment into DRR, as described in the previous section.

One key area of opportunity is in the development of financial instruments that are affordable and tailored to SME needs (by lenders such as commercial banks). This requires innovating in products that allow investors to lend to SMEs (smaller ticket sizes), and to scale up instruments or initiatives that have been successful in extending finance for DRR to SMEs. These can be initiatives targeted at reducing the cost of lending to SMEs, such as SMBX in the US, where investors can purchase ‘Small Business Bonds’ in US$10 increments (SMBX, 2021). Financiers can also include financial literacy components in their products to make them more accessible. Moreover, financiers can also contribute to the development of finance accelerators, to support the elaboration of innovative financial instruments and speed up financial flows. For example, the Climate Finance Accelerator in Luxembourg helped the Luxembourg Stock Exchange become the largest marketplace for green bonds (Sushchenko & Schwarze, 2020), by creating an attractive and supporting environment for climate finance fund managers (ICFA, 2021).

Example:

In Nigeria, a bank initiative supports women-owned SMEs through access to finance, training and mentoring, with a zero-interest rate on loans for an initial period. The FCMB bank in Nigeria has launched a SheVentures initiative which offers support to women-owned SMEs through access to finance, training and mentoring with zero-interest rates for an initial period of three months. Over 15,000 women-owned SMEs have so far benefitted from funding and training, since 2019. (see website of FCMB bank).

Other innovations by insurers, lenders and providers of concessional finance can more directly incentivise DRR. Incentives for DRR can be sharpened, particularly in developing countries, by drawing in capital from impact investors, who may be willing to accept a lower rate of return where measurable risk reduction objectives are attained under payment-by-results approaches.

Example:

The Africa Risk Capacity’s proposed Xtreme Climate Facility seeks to tie insurance premium payments to the uptake of DRR by African farmers (African Risk Capacity, 2020).
3.3 Broader business community

The broader business community has the expertise, the financial resources and the network to support the uptake of DRR. Especially larger corporations, being relatively less resource constrained and less exposed to disaster risks, might be in a position to facilitate DRR uptake by SMEs along their value chain, both upstream and downstream. A higher DRR uptake can be promoted through supporting more efficient contracting models, supporting more innovative business models, either financially, technologically or through capability building and through incentivizing the implementation of prevention-focused BCPs. Larger corporations, as well as other stakeholders of the broader business community, will benefit from promoting DRR through lower supply chain risks.

Large corporations can enhance SME resilience by adopting efficient contracting models. An example of this is the Joint Contracts Tribunal (JCT), construction contracts with extreme weather clauses introduced in the UK in 2011, which shifted the risk of adverse weather away from individual contractors onto the employer (see Box 11) (Designing Buildings Wiki, 2020; Womble Bond Dickinson, 2018). This enabled the contractor to claim a fair and reasonable extension of time to the project, without risk of penalty. These clauses boosted the resilience of SMEs through improved revenue security, and reduced supply chain risks for larger businesses themselves. Similarly, blockchain-based smart contracts can make the transactions more efficient and improve resilience to cyber risks.

Last but not least, large corporations can also support innovative and resilient business models for SMEs.

Example:
In the Netherlands, a SME and its corporate buyer participated in a smart contract using a blockchain supply chain finance platform, namely we.trade (FinTech Magazine, 2020). This enabled the SME to complete the transaction within a day, rather than the average 40-45 days it typically takes.

Example:
In the UK, JCT extreme weather clauses in construction contract helped shift the risk of adverse weather events away from the contractor and onto the employer.

Example:
In the Philippines, SM Group, a real-estate conglomerate, is providing free data storage to 5,000 SMEs to house their legal and insurance documents, improving their resilience to disasters (see Box 10).

14 The Joint Contracts Tribunal produces standard forms of construction contracts.
4 Current business continuity planning guidance and practices

Prevention-focused business continuity planning which integrates ERM methods can be an “entry point” for DRR, but current SME uptake is low and current BCP lacks focus on prevention. The leading and recently updated International Standard on Business Continuity Management Systems (ISO 22301:2019) defines business continuity planning as ‘a documented management system to protect against, reduce the likelihood of occurrence, prepare for, respond to, and recover from disruptive incidents when they arise’. Aspects of this process, notably the need to understand and prioritise key sources of business risk, can be a useful starting point for more strategic approaches to risk management by SMEs that balance reactive and preventative approaches to risk management. Yet, current SME uptake of business continuity planning is generally low and BCPs of SMEs which do engage in business continuity planning tend to be too focused on ex post recovery measures. Reasons for these stylized facts seem to be too complex business continuity planning guidance, lack of prevention focus and lack of SME capacity, among others.

This section provides details on business continuity planning guidance (Section 4.1), stylized facts on business continuity planning uptake and examples of current BCPs of SMEs (Section 4.2), as well as details on barriers to the uptake of prevention-focused BCPs (Section 4.3)
4.1 Current standards

Current business continuity planning guidance comes from international bodies, governments and businesses, and is adopted by SMEs on a voluntary basis. BCPs are part of Business Continuity Management (BCM) or a ‘management process that identifies threats to an organisation and the impacts to business operations’ (ISO 22301:2012). The recently updated International Standard on Business Continuity Management Systems (ISO 22301:2019) is the leading standard outlining principles of a BCP, as well as its interaction with BCM (for details see Box 1). The standard is intentionally broad to suit the needs of different sized businesses in diverse sectors and regions. Businesses can voluntarily choose to be ISO certified and adopt a BCP standard. Besides the ISO guidance, there also exists guidance from governments, such as the UK government’s BCM Toolkit. The BCM Toolkit follows national BCM guidance (BS25999) from the British Standard Institute (BSI). Similar to the ISO guidance, the BCM guidance is intended to ‘enhance enterprise resiliency and help an organisation respond to and recover from both unanticipated and anticipated business interruptions’ (HM Government, 2020). Finally, guidance comes from businesses in the technology sector, such as IBM Services (2020), who provide business continuity planning guides for technological risk and insurers, like AIG, who provide BCP templates to address natural disasters and accidental business damage in the real estate sector (AIG, 2013).

While business continuity planning focuses on ex post recovery, it encompasses elements that can support effective preventative planning at a low cost. While some business continuity planning definitions have recognised the importance of ex ante measures like the updated version of ISO 22301 (ISO, 2019), business continuity planning largely focuses on post-disaster recovery. For example, the UK government’s BCM toolkit predominantly outlines recovery-focused measures (HM Government, 2020). Integrating aspects of enterprise risk management (ERM) into BCPs can better connect risk analysis and reduction, supporting effective preventative planning at a low cost (see Box 2). More specifically, elements of business continuity planning, such as risk assessment (ISO 22301 Clause 8), can be leveraged from ERM. Approved prevention strategies, as part of ERM, can also be documented in actionable BCPs. As PwC (2020) highlights, “organisations that integrate ERM into their strategic planning efforts have found that BCM enhances both their value creation objectives and their protection objectives” (PwC, 2020).
The International Standards Organisation's (ISO) standard on business continuity management systems outlines requirements “to plan, establish, implement, operate, monitor, review, maintain and continually improve a documented management system to protect against, reduce the likelihood of occurrence, prepare for, respond to, and recover from disruptive incidents when they arise” (ISO, 2019). The sub-clause highlighted in bold font is the key DRR element in the ISO standard.

An opportunity to operationalise the DRR element lies in Clause 8 (also discussed below in Box 2):

- Operations (Clause 8): key planning activities include business impact analysis, risk assessment, ex ante and ex post measures, communication channels and testing.

Clause 8.4 of ISO 22301:2019 outlines key principles for developing a comprehensive BCP:

- Specificity: be specific regarding the immediate steps that are to be taken during a disruption;
- Flexibility: be flexible to respond to the changing internal and external conditions of a disruption;
- Prioritisation: focus on the impact of incidents that potentially lead to disruption;
- Relevance: be effective in minimising the impact through implementing appropriate solutions;
- Allocation: assign roles and responsibilities for tasks within them.

Other components of the standard highlight how a BCP interacts with BCM, this includes:

- Understanding the organisation and its context (Clause 4): understand the firm’s products and services, stakeholders and regulatory environment, to help determine the scope of BCM.
- Leadership (Clause 5): leaders should understand the resources required to implement BCP.
- Planning (Clause 6): outline objectives, identify risks and list success criteria for BCM.
- Support (Clause 7): appoint competent employees to design and implement BCMs. The business should communicate their BCP with all employees and customers in advance of an incident.
- Evaluation (Clause 9): evaluating performance against the plan.
- Improvement (Clause 10): list actions for continuous improvement including audits, reviews and exercises as per the Plan-Do-Check-Act (PDCA) Cycle of management.


Source: UNDRR based on ISO (2019) and ISO (2020)
Box 2  DRR opportunities in current business continuity planning and ERM ISO standards: ISO 22301 and ISO 31000

- Ex ante measures in Business Continuity Management (ISO 22301)
  - The updated version of ISO 22301 (ISO, 2019) emphasises the role of business continuity planning ‘to protect against, reduce the likelihood of occurrence [of disasters]’.
  - As part of planning activities, businesses are encouraged to conduct a risk assessment and a business impact analysis (Clause 8) to gain an understanding of risks and integrate them in business continuity strategy. Businesses are also encouraged to implement ex ante prevention measures and implement testing and communication channels as part of preparedness.

- Enterprise Risk Management principles (ISO 31000)
  - The focus of ERM “is to identify, assess, monitor, and report major risks that could impede or otherwise negatively affect achievement of an organisation’s strategic goals and operational objectives” (UNDRR, 2020).
  - ERM programs use risk scenario analysis or ‘strategic foresight’ as a “structured process that leads to a better understanding of the ways multiple factors can combine to both cause vulnerabilities and create opportunities” (UNDRR, 2020).
  - In order to ensure value creation and protection, ERM standards are based on multiple principles such as: continual improvement, best available information, integrated, inclusive and customised ERM (ISO, 2018).

