

●●●● PRACTITIONERS'
●●●● DIALOGUE ON
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Strengthening Climate Resilience of Small and Medium-sized Enterprises (SMEs)

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Abbreviations

BDS	Business Development Service
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
INDCs	Intended Nationally Determined Contributions
SMEs	Small and Medium-scale Enterprises
PSACC	Private Sector Adaptation to Climate Change

Executive Summary

Private sector involvement in adaptation and climate resilience has increased in recent years (Surminski, 2013). Small and Medium-scale Enterprises (SMEs) are very important for local communities and powerful drivers of a country's economy (Wedawatta, Ingirige & Amaratunga, 2010), especially in developing countries and emerging economies. Furthermore, countries' commitments to the implementation of their national climate action plans would not be met without the involvement of SMEs. However, climate risks pose serious threats to SMEs (Surminski, 2013; Wedawatta et al., 2010). To a great extent this is due to their difficulty in achieving economies of scale. SMEs' ability to face climate impacts is directly proportional to the scale of their human and financial resources. SMEs' struggles range from limited capital, human resources, technical skills, and knowledge gaps to address planning and infrastructure problems (Wedawatta et al., 2010). One of the main opportunities that have been identified to overcome some of the challenges facing SMEs is the multi-stakeholder consultation approach.

Fostering SMEs as drivers of economic development in developing countries and emerging economies needs to include supportive governance related to climate change adaptation strategies. Given the vulnerability of SMEs to climate change and their importance for their respective economies, key economic variables, e.g., employment, innovation and wealth generation can thereby be strengthened and be made climate resilient (McCann & Ortega-Argilés, 2016; Ballesteros & Domingo, 2015). One of the advantages of developing adaptation strategies within SMEs operations is that the options and incentives available are designed by policies and institutional arrangements that go beyond climate change. They build on related norms, policies and regulations in the infrastructure, water, industrial processes sectors and access to finance. Therefore, the integration of a flexible climate change perspective on the different sectors of the economy can help reduce climate risk exposure and increase their climate resilience.



1. Introduction

Developing countries and emerging economies are at significant risk from the impacts of a changing climate. These risks include a rise in average global temperatures and sea level, changes in precipitation patterns, and variations in frequency and intensity of weather events (IPCC, 2014; Beg *et al.*, 2002). These changes expose states to many natural hazards such as floods, droughts, storms, and coastal erosion, which translate into threats to human health and security, as well as severe economic costs (IPCC, 2014; Samaniego, 2009). As a consequence, many developing countries have committed to implement actions to adapt to the impacts of climate change, as stated in their national climate action plans, also known as Intended Nationally Determined Contributions (INDCs).

In order to face the challenges of the impacts of climate change, there is the need to understand the complex relationship between climate change adaptation, vulnerability and resilience. Adaptation is the process of changes due to projected or experienced undesirable impacts of climate change that lead to a reduction of the degree of risk that a system is exposed to, known as vulnerability (IPCC, 2014; Eakin & Lemos, 2006; Adger *et al.*, 2003).

National climate action plans - Intended Nationally Determined Contributions (INDCs) – reflect the country's ambition for reducing emissions, and adapt to climate change impacts.

Risk can range from low to high temperature, water shortages and land degradation. Besides vulnerability, adaptation is also linked to the concept of resilience. Resilience can be described as the capacity that a system has to absorb shocks and continue functioning (Folke, 2006). Thus, a country's ability to reduce vulnerability to climate change increases its adaptive capacity; hence, its adaptive capacity defines its climate resilience.

Private sector involvement in adaptation and climate resilience has increased in recent years (Surminski, 2013). Small and Medium-scale Enterprises (SMEs) are very important for local communities and powerful drivers of a country's economy (Wedawatta, Ingirige & Amaratunga, 2010), especially in developing countries and emerging economies. According to the World Bank (2015), "formal SMEs contribute up to 45 percent of total employment and up to 33 percent of national income (GDP) in emerging economies". However, climate risks pose serious threats to SMEs (Surminski, 2013; Wedawatta *et al.*, 2010) due to a great extent to their difficulty in achieving economies of scale. SMEs' ability to face climate impacts is directly proportional to the scale of their human and financial resources. SMEs' struggles range from limited capital, human resources, technical skills, and knowledge gaps to address planning and infrastructure problems (Wedawatta *et al.*, 2010).