- The best of both ERM and business continuity planning standards can be integrated at a level that is practical given the limited capacity and resources of SMEs. As an example, risk assessment as part of business continuity planning can follow the three steps process outlined in ERM of risk identification, analysis and evaluation.

Source: UNDRR based on ISO (2019), ISO (2018) and UNDRR (2020)

4.2 Current BCP uptake among SMEs: Stylized facts

At present, few SMEs have BCPs in place and those that do tend not to focus on elements that can support prevention and therefore underinvest in DRR. Figure 5 displays levels of BCP uptake by SMEs around the world. Globally, on average, only 20-30% of SMEs have a written BCP in place (Runyan, 2006). Evidence on BCPs is disparate and unrepresentative, especially for developing countries with high levels of unregistered SMEs. Moreover, effectiveness of measures defined in BCPs remains uncertain. Even where SMEs have a written plan, 73% reported that they had not tested their plan in the last year, and 50% admitted they are not planning to do so within the next year (SmallBusiness.co, 2015). In contrast, most large firms have a BCP and follow BCM practices as outlined in ISO 22301.

When business continuity planning is adopted by SMEs, it tends to lack focus on risk prevention. While current SME BCPs are specific and relevant, as per the criteria outlined by ISO 22301, they often lack three elements outlined in ISO’s guidance (see Box 2):
• Risk prioritisation: few SMEs are strategically assessing risks and prioritising them in their BCP. Business continuity planning guidance does not focus on prioritisation between prevention and recovery to understand which risks can be mitigated and which risks have to be addressed post-disaster. Consequently, SME BCPs primarily focus on recovery time objectives and emphasise disaster management, such as employee evacuation (Hiles, 2010). Risk prevention is particularly important when preparing for uncertain futures. Therefore, larger firms complement BCPs with Enterprise Risk Management (ERM) to ‘identify, assess, monitor, and report major risks that could impede or otherwise negatively affect achievement of an organisation’s strategic goals and operational objectives’ (ISO, 2019). However, in the absence of simple guidance and templates supporting prevention, SMEs lack capacity to adopt this holistic approach.

• Flexibility: SMEs lack flexibility in their BCPs. For example, while DRR measures, such as cloud backups, minimise multiple risks and reduce the creation of new risks, a focus on recovery tools may be only relevant to certain hazards.

• Appropriate resource allocation: most BCPs lack the ex-ante measures outlined in the 2019 BCP ISO standard (e.g. business impact analysis, risk assessment, ex ante measures, communication channels and testing). Focus on recovery leads to inappropriate allocation of roles within an organisation. For example, while recovery-focused BCPs emphasise emergency response drills, they lack risk preventative measures, such as BCP certification for nominated staff.

There are however some exceptions in which SMEs take innovative approaches and have successfully leveraged their business continuity planning process to integrate DRR measures and reduce risk:

• Cleone Foods, a food and beverage SME in the UK, has leveraged elements of business continuity planning (risk assessment and prioritisation) for preventative planning against frequent flooding, and diversified its supply chain, significantly reducing losses (see Box 12 in Appendix I.iv).

• In Kenya and Senegal, female-led SMEs have devised innovative approaches to pool capacities for preventive planning. Specifically, the SMEs formed women support groups which enabled knowledge-sharing, supported pooling of climate resilient technologies, facilitated market linkages and ultimately increased their market power.

A lack of BCPs among SMEs not only hinders the adoption of DRR but leads to inefficient reactionary responses. Instead of strategic risk management, SME approaches are ad hoc, closely resembling reactionary individual decision-making (Crick et al., 2018; Power et al., 2020). For example, given higher levels of informality, SMEs are more likely to lay-off employees post-disaster as compared to larger firms. A UNDRR survey indicates that between 15-35% of SMEs reduce the number of their employees in the aftermath of a disaster. In Kenya and Senegal, 25.6% SMEs resort to strategies such as reducing commodities produced after an extreme weather event (Atela et al., 2018). Moreover, companies might sell company capital or even rely on personal or family savings, as well as other informal financing mechanisms, to recover from disasters (Wiatt et al., 2020).

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15 See definition provided by United Nations (2016) in the definitions list.
The adoption of reactionary recovery measures lead to business contraction and can have negative spillover effects, particularly in developing countries, where most SMEs are comprised of vulnerable groups. Common results of reactionary disaster recovery measures are the depletion of capital, customer loss, reputational damages and unsustainable financial liabilities, such as debt or bankruptcy, and can lead to longer-term business contraction (Crick et al., 2018). This can exacerbate inequalities between SMEs and larger firms, especially in developing countries, where SMEs are disproportionately affected by disasters (Crick et al., 2018). Moreover, reactionary strategies can create new risks. For example, reduced income revenues and school closures in the aftermath of COVID-19 has increased the risk of child labour by smallholder farmers in Ethiopia (Maplecroft, 2020). Put differently, emphasising prevention could help SMEs realise the triple dividends of resilience, which includes minimising immediate disaster losses, stimulating economic activity by reducing disaster risk and generating co-benefits, such as the protection of ecosystem services and other SDG objectives (Surminski et al., 2016).

Given the increased vulnerability of SMEs with no prevention-focused BCP and the risk of potential negative economic spillover effects, the following sections will focus on identifying key barriers to prevention-focused BCPs (Section 4.3) as well as opportunities to reduce these (Section 5).

Figure 5 BCP uptake by SME in different geographic regions

Note: Data was obtained from Evans et al. (2008), (APEC, 2014), (UNIDO, 2020), (Intellecap, 2015), (Japan Ministry of Economy, 2019), (Red Cross Red Crescent Climate Centre, 2017), (Auzzir et al., 2018), (UNISDR Regional Office for the Americas and the Caribbean, 2018)

Source: UNDRR
4.3 Key barriers to SME uptake of prevention-focused BCPs

The literature suggests that there are three key barriers that prevent uptake of BCP by SMEs: low accessibility, low levels of awareness of disaster risks and benefits of BCP, and weak incentives.\(^{16}\) First, SMEs might lack the expertise and financial resources to implement or provide the excessively complicated processes and/or deliverables outlined in official business continuity planning and risk management guidance. Second, compared to large businesses, SMEs are relatively less informed on disaster risk, the opportunities for and benefits of BCPs, and particularly on the role they can play in promoting preventative strategies. For example, 45% of SMEs in the USA obtained risk information from social media and 56% reported high levels of misinformation at the onset of COVID-19 (Facebook, 2020). Third, SMEs are generally under-incentivised to invest in BCPs for a number of reasons. A survey run by SAP amongst USA SMEs found that SMEs most valued improving customer experience and revenue growth. Increasing organisational agility, which includes disaster preparedness, was the last of their top ten priorities. Each of the three key barriers will be explained in more detail below. For examples, see Figure 6.

Low firm accessibility to adopt and adhere to a BCP arises from unclear and complex guidance as well as a lack of firm capacity:

- **Unclear and complex guidance: the existing guidance (such as the BSI’s BCM standard and ISO 22301 certification) has been too complex**, given the low organisational capacity of SMEs, not focused enough on prevention and failed to meet the needs of SMEs. However, the latest guidance from ISO (2019) recognises this and is taking initial steps towards simplifying it (see Box 1). For instance, the ISO recommends user-focused BCP, which may entail having multiple smaller plans rather than a large document. The updated guidance also recognises the unnecessary cost and complexity of implementing the standard for SMEs. Yet, standard-setting organisations need to take some more steps to provide simple and relevant business continuity planning definitions and standards, as well as customised solutions which can help ease SMEs into business continuity planning.

SMEs have weak incentives to invest in BCPs due to high costs, low regulatory requirements and missed opportunities by lenders and insurers.

- **High costs**: due to their financial constraints, most SMEs cannot afford upfront investments into developing their own risk frameworks and to access risk information.

- **Low regulatory requirements**: the majority of business continuity planning standards are not enforced. Some regulations outline awareness amongst businesses but remain discretionary.

- **Missed opportunities for lenders and insurers to create mutually beneficial situations**: most frequent SME interactions, such as with insurers and lenders, do not incentivise business continuity planning uptake. For example, most SME loans or contracts are not dependent on an SME having a BCP. As a result, SMEs consider business continuity planning to be a low priority when compared to immediate profits. Incentivising business continuity planning uptake is beneficial for lenders and insurers themselves as well, as it can reduce their portfolio risk.

\(^{16}\) E.g. a UNDRR survey of SMEs identified lack of capacity (i.e. accessibility), awareness and incentives as the biggest barriers for SME resilience; specifically disasters?"
<table>
<thead>
<tr>
<th>Barrier</th>
<th>Sub-barrier</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhance accessibility</td>
<td>Unclear and complex guidance</td>
<td>A large proportion of SME participants in an ARISE workshop in the Philippines found BCP guidance ill-suited to the hazards they were experiencing. Guidance was focused on natural hazards, with little information on pandemic risks which SMEs deemed to be very important. 79% of Italian SMEs note that local governments and other sources of information have failed to provide them with relevant BCP and DRR material (UNDRR, 2020).</td>
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<td></td>
<td>Low firm capacity</td>
<td>While some studies indicate SMEs are more likely than larger firms to discuss risks at the board level (58%), there is little evidence of SMEs strategically assessing risk or undertaking scenario-based analysis (CCC, 2016).</td>
</tr>
<tr>
<td></td>
<td>Financial insufficiency</td>
<td>Insufficient financial capacity led 78% of SMEs affected by the 2011 Thailand floods to operate in the same location after the disaster (Haraguchi &amp; Lall, 2015).</td>
</tr>
<tr>
<td>Increase awareness</td>
<td>Low awareness of BCPs and disaster risk</td>
<td>45% of SMEs in the USA obtained risk information from social media and 56% reported high levels of misinformation at the onset of COVID-19 (Facebook, 2020).</td>
</tr>
<tr>
<td></td>
<td>Inadequate knowledge of DRR co-benefits</td>
<td>In Cameroon, a partner-led NbS programme increased yields for 58% of farmers, diversified revenue streams for 81% and reduced the impact of droughts.</td>
</tr>
<tr>
<td>Provide incentives</td>
<td>High costs</td>
<td>Risk frameworks and tools, like BCM or ERM systems, are not publicly available and are often the intellectual property of large firms, such as IBM’s software and cloud-based solutions to BCP (Surinski et al., 2018).</td>
</tr>
<tr>
<td></td>
<td>Low regulatory requirements</td>
<td>In the UK, the Civil Contingencies Act 2004 only mandates BCP for emergency service and health providers.</td>
</tr>
<tr>
<td></td>
<td>Low financial or contractual incentives</td>
<td>A survey run by SAP amongst USA SMEs found that SMEs most valued improving customer experience and revenue growth. Increasing organisational agility, which includes disaster preparedness, was the last of their top ten priorities.</td>
</tr>
</tbody>
</table>

Source: UNDRR based on multiple sources.
• Capacity constraints: SMEs lack the resources and expertise to undertake preventative planning. Limited numbers of employees mean business continuity planning responsibilities may be concentrated amongst critical staff. Additionally, in countries with low adult illiteracy rates, SMEs may lack expertise to follow business continuity planning standards and develop plans supporting prevention. SMEs also lack capacity for risk assessment due to poor access to tools and tailored risk information and advice.

• Financial constraints: Falkner & Hiebl (2015) find that SME business continuity planning capacity is also limited due to financial constraints, such as low profit margins. SMEs may not be able to afford technological solutions to implement scenario analysis or seek risk advisory services, as done by larger firms (TCFD, 2017). Low financial capacity is exacerbated in the aftermath of a disaster, which leads to short-termism in BCPs.

Low awareness of disaster risks and business continuity planning benefits (including DRR co-benefits):

• Low awareness: most SMEs have low awareness of business continuity planning benefits, stemming from a lack of understanding of disaster risks (International Recovery Platform, 2016). In the absence of reliable evidence from local authorities, information uncertainty can dissuade SMEs from investing in a BCP, especially during prolonged events such as a pandemic.

• Inadequate knowledge of DRR co-benefits: even when SMEs are implementing business continuity planning, there are missed opportunities to realise DRR benefits by not focusing on prevention. Most SMEs have inadequate knowledge about co-benefits of DRR investments. For example, in Cameroon, due to knowledge-sharing between small-holder farmers, a nature-based solution (NbS) programme increased yields for 58% of farmers and improved their crops’ resilience to drought (see Box 14, Appendix I.iv).
5 Opportunities for increasing SME uptake of business continuity planning

Policymakers, financiers and the broader business community can support DRR uptake by SMEs through promoting the more widespread adoption of business continuity planning, with a greater emphasis on prevention. As detailed in Section 4, the process of writing a prevention-focused BCP requires businesses to systematically assess and prioritize key sources of risks to their business, as well as to strategically select a balanced set of preventive (i.e., DRR) and reactive measures. Thereby, prevention-focused business continuity planning encourages DRR uptake, which in turn increases SME resilience and thereby generates potential dividends for all stakeholders. Policymakers, financiers and the broader business community thus have an inherent interest in promoting the establishment of BCPs. Yet, all three stakeholders also have a critical role to play in reducing the barriers to SME uptake of prevention-focused BCPs, including through the integration of BCP and ERM strategy and practice.

As Section 3 did for all other key barriers to DRR uptake, this section sets out opportunities for policymakers (Section 5.1), financiers (Section 5.2) and the broader business community (Section 5.3), larger businesses in particular, to promote SME uptake of prevention-focused business continuity planning.
5.1 Policymakers

Policymakers can play a critical role in increasing accessibility of business continuity planning approaches, increasing awareness of the benefits of BCPs, as well as providing incentives to write BCPs, through promoting prevention-focused BCP definitions, building knowledge-sharing platforms, providing incentives through local resilience forums and offering digital BCP tools, as well as funding dissemination activities. More specifically, policymakers can encourage the uptake of BCPs through:

Mainstreaming prevention into BCP definitions by standardising disaster and risk terminologies across ERM and business continuity planning and combining it in a simplified format (standard setting institutions, IOs, NGOs): standard setting institutions, ERM and business continuity planning practitioner groups as well as NGOs can place more emphasis on prevention, by further integrating ERM concepts (e.g. risk assessment, scenario analysis, strategic foresight) in BCP definitions. For instance, disaster risk terminologies can be standardised and business continuity planning and ERM guidance outlined in ISOs 23301 and 31000, respectively, can be integrated into one coherent framework. Box 3 proposes such an integrated prevention-focused business continuity planning framework.

Policymakers should work with stakeholders from the business community. For example, larger corporations can provide resources for testing business continuity planning frameworks. Moreover, they can help to develop a comprehensive typology of BCPs, which can be customised based on SME capacity and characteristics such as region, sector and position in supply and value chains, as well as types of hazards faced. As an example, the OECD (2020b) and SMEs themselves established foresight initiatives which include cooperation in stakeholder analysis and identifying a roadmap to understand risks (Vishnevskiy et al., 2015).

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17 The forthcoming ISO 31050, guidance for managing emerging risks to enhance resilience, seems to partly address this (ISO, 2021).
• Funding dissemination activities and providing a knowledge-sharing-platform (Key actors: governments, public bodies, international organisations): policymakers can provide funding for activities which support the dissemination of information, non-commercial guidance or tools for business continuity planning. This may include funding for training as provided by AGRA in Kenya (see Figure 8). Moreover, local policymakers could build peer-to-peer knowledge-sharing platforms on which SMEs could exchange lessons learned or best practices. The platforms could be digital as well as in-person formats (e.g. fairs, regular meet-ups). For example, in the UK, the Civil Contingencies Act 2004, provides the legal framework for local authorities to raise business continuity planning awareness amongst SMEs, through local resilience forums (Cabinet Office, 2012).

• Note on larger corporations, business chambers, practitioner groups: policymakers should work together with stakeholders from the business community to define dissemination channels requiring funding and test their efficacy. Moreover, policymakers should cooperate with local business communities to design the most appropriate knowledge-sharing platforms and to leverage their network for its promotion or even facilitation.

• Providing incentives for uptake of business continuity planning (Key actors: international organisations, national governments, ministries of trade, local authorities, non-profit organisations): Policymakers can provide incentives for seed funding for innovative solutions for business continuity planning. Local policymakers in particular can support innovative ways to pool capacity at the community scale (e.g. provision of on-the-go BCP tools) and facilitate knowledge-sharing, as piloted by Resilience First (Resilience First, 2021).

• Note on business chambers: local governments and business associations can also collaborate to provide additional incentives for BCP uptake.
Box 3. Six Steps for integrating ERM elements into business continuity planning

Building on ILO’s existing business continuity planning methodology, six steps are recommended for SMEs to integrate DRR and risk management principles, presented in the figure below. ERM elements (ISO 31000) such as strategic foresight (scenario analysis), risk evaluation and treatment (strategic DRR decision-making), as well as monitoring and review (updating and enhancing BCP), are all integrated in the proposed guide. The proposed prevention-focused business continuity planning framework can support effective preventative planning, even amongst SMEs with limited capacity, as highlighted in the examples for steps 1-6. The presented framework synthesises insights from desk-based research on current approaches to business continuity planning and opportunities to support more preventative planning.

Having reviewed various business continuity planning and ERM guidance, the ILO (2020)’s guide was selected based on the following criteria:

- SME-focus: designed specifically for SMEs.
- Universality: applicable across hazards outlined in the Sendai Framework.
- Replicability: relevant for different sectoral and geographic contexts.
- Simplicity: employs the ‘4Ps’ (People, Processes, Profits and Partnerships) framework, which can be easily adopted by SMEs.

The 6-Steps framework:

**Step 1: identify key products, services and supporting value chains.** The first step involves identifying key products, services and value chains in order to identify the objectives for the BCP. This can be based on criteria such as revenue generation, client demand, concentration of suppliers and the costs of non-delivery due to contractual obligations. Establishing infrastructure criticality and other supply chain linkages can help identify the objectives. For example, an adverse weather event such as flooding can impact all SMEs reliant on essential transport routes, not just SMEs directly impacted by the disaster (Wedawatta et al., 2010).

**Example:**

*Cleone Foods has outsourced stockholding and distribution to prevent geographic concentration of the supply chain (Box 12, Appendix I.iv).*
### Step 2: establish the objectives of your BCP, with an emphasis on prevention

Step 2 of the ILO methodology encourages SMEs to draft a BCP. The ILO recommends objectives such as resuming operations as quickly as possible following disruptions, prioritising employee safety and recovery time objectives (RTO). However, objectives can also have an emphasis on prevention, such as avoiding any disaster losses, and safeguarding supply chains (Hiles, 2010). Objectives should recognise SME-specific constraints, such as limited capacity, reliance on informal solutions and low resource access. The purpose of the objectives is to later guide the prioritisation of DRR actions (Step 4) as well as to inform the need for partners (Step 5).

**Example:**

Cleone Foods added flood risk prevention as a business objective as part of its BCP (Box 12, Appendix I.iv).

### Step 3: evaluate the impact of hazard risks following ISO 31000 and 31050 guidance

Step 3 involves accessing risk information like weather updates and leveraging simple risk assessments tools such as the QRE tool developed by UNDRR to evaluate disaster impacts. Understanding and applying scenario planning, strategic foresight and scenario analysis can help SMEs evaluate current and future risks (APEC, 2013). Scenario analysis is particularly relevant for hazards with uncertainties such as climate risks (UKCIP, 2017).