There are currently several methodologies and tools that provide climate risk assessments and adaptation actions to improve SMEs' resilience to climate change. However, there are many challenges and barriers for SMEs to first, invest in the tools to identify the adaptation actions needed and second, to implement them. This policy brief outlines some of these barriers and challenges and provides some recommendations to have SMEs engaged, based on existing literature and the lessons learned from one approach already being implemented in Morocco.



2. Climate Resilience as a business sustainability strategy for SMEs

2.1 Overview of the problem and the urgency for action: Consequences of doing nothing

Climate change impacts pose increasing risks to business operations and companies' assets. Therefore, SMEs in developing countries and emerging economies, especially those highly exposed to the impacts of climate change, have to consider climate risks in their operations and management/continuity plans.

Out of the 162 countries that submitted their INDCs, 140 included an adaptation component that will need the involvement on SMEs in order to be carried out/fulfilled. Hence the importance of providing SMEs with the necessary means to overcome the barriers identified previously.

SMEs in developing countries account for 90% of the existing private enterprises (DGDA, 2015). Most of them can be found in the trade, agriculture, tourism, and manufacturing sectors. Thus, the consequences of failing to invest in climate resilience now would translate into major economic costs, as well as social and environmental losses, for a country's economy and the world. For example, the Stern Review calculated that the costs of Extreme Weather Events will range around 0.5-1% of the world's GDP by the mid-21st century (Stern, 2007).

On the other hand, climate change also provides business opportunities, both for companies that are quick to adapt and thereby gain a competitive advantage, as well as companies developing products and services to aid the adaptation to climate change. For example, according to market projections, the wastewater, small hydro, and climate and water technology sectors will be the new SMEs' niche (DGDA, 2015).

2.2 Barriers and challenges of climate adaptation measures for SMEs

Some of the main barriers to the adoption of tools and the implementation of the adaptation measures are:

- a) **Knowledge gaps:** Lack of awareness, knowledge, and information about the risks, opportunities and costs of climate change. SMEs have a lack of understanding of climate change, as well as the need and options available to adapt. The costs and losses associated with climate change impacts on their business are unknown to many SMEs; therefore the incentives to invest are absent.
- b) **Finance gaps:** Lack of information and data about the investment costs to implement measures and limited resources to invest in their implementation. There is also lack of information on the company side on where to access the resources available for investing in climate resilience.
- c) **Policy gaps:** Lack of or weak policies to support SMEs to invest in co-creating climate resilience. Most countries do not incentivize nor provide enabling mechanisms for adaptation to climate change. In addition, a targeted approach to the private sector is missing, such as focused economic policy interventions on vulnerable sectors. Insufficient differentiation of the private sector in general (SMEs, big companies, multinationals, finance industry) adds to this problem. In general, SMEs are governed by: weak regulatory climate frameworks, lack of implementation and enforcement of existing climate-related legislation (e.g. land use planning, environmental impact assessments, standards and codes, pricing, pervasive subsidies, among others), weak support in financing mechanisms, among others.

2.3 Opportunities and benefits to invest in climate resilience

One of the main opportunities that has been identified to overcome some of the challenges facing SMEs is the multi-stakeholder consultation approach. This would close the communication and coordination gap between the public and private sectors, and civil society. It translates to bringing together SMEs, government institutions, NGOs, financial institutions, local banks, insurance companies, and any other key stakeholders that should be participating based on the context of the country.

One of the main benefits SMEs will achieve is limiting negative consequences and decreasing future costs. For example, in most cases the costs to adapt are lower than the costs to reconstruct after an extreme weather event. In many cases, resource efficiency measures as a way to prepare for slow-onset change also bring cost advantages and ensure the survival of SMEs. Another benefit is the development of new products, services and markets for climate resilience that is often easier for SMEs as they are provided with flexible structures.

3. Case Study: PSACC

SMEs can take different approaches to face the challenges from the impacts of climate change. These approaches will vary depending on national circumstances as well as the organizational culture of the SMEs. This section will introduce an example from Morocco through which climate adaptation measures by SMEs are supported through the "Private Sector Adaptation to Climate Change" (PSACC) program.