**Example:**

Ball and Co conducted a detailed risk assessment to understand and prevent flood risk.

### Step 4: list and prioritise actions to protect your business, using the 4Ps framework, as well as metrics and screening criteria for DRR options

SMEs can prioritise DRR actions based on their objectives, and screening criteria outlined in Box 5. At this stage, SMEs can also assess cash reserves and seek financial support from partners (Step 5) based on the corresponding investment needs.
**Step 5: establish and strengthen your external partnerships.** Actions defined in Step 4 can leverage support of external partners, including governments, financiers, insurers and larger businesses.

**Example:**

i - SM Group, a large real-estate conglomerate, is providing free BCP training to SMEs (see Box 10, Appendix I.iii).

ii - In Cameroon, an NbS programme involved collaboration between farmers, NGOs and academia (see Box 14, Appendix I.iv).

---

**Step 6: maintain, review, update and continuously enhance your BCP.** To ensure up-to-date-ness and longevity, SMEs should write down their BCP and improve their BCP continuously, taking into account new information in light of disruptions. Some BCP providers recommend comprehensively reviewing formal BCPs and testing of emergency drills annually (RockDove Solutions, 2017). For example, SMEs have used COVID-19 induced supply-chain disruptions as an opportunity to update their BCPs (Harvard Business Review, 2020). As Butler (2018) suggests, SMEs should consider whether they thrive, not just survive in the event of a disaster.

**Example:**

American SMEs have used COVID-19 induced supply-chain disruptions as an opportunity to update their BCP plans (Harvard Business Review, 2020).

---

The proposed framework is a step forward to overcome the key challenge of integrating business continuity planning (ISO 22301) and ERM practices (ISO 31000) and can serve as an entry point for DRR.
Figure 7 Illustration of a prevention-focused business continuity planning framework

1: Identify your key products, services and value chains

2: Establish the objectives of your BCP

3: Evaluate disaster risk & co-benefits of DRR

4: List and prioritise action to protect your business

5: Establish and strengthen partnerships

6: Review, update & enhance your BCP

Focus on prevention in objectives

Focus on value chains

Emphasise prevention in objectives

Source: UNDRR

Note: New ERM elements are highlighted using call outs, original six steps are retained from ILO (2020)
Figure 8 Recommendations for policymakers (e.g. international organisations, government and public bodies, non-profit organisations, standard setting bodies)

<table>
<thead>
<tr>
<th>Goal</th>
<th>Recommended actions</th>
<th>Case Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhance accessibility</td>
<td>Mainstream prevention into BCP definitions (standard setting institutions, IOs, NGOs; with larger corporation, business chambers, practitioner groups)</td>
<td>The OECD (2020) and SMEs established foresight initiatives which include cooperation in stakeholder analysis and identifying a roadmap to understand risks</td>
</tr>
<tr>
<td>Increase awareness</td>
<td>Fund dissemination activities in pilot locations; M&amp;E to gauge success</td>
<td>In Kenya, AGRA (Alliance for a Green Revolution in Africa) funds a partnership between agricultural producers and buyers, that conducts ex-ante training to support SMEs with DRR decision-making. In the UK, local authorities can use local resilience forums to connect SMEs and promote integration of ERM and BCP.</td>
</tr>
<tr>
<td>Provide incentives</td>
<td>Provide incentives through supporting support innovative ways to pool capacity at the community scale (national governments, local authorities, IOs, NGOs; with business chambers)</td>
<td>Digitisation of prevention-focused BCP can enable SMEs to complete guidance on-the-go using simple online forms and apps. There is scope to enhance pre-existing apps that build organisations resilience, such as ShaRe by Resilience First by adding ERM elements. This can be extended to SMEs via business chambers or ministries of trade.</td>
</tr>
</tbody>
</table>

Note: Italics: stakeholders responsible. Bold highlights: DRR elements in case study.
Source: UNDRR based on Conservation Agriculture For Food Security, 2020; FAO, 2017; Mukherjee et al., 2020; UNDRR, 2020b; UNISDR Regional Office for the Americas and the Caribbean, 2018; UP ISSI, 2016, Resilience First, 2021

5.2 Financiers

Financiers such as insurers and lenders play a key role in providing incentives to increase business continuity planning adoption (Key actors: lenders, donors, financial institutions). Financiers benefit from increased uptake of BCP that encompasses prevention, as it reduces their overall portfolio risk. They can incentivise business continuity planning uptake via lower insurance premiums and conditional-ity on loans, as seen in Figure 9. For instance, 27% of respondents to a survey by the Business Continuity Institute (BCI) said that BCP certification has helped to reduce insurance costs (Business Continuity Institute 2020). In Australia, Suncorp bank offers premium reductions if SMEs have undertaken disaster mitigation strategies. Similar strategies can be used by providers of concessional finance and financial institutions to add conditionality to loans.

Figure 9 Recommendations for financiers (e.g. insurers, lenders, providers of concessional finance)

<table>
<thead>
<tr>
<th>Goal</th>
<th>Recommended actions</th>
<th>Case Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide incentives</td>
<td>Provide financial incentives to SMEs for BCP adoption through insurers and financiers (e.g. BCP certification to lower insurance costs/loan repayment instalments, leveraging risk management expertise of insurance sector) (lenders, donors, financial institutions)</td>
<td>84% insurers in the UK are willing to provided improved insurance policy terms if a business had a BCP in Place (BIBA, 2020). Insurers can be part of pilots which provide reduced minimum premiums to SMEs with a BCP or ERM system. Large banks prolonging equated monthly instalment (EMI) dates for SMEs affected by COVID-19 in India. As a preventive measure, future EMI dates and payments can be linked to prevention-focused BCP undertaken by SMEs</td>
</tr>
</tbody>
</table>

Note: Italics: stakeholders responsible. Bold highlights: DRR elements in case study.
Source: UNDRR based on AIG, 2013; BIBA, 2020
5.3 Broader business community

The business community can provide critical help for SMEs to implement business continuity planning and ERM (large corporations, business consortiums, business chambers and BCP vendors and providers). Business stakeholders can in particular help to provide necessary information and tools for creating a BCP, build SME capacity, encourage peer-to-peer exchanges on business continuity planning and incentivise the establishment of a BCP (also see Figure 10). Studies suggest that what larger corporations and business chambers will gain from promoting BCP as business continuity planning is highly effective when implemented across sectors and value chains (Hiles, 2010).

Figure 10 Recommendations for broader business community (e.g. large corporations, business consortiums, business chambers, BCP vendors and providers)

<table>
<thead>
<tr>
<th>Goal</th>
<th>Recommended actions</th>
<th>Case Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enhance accessibility</td>
<td>Disseminate information and tools for risk assessment and decision support (large corporations) Build capacity among SMEs for implementation of BCP (business forums, partitioner groups)</td>
<td>In the Philippines, SM Group set the target of making 5,000 SMEs disaster-resilient through prevention focused BCP training. MaRS Start-up toolkit allows SMEs to select strategic foresight options most feasible to them. Some providers like BCI, complement ISO standards with practical templates and tools to support SME implementation. This can be further improved by integrating ERM and BCP approaches.</td>
</tr>
<tr>
<td>Increase awareness</td>
<td>Increase awareness of BCP and disaster risks through peer-to-peer partnerships, connecting SMEs with larger businesses and through the creation of a network of BCP champions (large businesses, ARISE members)</td>
<td>A business peer-to-peer mentoring programme in New York has resulted in 83% survival rate of early-stage mentored SMEs, which includes risk management advice.</td>
</tr>
<tr>
<td>Provide incentives</td>
<td>Provide contractual incentives (e.g. minimum BCP requirements in supplier agreements) to SMEs for BCP adoption (large businesses and suppliers)</td>
<td>In the Philippines, SME suppliers of large enterprises are often required to undertake BCP in supplier agreements. This can be enhanced by adding DRR conditionality, like mandatory risk assessment.</td>
</tr>
</tbody>
</table>

Note: Italics: stakeholders responsible. Bold highlights: DRR elements in case study.

Source: UNDRR based on ARISE Philippines, 2019; BCI, 2020b; Business Mentor NY, 2020; Gonzales, 2019; Sustainability West Midlands, 2013
The following actions are recommended for stakeholders of the broader business community to encourage higher business continuity planning uptake:

Improving access to relevant information and tools for risk assessment, DRR benefit assessment and decision support (large corporations, business consortiums): first, large corporations and business consortiums can provide information and tools to enable SMEs to conduct risk assessments, stress-test value and supply chains, and identify multiple, intersecting hazards without external support (see Box 4). Second, they can provide simple metrics and screening criteria to help SMEs prioritise different DRR options. These screening criteria should account for the co-benefits of DRR, which can strengthen the business case for the adoption of a BCP. For further details on screening criteria, see Box 5. Third, as recommended by the Business Continuity Institute (2018, 2019), tools for decision-making advice should be provided alongside the information on risk and DRR benefits. This includes using automated communication and notification systems, BCM platforms, incident management platforms or social media to communicate with suppliers. Some tools already exist to support business decision-making for specific hazards, such as the UKCIP Business Climate Adaptation Wizard, which assists SMEs to make climate adaptation investments.

Note on government and public bodies, international organisations, non-profit organisations: when it comes to providing risk-related information, policymakers should support larger corporations or business consortiums. For instance, public bodies, such as meteorological offices, can run pilot initiatives which provide SMEs with context-specific risk information and tailored decision-making advice (e.g. Kukua weather station service provides weather updates and agronomic information to smallholder farmers in Africa). In addition, risk assessment resources can be developed in cooperation with policymakers (e.g. by leveraging existing tools like QRE; see Box 4).
Box 4  Examples for existing risk assessment tools and decision making advice

- MaRS Startup Toolkit: provides strategic foresight planning capabilities to SMEs and startups in the technology sector in Canada (MaRS Startup Toolkit, n.d.)
- Quick Risk Estimation (QRE) tool: designed in the aftermath of COVID-19 by UNDRR for SMEs, including those in the informal sector, to understand their disaster exposure and vulnerability.
- Decision-making advice combined with weather alerts; in Africa, smallholder farmers receiving weather-alerts from the Kukua weather station in combination with agronomic advice which has resulted in a reported increase in income by 10 to 82% (FAO, 2017)

Source: UNDRR

Box 5  Screening criteria for SMEs, financiers and insurers to introduce DRR in BCP

Prioritising DRR investments require screening criteria and metrics to implement measures which are most appropriate for an SME. Screening criteria and metrics include:

- Efficiency: how cheap is a DRR solution to implement? What is the return on investment (ROI) required for this measure to be profitable? What are the upfront costs associated with the investment? What financing options are available to implement this? Metrics: ROI, cost of the DRR solution
- Effectiveness: effectiveness is about track record of BCP measures and ability to reduce risk. A policy is effective if it delivers appropriate adaptation. Metrics: cost-benefit analysis, avoided losses
- Feasibility: how easy are DRR measures to implement? What skills, tools and resources are required? Are DRR measures and co-benefits in line with other business objectives (e.g. crop productivity from NbS measures)? What are the business recovery time objectives (RTO)? How risk averse is the SME to different types of disasters? Metrics: RTO, total avoided costs, number of trained employees needed to implement solution
- Longevity: how long does it take to realise benefits? How often are reinvestments required?
  Metrics: time taken to realise benefits

DRR prioritization criteria should factor in SME capacity and local contexts. Flexible frameworks are required based on varying levels of SME capacity. DRR screening criteria and decision making frameworks should be adaptable, factoring in SME characteristics, such as low access to finance (Inoni, 2016). Local context, such as the complexity of SME supply chains and dependence on critical infrastructure, also needs to be considered, as it can affect multiple businesses in the value chain (UKCIP, 2017).

Source: UNDRR
Building capacity among SMEs for implementation of prevention-focused business continuity planning: leading ERM programs use the technique of risk scenario analysis to move beyond traditional enterprise risk management assessments (PwC, 2020). To enable SMEs to follow suit, the broader business community can enhance SME capacity by providing BCP certifications, guides and templates that account for SME resources and needs. Support is also needed in the testing of BCPs. For example, a network of coaches from larger corporations or practitioner groups can help SMEs conduct periodic testing, as suggested in the six-step guide (see Box 3). They can also provide training or workshops accessible through digital platforms. The resources, the testing support and trainings should ideally be provided in local languages and accessible through digital platforms. For example, a large conglomerate in the Philippines provides BCP supporting prevention training and risk management capacity building to 5,000 SMEs, see Box 6.

Note on government and public bodies, international organisations, non-profit organisations: as highlighted above, policymakers play a critical role in funding the capacity building activities driven by the business communities.

Box 6 A real-estate conglomerate supports 27% of SMEs in the Philippines with BCP training

- SM Prime Holdings, Inc. (SM Prime) is one of the largest integrated property developers in Southeast Asia, and a pioneer in integrating DRR into BCP. The businesses BCP includes risk assessments, capacity building and disaster-resilient infrastructure. In 2019, it set the target of making 5,000 SMEs disaster-resilient through delivering BCP training. Other capacity building initiatives include:
  - Free data storage in a disaster-resilient facility: free data storage to 5,000 SMEs to house their insurance and operational documents.
  - Flexible contracts: waived rental fees for tenants, 75% of which are SMEs (up to US $200 million).
  - Leveraging disaster risk reduction organisations: SM Group advocates for SMEs resilience through Public Private Partnerships (PPPs) with partners such as the National Resilience Council, APEC Emergency Preparedness Capacity Building Centre, UNDRR Global Education and Training Institute and other organisations which provide technical assistance.

Source: UNDRR based on ARISE Philippines, 2019; Gonzales, 2019
• Fostering a market for BCPs which are accessible to SMEs (larger corporations, business consortiums and chambers): larger corporations, business consortiums and chambers can cooperate with BCP vendors to ensure the development of an SME-focused marketplace for business continuity planning services or resources. At present, most BCP providers cater to larger firms. Working with BCP providers can accelerate BCP adoption amongst SMEs, and help address deficiencies in BCPs, such as preparedness for multi-hazard risks (DRI International, 2020).

• Increasing awareness of business continuity planning, ERM and disaster risks: larger corporations can leverage their business networks (such as ARISE) to form peer-to-peer partnerships for SMEs with larger corporations and business continuity planning champions along their value chain. Larger corporations and selected champions can showcase their success stories of business continuity planning based risk prevention or disaster recovery to increase awareness.

• Providing incentives for prevention-focused business continuity planning uptake through contracts (business consortiums and chambers). For instance, in Asia, larger businesses are putting conditions on SMEs to have BCP.
6 Conclusion and next steps

This report has set forward detailed recommendations for actions which should be taken by stakeholders in government, finance and business to encourage SME uptake of DRR, and thereby enhance SME resilience. The recommended actions are tailored to help alleviate the four barriers to DRR uptake, namely lack of access to finance, lack of resilient business models, asymmetric contractual relationships leading to inefficient contracting, lack of prevention-focused business continuity planning. The recommendations are addressed to policymakers, financiers and the broader business community given their regulatory and financial capacity, expertise and relationships to effectively execute the required actions needed for significantly increasing SME uptake of DRR. Moreover, as highlighted before, all parties should have an incentive to contribute as all stand to gain from potential interventions.
Policymakers in particular should take actions to rectify all of the market and government failures that give rise to the barriers described above. To improve access to finance, interventions could include increasing the flows of public and concessional finance, removing regulatory barriers to private finance, and enhancing the capacity of local financial institutions to appraise DRR investments. Moreover, policymakers can encourage the adoption of resilient business models by providing supporting infrastructure and enhancing SME capacity and awareness, by reducing regulatory barriers and barriers for the adoption of digital technologies. To promote more efficient contracting models, policymakers should address power imbalances, for instance through low-cost dispute resolution and improve SME capacity to understand contracts and bargain collectively. Lastly, actions by policymakers are need for increasing the uptake of business continuity planning that supports prevention. Potential actions could include mainstreaming prevention in BCP definitions, funding business continuity planning dissemination activities, building knowledge-sharing platforms and providing incentives for the establishment of a prevention-focused BCP.

In particular, policymakers should support the mainstreaming of prevention-focused BCPs. This report suggests a prevention-focused business continuity planning framework which better suits the needs of SMEs. The four enhancements are: first, broadening business continuity planning objectives to comprise prevention, in particular through integrating ERM standards, second, proposing scenario-based risk assessment to identify causal sources of vulnerability, third, prompting SMEs to consider DRR options to eliminate identified sources of vulnerability, fourth, seeking partnerships through which DRR can be implemented.

Financiers have a role in channeling investment into DRR and in incentivising risk-reduction. There is a large opportunity for innovative financing and insurance instruments which incentivise DRR and are more affordable to SME needs. Likewise, financiers can create incentives to increase business continuity planning adoption. Analogously to stimulating DDR uptake, they can offer BCP-contingent incentives via lower insurance premiums and conditionality on financial and insurance products.

Similarly to policymakers, the broader business community has a critical role to overcome the market failures leading to low DRR uptake through mainly providing expertise, resources and incentives. For instance, by adopting more efficient contracting models, larger corporations can provide incentives for efficient SME uptake of DRR. In addition, by providing digital infrastructure, larger corporations can support innovative digital business models. When it comes to encouraging business continuity planning adoption along their supply chain, larger corporations will probably need to provide all three: First, larger corporations should provide opportunities for best-practice sharing, like peer-to-peer partnerships. Second, businesses should build-up SME capacity by offering training, guidance and certifications as well as by providing the necessary information, tools and decision guides. Also, the broader business community should corporate with BCP vendors to encourage SME-specific affordable BCP products. Third, beyond expertise and resources, they can provide incentives for BCPs by offering BCP-contingent contracts to SMEs.
As a next step, the recommendations outlined in this report for each stakeholder group should be tested in pilots. This report provided detailed recommendations on actions which could be taken to increase SME uptake of DRR. However, across all areas, there is a lack of practical evidence on precisely what works under what conditions. Pilots of sector-specific guidance and institutional models or, in case of potential incentive schemes to increase business continuity uptake, more strategic studies to develop detailed policy or contract models can fill these gaps. Figure 11 and Figure 12 provide suggestions for pilot programmes for each of the actions recommended in this report. Specific actions for enhancing BCP uptake are suggested in Figure 12, including empirical analysis and the development of prevention-focused business continuity planning tools.

Pilots focused on testing solutions to increase business continuity planning uptake in particular could be carried out in regions and sectors where the BCP market for SMEs is more mature. High hazard, low-middle income regions where BCPs are reasonably well established, such as Asia and the Caribbean, exemplify many of the key challenges identified in this report but are also likely to be more receptive to pilot studies. Furthermore, some countries have specialist providers of BCPs, and convening groups (e.g. Caribbean Chambers of Commerce (CARICHAM)) that can play a key role in ensuring pilot studies gain initial traction and have sustained impact.

Once models have been established and tested in these regions they can be scaled up and adapted to other regions and settings.

Figure 11
Actions to increase investment in DRR, support resilient business models, improve contracts

Potential solutions to address barriers to investment in DRR

<table>
<thead>
<tr>
<th>Programme</th>
<th>Model development</th>
<th>Suggested pilots</th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donor support for DRR by SMEs</td>
<td>• Assess case for lending to SMEs for DRR as part of donor spending on resilience</td>
<td>• Amend capital adequacy rules to unlock investment by (re-) insurers (European Union)</td>
<td>Providers of concessional finance</td>
</tr>
<tr>
<td></td>
<td>• Identify mechanisms, such as a regional resilience fund (developing countries)</td>
<td>• Pilot tailored financial instruments:</td>
<td>International development and finance agencies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>– E.g. Expand micro-finance for DRR (e.g. Philippines)</td>
<td>Governments</td>
</tr>
<tr>
<td>Mechanisms for financial support</td>
<td>• Consolidate evidence on financing models, success factors and barriers</td>
<td>• Explore expansion of Climate Resilience and Adaptation Finance &amp; Technology Transfer Facility (CRAFT) for DRR finance to other regions/sectors</td>
<td>Financial institutions (monetary financial institutions, SME divisions of public and private banks)</td>
</tr>
<tr>
<td></td>
<td>• Develop candidate solutions to increase funding, assess cost and impact (developing countries)</td>
<td></td>
<td>Business chambers</td>
</tr>
</tbody>
</table>

18 A companion paper that focuses on enabling conditions for enhanced DRR and provides an initial review of such models.
### Potential solutions to support the development of resilient business models

<table>
<thead>
<tr>
<th>Programme</th>
<th>Model development</th>
<th>Suggested pilots</th>
<th>Stakeholder</th>
</tr>
</thead>
</table>
| Reduce barriers and provide incentives for innovation | - Develop models for government to incentivise efficient approaches, drawing on evidence of successful innovation in similar fields (e.g. DRF), experience of COVID-19 (e.g. construction, transport, across sectors)  
- Develop regulatory models that reduce barriers to new business models (e.g. targeting complexity of tax system, barriers to international diversification) (e.g. European Union, Africa, Latin America) | - Apply SM Group’s model of digital infrastructure provision to other regions (e.g. Caribbean) | - Governments  
- Business chambers  
- Large corporations  
- ARISE members |

### Potential solutions to foster adaptation of efficient contracts

<table>
<thead>
<tr>
<th>Programme</th>
<th>Model development</th>
<th>Suggested pilots</th>
<th>Stakeholder</th>
</tr>
</thead>
</table>
| Research/pilots on what works                  | - Synthesis on experience of contracting models, evidence of success factors/barriers, impacts (e.g. agriculture, construction)  
- Develop contract model archetypes, assess applications to key sectors/regions | - Pilot new contractual models in the construction sector with the Centre for SME Development (e.g. United Kingdom)  
- Conduct research on the propagation of risk along value chains (e.g. global; manufacturing and agriculture sector) | - Governments and public bodies  
- Business chambers  
- Large corporations  
- Business consortiums  
- Pilot SMEs |
| Capacity building                              | - Support capacity building activities                                              |                                                                                 |                                                                            |
| Regulatory changes                             | - Develop models of arbitration and enforcement                                     |                                                                                 |                                                                            |

Notes: Bold: key activities. Parathesis: suggested regions and sectors for the implementation of the pilot programmes

Source: UNDRR
### Potential solutions to enhance incentives for BCP writing

<table>
<thead>
<tr>
<th>Model development</th>
<th>Suggested activities and pilots</th>
<th>Stakeholders</th>
</tr>
</thead>
</table>
| **Incentives for BCP through financial sector** | - Desk research and interviews to inform strategic study on standards required by lenders and insurers to integrate aspects of ERM into BCPs to focus on prevention, costs and benefits – opportunities to develop, risks to address and DRR activities to pursue  
- **Strategic study** on opportunities for insurers and financiers on how to integrate BCP focused on DRR through SME insurance and financing, prospective benefits to stakeholders, next steps  
- Run pilot initiatives in sectors and regions suggested | - Local governments  
- International DRR organisations  
- ARISE members  
- Business chambers |
| **Incentives through contracts**          | - Parallel work programme to above, focusing on contractual incentives to adopt BCP             |                                   |
| **Incentives for innovation**             | - Develop models for governments to incentivise efficient approaches, drawing on evidence of successful innovation in similar fields (e.g. DRF, ERM), experience of Covid  
- Pilot DRR models                           |                                   |

### Potential solutions to enhance accessibility to prevention-focused BCPs

<table>
<thead>
<tr>
<th>Model development</th>
<th>Suggested activities and pilots</th>
<th>Stakeholders</th>
</tr>
</thead>
</table>
| **Research to understand what works**    | - Regional workshops with SMEs and large corporations to assess increase in DRR activities following BCP  
- **Empirical analysis** on the implications of COVID-19 for SME BCP planning focused on prevention | - ARISE members  
- Business chambers (e.g. FICCI, CARICHAM) |
| **Apply and pilot enhanced BCP guidance**| - Workshop with BCP standard setting institutions to identify ways of integrating prevention, and elements of ERM into BCP and in a simplified format  
- Run pilot initiatives in sectors and regions suggested to test risk assessment / decision support approaches (e.g., apply and test eco-centric BCP models in agriculture sector, India; place-based BCPs, UK)  
- Carry out M&E  
- Develop accessible BCP as well as **risk assessment tools and tailored risk information** based on pilot evidence (e.g., digitalisation of BCPs, Caribbean; partner with weather station service to link risk information with BCP updates for agriculture sector, East Africa)  
- Develop and share **screening criteria and metrics** for SMEs to prioritise risk management measures in BCP | - ARISE members  
- Business chambers  
- Pilot SMEs  
- Risk information providers  
- Insurers |
| **Enhance capacity of SMEs to develop BCP focused on prevention** | - Deliver **customised risk management training** in pilot areas based on local needs and capacity (e.g. digital and language accessibility)  
- Facilitate **peer-to-peer partnerships** and connect SMEs with larger businesses supporting BCP  
- **Network of BCP champions** (e.g. large businesses, ARISE members) to support with BCP planning  
- Foster a marketplace for BCP solutions which focus on prevention and integrate relevant aspects of ERM by consulting with BCP vendors to customise solutions to SME needs  
- **Guidebook** for BCP vendors on addressing barriers in the BCP marketplace, integrating strategic foresight into BCP and recommendations on how to approach SME clients | - Business chambers  
- Practitioner groups |
## Potential solutions to increase awareness of prevention-focused BCPs

<table>
<thead>
<tr>
<th>Model development</th>
<th>Suggested activities and pilots</th>
<th>Stakeholders</th>
</tr>
</thead>
</table>
| **Broader dissemination** | ▪ Partner with international stakeholders to develop a plan (including content and channels) to disseminate DRR / planning information widely  
▪ Knowledge-sharing platform to facilitate peer-to-peer SME exchange of BCP good practices  
▪ Workshop with risk information institutions, business associations, financiers and insurers to identify channels of circulating risk information and risk assessment tools with SMEs  
▪ Fund dissemination activities in pilot locations. M&E to gauge success  
▪ Guidance on dissemination activities for other stakeholders | ▪ Local governments  
▪ International DRR organisations  
▪ ARISE members  
▪ Business chambers |

### Notes:  
**Bold:** key activities. **Parathesis and italic:** suggested regions and sectors for the implementation of the pilot programmes

### Source:  
UNDRR
### Annex

#### 7.1 I.i Categorisation of actors

**Figure 13**  Definition of actors per sub-category and with examples

<table>
<thead>
<tr>
<th>Stakeholder Group</th>
<th>Sub category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policymakers</td>
<td>International organisations</td>
<td>UNDRR, FAO, development agencies</td>
</tr>
<tr>
<td></td>
<td>Standards organisations</td>
<td>ISO, BSI</td>
</tr>
<tr>
<td></td>
<td>Governments and public bodies</td>
<td>National and regional authorities, ministries of trade, weather stations, local authorities</td>
</tr>
<tr>
<td></td>
<td>Non-profit organisations</td>
<td>NGOs (e.g. DRI International), academia (e.g. Centre for SME Development), practitioner groups (e.g. BCI)</td>
</tr>
<tr>
<td>Financiers</td>
<td>Insurers</td>
<td>AIG, Allianz</td>
</tr>
<tr>
<td></td>
<td>Providers of concessional finance</td>
<td>Countries and regional organisations (e.g. EU), international aid organisations (e.g. Red Cross)</td>
</tr>
<tr>
<td></td>
<td>Lenders</td>
<td>Governments, banks, international institutes (e.g. EBRD)</td>
</tr>
<tr>
<td>Broader business community</td>
<td>Large corporations</td>
<td>UPS, Deloitte</td>
</tr>
<tr>
<td></td>
<td>Business consortiums**</td>
<td>ARISE, local business forums</td>
</tr>
<tr>
<td></td>
<td>Business chambers*</td>
<td>CARICHAM, US Chamber of Commerce</td>
</tr>
<tr>
<td></td>
<td>BCP vendors and providers</td>
<td>SM Group, PwC</td>
</tr>
</tbody>
</table>

**Note:**  *Business chambers are understood as network of businesses receiving some government funding (hence playing a more official role in representative processes).** Business consortiums, on the other hand, are understood as fully private or non-profit organisations.

**Source:**  UNDRR
Implementing BCP measures based on the 4Ps Framework

- The ILO recommends the 4Ps framework to draft an exhaustive list of actions in a BCP.
- People: preventive measures include risk information, capacity building and simulation exercises provided to all employees. For example, 27% of respondents to a survey by the BCI said that BCP certification has helped reduce ex post insurance costs (BCI, 2020a). Upskilling leadership is important to ensure they can operate in an unstable environment.
- Processes: implementing the BCP plan (Step 2) requires a plan walk-through and strengthening operational processes. For instance, ICT service providers can prioritise contingency data storage facilities. Risk management processes such as evaluation protocols should be tested in advance.
- Profits: a stable cashflow needs to be established based on credit risk (Step 3). For instance, product or supplier diversification can be prioritised to ensure continued revenue streams in the event of a disaster.
- Partnerships: collaborating with upstream and downstream partners is key to ensure supply chain resilience. Collaboration can include formal risk-sharing agreements, flexibility in contracts, pre-negotiated recovery arrangements and sharing risk information. Partnerships with customers can include digitalisation of services, seen in the aftermath of COVID-19 (Facebook, 2020)

**People**
- In-house training, simulation drills and safe evacuation of staff

**Processes**
- Following BCP plan, pre-existing protocols and contracts

**Profits**
- Restoring all business operations

**Partnerships**
- Partnering with suppliers, customers and the wider municipality

Suzuki Kogyo Co. Ltd’s BCP measures successfully followed the “4Ps” of SME BCP planning outlined by the ILO
7.3 1.iii Case studies on boarder update of DRR by SMEs

Box 8 Coffee production in Ethiopia is dominated by smallhold farmers who are less likely to have implemented DRR, making them more vulnerable to drought

<table>
<thead>
<tr>
<th>Sector</th>
<th>Smallhold</th>
<th>Larger Farm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethiopia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Challenge - Ethiopia’s coffee sector is particularly exposed to droughts, which are becoming more frequent and severe in Ethiopia as a result of climate change

SMEs dominate coffee production in Ethiopia, with smallholder farmers account for 95% of total coffee production.

- 80% of smallholders already live below the poverty line, meaning losses threaten to put producers further into poverty, driving food insecurity and health issues in the long-run.
- Coffee accounts for 35% of exports and 70% of Ethiopia’s foreign exchanges, meaning losses to the sector can result in significant macroeconomic impact.

Impact - Smallholders are less likely to have implemented DRR and have less bargaining power with buyers, causing greater revenue losses from drought than for larger firms.

- Smallhold coffee producers are less likely to have implemented DRR practices than larger firms, meaning the drought results in 40pp greater yield losses.
- Upstream buyers are easily able to switch between small producers, resulting in further revenue losses for Ethiopian smallholders, who represent 2.8% of global exports.

Coffee prices are already low, causing smallholders to resort to coping strategies that cut costs, including the use of child labour and substitution to lower value but less drought vulnerable crops.

Notes: (1) areas in grey represent regions with either no agricultural production or no data availability (2) Journeyman (2003)

Box 9 In the UK, a match-funding platform helped finance the digitalisation of SMEs, allowing them to operate despite the COVID-19 pandemic

<table>
<thead>
<tr>
<th>Sector</th>
<th>Country</th>
<th>Barriers addressed</th>
<th>BCP Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>United Kingdom</td>
<td>Finance</td>
<td>Match-funding for DRR activities</td>
</tr>
</tbody>
</table>

Challenge - A survey conducted in August 2020 showed that the revenues of 70% of European SMEs had declined as a result of the COVID-19 pandemic, with severe knock-on effects. One in five was concerned they might default on loans and have to lay off employees. Overall, more than 50% feared their businesses may not survive longer than 12 months, even though 20% had already taken advantage of government aid programmes, such as tax breaks or payments to furlough staff (McKinsey & Company, 2020).

Best Practices - Back-to-Business COVID-19 match-funding platform:

- Crowdfunding: pay It Forward London enables businesses to raise vital funds and stay afloat, rebuild and recover from the impacts of COVID-19 through crowdfunding.
- Match-funding: the Mayor of London’s £1 million Back to Business Fund offers up to £5,000 in match funding to SMEs through the Pay It Forward London crowdfunding platform.
- Attaching DRR conditions: the government match-funding will be given to SMEs investing in longer-term resilience measures.
- Focusing on digitalisation: for instance, the funds can be used for online payment technologies or digital marketing training. Similar schemes can be expanded to other areas in the UK.

Impact - The scheme helped SMEs finance a digital transition, which allowed them to increase their long-term resilience to the pandemic.

- By October 2020, more than 200 businesses had applied for the match-funding and more than £200,000 has been allocated through the Back To Business Fund.
- The money allocated has also been leveraged to generate an additional £450,000 in investment for affected businesses.
- The scheme supported SMEs in expanding their operation online, investing in their future and adapting to safe, socially distant trading.

Source: UNDRR
Box 10 In the Philippines, provision of cloud computing infrastructure by large businesses helped improve the resilience of SMEs and their value chain

<table>
<thead>
<tr>
<th>Sector</th>
<th>Country</th>
<th>Barriers addressed</th>
<th>BCP Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>Philippines</td>
<td>Innovation</td>
<td>Match-funding for DRR activities</td>
</tr>
</tbody>
</table>

**Challenge** - The SM Group, a real-estate conglomerate, works with more than 30,000 small and medium enterprises, both directly and indirectly, representing about 27% of total SMEs in the Philippines. These SMEs are SM Group’s mall tenants, traders, and suppliers mainly in retail. The Philippines is one of the most disaster-prone countries in the world, with, for example, 6 typhoons affecting millions of inhabitants during the COVID-19 pandemic (Nikkei Asia, 2021).

**Best Practice** - Infrastructure provision:

- the SM Group has provided free storage data to serve as the repository for documents essential to early recovery and business continuity, such as legal and insurance documents.

**Impact** - The successful implementation resulted in:

- over 5,000 SMEs have availed themselves of the service offered by the SM Group.
- cloud computing has helped SMEs improve their resilience by diversifying their ICT assets so that one disaster will not affect their entire system.
- the SM Group’s push for disaster-resilient SMEs helped achieve a more sustainable value chain and business continuity.

Source: UNDRR
Box 11 In the UK, JCT extreme weather clauses in construction contract helped shifting the risk of adverse weather events away from the contractor and onto the employer

<table>
<thead>
<tr>
<th>Sector</th>
<th>Country</th>
<th>Barriers addressed</th>
<th>BCP Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>United Kingdom</td>
<td>Contracts</td>
<td>Inclusion of disaster clauses</td>
</tr>
</tbody>
</table>

**Challenge** - Construction SMEs have historically had a high vulnerability towards extreme weather events in the UK, such as heavy floods in 2007 and significant snowfalls in 2009/2010. In the 2009 snowfall, a large share of the businesses which were predicted to go out of business due to operations failure were in the construction sector. At the time, 99% of construction businesses in the UK were SMEs.


JCT contracts were initially introduced in 2011, which shifted the risk of adverse weather events away from the contractor and onto the employer.

In the case of an adverse weather event, the JCT contract enables the contractor to claim a fair and reasonable extension of time to the project, without risk of penalty. Although there are situations in which the contractor can claim additional loss and expense claims, this is typically not the case.

**Impact** - SMEs using the JCT contract benefit from revenue security, assured that they will not be replaced by larger firms who may be better equipped to adapt to extreme hazards.

In 2017, there were 330,239 construction SMEs operating in the UK. Each contributed towards an average of ~£4,500 of value added per week. This highlights the opportunity for direct value gained by SMEs as a result of fair contract extension in the case of extreme weather.

Where construction supply chains are damaged, project extensions also allow SMEs flexibility and time in procuring new resources to ensure completion of the work.

Source: UNDRR
### 7.4 Case Studies on good practice BCP by SMEs

Case studies on best practice BCP planning can support SMEs and policymakers build resilience. This section presents case studies on best practice BCP planning. Innovative BCP practices used to address local challenges are highlighted in the construction, agriculture, utilities and transport sectors. Findings are designed to support SMEs as well as policymakers, financiers and large corporations who can enable conditions for DRR planning.

**Box 12** In the UK, a food manufacturer implemented contractual agreements which have prevented supply chain disruption due to extreme weather, power failure and IT disruptions

<table>
<thead>
<tr>
<th>Sector</th>
<th>Country</th>
<th>Barriers addressed</th>
<th>BCP Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport</td>
<td>United Kingdom</td>
<td>Ability, awareness, incentives</td>
<td>Plan, risk analysis, suppliers, energy, contracts</td>
</tr>
</tbody>
</table>

**Challenge** - Cleone Foods Ltd is a food and beverage SME based in the UK. Significant delays in its production facilities can lead to financial penalties imposed by supermarkets.

**BCP Best Practices** - Cleone Foods proactively conducted a risk assessment which revealed it is vulnerable to heavy snow, flooding, power failure and IT disruptions. This informed the following BCP measures:

- **BCP plans**: comprehensive resilience plans were made after carrying out a risk assessment, including a survey and plan specifically for flood risk.
- **Supply chain diversification**: Cleone Foods outsourced stockholding and distribution to prevent geographic concentration of the supply chain.
- **Cloud backups and backup generators**: the SME has dual main servers and mirrored hard drives which enable remote access to all IT systems. These backups have warranty, enabling replacement in the event of site damage. Diesel powered generators have also been installed to secure freezer supplies during a power cut.
- **Impact** - A comprehensive BCP has made Cleone Foods a resilience leader in the local community:
  - Avoided losses: there have been no supply chain disruptions since the BCP was implemented.
  - Winning new clients: the SME won its first large contract with a supermarket because of its strong BCP plans to avoid production delays.
  - Teleworking flexibility: employees can work from home because of cloud backup systems.

Cleone Foods followed all the steps outlined in the step-by-step BCP guide.

Source: UNDRR based on Sustainability West Midlands (2020)
Box 13 An 83% survival rate was noted among SMEs involved in a peer-to-peer business mentorship programme in New York City

<table>
<thead>
<tr>
<th>Sector</th>
<th>Country</th>
<th>Barriers addressed</th>
<th>BCP Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>United States</td>
<td>Ability, awareness</td>
<td>Training, partners</td>
</tr>
</tbody>
</table>

Challenge - In the USA, 60,000-100,000 SMEs were affected by Hurricane Sandy in 2012, 30% of which were unable to resume business operations after the storm.

BCP Best Practices - In response to the disaster, the local government created Business Mentor New York (BMNY), a peer-to-peer business mentorship programme to connect SMEs with larger counterparts. Mentor pairs can exchange BCP lessons during their weekly meetings over the course of three months.

Impact - Following participating in the BMNY programme SMEs benefited from:

- Firm survival: early-stage mentored SMEs had a 83% survival rate.
- Job creation: SMEs with mentors were twice as likely to create new jobs than their counterparts.
- Access to finance: 34% of SMEs reported increased finance opportunities after the programme.
- Updated BCP measures: business advice led to further BCP uptake such as accessing finance opportunities, diversifying suppliers and creating a digital presence to reach customers online.

The BMNY programme followed all the steps outlined in the step-by-step BCP guide.

Source: UNDRR based on BMNY website (2020)
Box 14 In Cameroon, Nature based Solutions (NbS) increased yields for 58% of farmers, diversified revenue streams for 81% and reduced the impact of droughts.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Country</th>
<th>Barriers addressed</th>
<th>BCP Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>Cameroon</td>
<td>Awareness</td>
<td>NbS, training, partners</td>
</tr>
</tbody>
</table>

Challenge - Cameroon is experiencing increasing irregularities in rainfall due to climate change. This is causing reduced yields for smallholder farmers and driving food insecurity in already vulnerable areas.

BCP Best Practices - A policy-led programme funded by the Canadian International Development Agency worked in collaboration with 2,000 poor and vulnerable farmers to improve their resilience through the following BCP measures:

- **Investment in NbS:** the programme provided farmers with access to bio-fertilizers and worked with smallholders to develop drought-resistant seeds.
- **Capacity building and knowledge-sharing:** the programme also included the development of farmer field schools, in which smallholders shared knowledge on different crops and collaborated to develop improved techniques.

Impact - Investment in NbS resulted in:

- **Increased production:** the programme increased yields for 58% of farmers and improved their crops’ resilience to drought. NbS also enhances the capacity of the natural environment to function, improving longer term crop productivity.
- **Diversified revenue streams:** 81% of farmers were able to diversify revenue streams through NbS.
- **Future climate resilience:** NbS increased crop resilience to future drought events.
- **Improved agricultural techniques:** innovative agricultural techniques were adopted after the knowledge exchange sessions.
- **Reduced deforestation and environmental services:** NbS reduced deforestation in the Congo basin, which provides global environmental services including carbon sequestration and biodiversity conservation.

In the absence of a BCP, the partner-led NbS programme followed three steps outlined in the step-by-step BCP guide.

Box 15 In Nigeria, some SMEs have invested in off-grid solar (OGS) generators to address unreliable power cuts and petrol price hikes, reducing energy costs by up to 70%.

<table>
<thead>
<tr>
<th>Sector</th>
<th>Country</th>
<th>Barriers addressed</th>
<th>BCP Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilities</td>
<td>Nigeria</td>
<td>Incentives</td>
<td>Alternative energy</td>
</tr>
</tbody>
</table>

Challenge - In Nigeria many SMEs are opting for off-grid back-up generators due to frequent power cuts causing business disruption. Most backup generators are petrol or diesel operated. Some SMEs purchased OGS generators when the price of petrol increased by 67% per litre in 2016.

BCP Best Practices - OGS generators vary in size and capacity. For instance, a rice-milling SME invested in a 37.8 kW OGS mini-grid constructed by GVE Projects Limited in collaboration with the Bank of Industry, United Nations Development Programme, and the Institute of Electrical Electronics Engineers.

Impact - Diversifying power supply to include OGS has resulted in numerous benefits:

- Cost savings: energy costs for some SMEs have reduced by up to 70% after switching from petrol to solar-operated generators.

- Energy independence and diversification: OGS generators have given SMEs both energy reliability and independence. Some SMEs continue to maintain diesel or petrol-operated generators and have a diverse range of energy supplies.

- Increased production: a rice-milling SME reported faster milling times using an OGS generator compared to its previous diesel-powered energy supply.

- Innovation incentives and climate mitigation: frequent power disruptions have created a business opportunity for the OGS market, which is worth US$ 1.75 billion annually. Investment in OGS also contributes to climate mitigation by reducing reliance on diesel, petrol and other polluting sources of energy.

In the absence of a BCP, SMEs have undertaken the first three steps in the step-by-step BCP guide.

Source: UNDRR based on Punch NG (2018) and OECD (2020a)
7.5 Definitions

- **Business continuity management (BCM) (ISO 22301:2019)** – The International Standards Organisation’s (ISO) standard on business continuity management systems outlines requirements ‘to plan, establish, implement, operate, monitor, review, maintain and continually improve a documented management system to protect against, reduce the likelihood of occurrence, prepare for, respond to, and recover from disruptive incidents when they arise’.

- **Business continuity plan (BCP) (ISO 22301:2019)** – Documented procedures that guide organisations to respond, recover, resume, and restore to a pre-defined level of operation following disruption. Planning also includes, ‘…a documented management system to protect against, reduce the likelihood of occurrence, prepare for, respond to, and recover from disruptive incidents when they arise’ (see above).

- **Cloud Computing – (Neicu et al., 2020)** a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources that can be rapidly provisioned and released with minimal management effort or service provider interaction.

- **Disaster risk reduction (DRR) (United Nations 2016)** – DRR is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development.
  - Annotation: disaster risk reduction is the policy objective of disaster risk management, and its goals and objectives are defined in disaster risk reduction strategies and plans. Disaster risk reduction strategies and policies define goals and objectives across different timescales and with concrete targets, indicators and time frames. In line with the Sendai Framework for Disaster Risk Reduction 2015-2030, these should be aimed at preventing the creation of disaster risk, the reduction of existing risk and the strengthening of economic, social, health and environmental resilience. A global, agreed policy of disaster risk reduction is set out in the United Nations endorsed Sendai Framework for Disaster Risk Reduction 2015-2030, adopted in March 2015, whose expected outcome over the next 15 years is: “The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries”.

- **Enterprise Risk Management (ERM) (ISO 31000: 2018)** – As per the ISO, “a risk management process is normally initiated for the purposes of optimizing the organization’s resource allocation necessary to operate in a particular environment”. ERM can help organizations increase the likelihood of achieving objectives, improve the identification of opportunities and threats and effectively allocate and use resources for risk treatment.
  - UNDRR (2020) explains the focus of ERM ‘is to identify, assess, monitor, and report major risks that could impede or otherwise negatively affect achievement of an organisation's strategic goals and operational objectives.’ ERM programmes also use risk scenario analysis (sometimes referred to as ‘strategic foresight’) as a ‘structured process that leads to a better understanding of the ways multiple factors can combine to both cause vulnerabilities and create opportunities.’

- **JCT clauses (JCT design & build Contracts 2011, 2016)** – Where a ‘relevant event’ (defined as exceptionally adverse weather conditions) impacts on the completion date of a construction project, the contractor may be entitled to an extension of time and, in some cases, loss and expense claims.
• **Nature-based Solutions (NbS) (IUCN 2020)** – Nature-based Solutions (NbS) are defined by IUCN as ‘actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits’.

• **Preparedness (United Nations 2016)** – The knowledge and capacities developed by governments, response and recovery organisations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters. Preparedness is based on a sound analysis of disaster risks and good linkages with early warning systems, and includes such activities as contingency planning, the stockpiling of equipment and supplies, the development of arrangements for coordination, evacuation and public information, and associated training and field exercises.

• **Prevention (United Nations 2016)** – Activities and measures to avoid existing and new disaster risks. Prevention (i.e., disaster prevention) expresses the concept and intention to completely avoid adverse impacts of hazardous events. While certain disaster risks cannot be eliminated, prevention aims at reducing vulnerability and exposure in such contexts where, as a result, the risk of disaster is removed. Examples include dams or embankments that eliminate flood risks, landuse regulations that do not permit any settlement in high-risk zones, seismic engineering designs that ensure the survival and function of a critical building in any likely earthquake and immunisation against vaccine preventable diseases. Prevention measures can also be taken during or after a hazardous event or disaster to prevent secondary hazards or their consequences, such as measures to prevent the contamination of water.

• **Resilience (UN 2016)** – The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.

• **Small and Medium Enterprise (SME)** – There is no unique definition; therefore, the definition varies from country to country and from organisation to organisation.
  - The World Bank defines SMEs based on number of employees: firms with 6–49 employees are small; firms with 50–99 employees are medium sized; and firms with more than 100 employees are considered as large firms.
  - International Finance Corporation (IFC) definition of SMEs: small: 10–49 employees; and medium: 50–300 employees. IFC also uses assets and annual sales as variables for their SME definition. There is also an IFC loan size proxy for defining SMEs.
  - EUROSTAT and SME Performance Review – EU use several breakdowns to accommodate different SME definitions: 0–9 (0 to 9 persons employed), 10–19 (10 to 19 persons employed), 20–49 (20 to 49 persons employed), 50–249 (50 to 249 persons employed), GE250 (250 or more persons employed).

• **Unfair trading practices (European Commission, 2013)** – Practices that grossly deviate from good commercial conduct and are contrary to good faith and fair dealing. UTPs are typically imposed in a situation of imbalance by a stronger party on a weaker one and can exist from any side of the B2B relationship at any stage in the supply chain.
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UN Office for Disaster Risk Reduction (UNDRR)

The nature of our modern world means shocks, stresses and crisis brought about by the interaction between climate change, ecosystem fragility, unplanned urbanization, political or financial instability reverberate globally. Disasters - where natural hazards negatively meet people - are coming faster, lasting longer and hitting harder. The people hit hardest are those who have done the least to cause these significant changes – the poorest.

UNDRR is the United Nations focal point for disaster risk reduction. We work at the intersection between understanding risk and risk impact: reducing disaster loss and preventing the emergence of new risk. UNDRR oversees the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030, supporting countries in its implementation, monitoring and sharing what works in reducing existing risk and preventing the creation of new risk.

https://www.undrr.org