Private Sector Adaptation to Climate Change (PSACC):

The Morocco PSACC program started in 2014 as part of a global program of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, funded by the Federal Ministry for Economic Cooperation and Development (BMZ). Industrial Parks in Morocco are extremely important for the country's economy and act as key multipliers in raising SMEs' awareness and knowledge of climate change and adaptation. The project's pilot industrial zone is Ait Melloul in Agadir with around 300 SMEs. The priority sector is the export-oriented agricultural industry. This is one of the most economically powerful regions in Morocco, but it is also extremely vulnerable, due to a combination of climate phenomena (frequent heavy rainfall with large-scale flooding, heat waves and extreme temperature fluctuations).

PSACC aims to assist SMEs and Industrial Parks in Morocco to perform a climate-change risk and vulnerability assessment, and to develop effective adaptation strategies.

The program developed two methodologies for risk assessment – one for individual SMEs and one for the Industrial Zones, – and an adaptation strategy. So far, two case studies are available (Fish company, Industrial Zone Ait Melloul). The program also developed a website, called Climate Expert (www.climate-expert.org) for SMEs and multiplier organizations in order to provide:

- risk assessment methodologies and frameworks for SMEs and Industrial Zones
- vulnerability assessment tool for SMEs
- cost-benefit tool
- learning programs on resilient strategies
- case studies on SMEs from different sectors
- coming up: Proven business cases



The main objectives and goals of the global PSACC program are:

- To raise awareness, disseminate knowledge about climate change, and provide capacity building and training including manuals for SMEs and multiplier organizations.
- To assist them in developing climate adaptation strategies and to provide advisory services on financing mechanisms for the implementation of climate change adaptation strategies and measures.

The main challenges identified and tested so far include:

1. How to mobilize SMEs in general to invest in climate resilience
2. How to make the business case for adaptation
3. How to attract and mobilize the right partners for the implementation of adaptation strategies
4. How to define adaptation measures for the private sector, especially for SMEs
5. How to guarantee the implementation of adaptation measures identified in vulnerability assessments and successfully harness the commitment of partners and responsible parties for these measures.
6. How private sector intermediaries can promote private investments in Climate Change Adaptation at two levels: SMEs as investors in new measures and innovation within SMEs, and unlocking (new) funding opportunities (private and public) for financing adaptation
7. How to upscale and measure adaptation for SMEs

4. Role of governments: the need for public policy and intervention

The fostering of SMEs as drivers of economic development in developing countries and emerging economies needs to include supportive governance related to climate change adaptation strategies. Given the degree of vulnerability of SMEs to climate change and their importance for their respective economies, key economic variables such as employment, innovation and wealth generation can thereby be strengthened and be made climate resilient (McCann & Ortega-Argilés, 2016; Ballesteros & Domingo, 2015).

As PSACC shows, leadership and political support from governments on addressing the barriers and challenges that SMEs face to take on climate adaptation strategies can create an environment of trust and foster the private-public relationship (Bulkeley, Schroeder, Janda, Zhao, Armstrong, Chu & Ghosh, 2009). Furthermore, governments play a major role regarding enabling mechanisms or initiatives that SMEs can participate in in order to ensure climate resilience in their business operations or provide technologies and services for the community. For example, SMEs in Rwanda benefit through infrastructure, access to government programs and availability of adaptation projects, as well as guidance on resilience-building incorporated into the integrated approach of its National Strategy for Climate Change and Low Carbon Development (Dougherty-Choux & Soltoff, 2015). Additionally, banks foster financing options and products for resilient investments of SMEs.

Promoting solutions to overcome the barriers and challenges for climate adaptation strategies by SMEs also include a review of existing regulatory frameworks (ILO, 2011). The development of new policies or practices that can help reduce the risks of SMEs, such as the creation of incentives, tax breaks and subsidies are only a few examples from governments to address current challenges.



Besides enabling regulatory frameworks and financial interventions, governments can also facilitate access to information and climate change education as demonstrated by the case study above. For this particular option, governments must take a multi-stakeholder approach in order to provide integrated solutions. Basing these capacity building efforts on knowledge partnerships with academia, NGOs and multilateral organizations is important to assure up-to-date expertise and concerted action and can also improve capacities of government actors themselves. For example, the National Competence Center for Climate Change (4C) in Morocco, where a new public private platform will be established and climate data, research materials and contact to academia and scientists will be provided.

For all public sector interventions it is important to address the private sector with a differentiated approach: E.g. sector, size, business model (trade, manufacturing, service). Each case needs different adaptation strategies and differentiation is needed in the gaps to be filled and solutions to be provided by the public sector. This will allow for each country to meet the goals of their national climate action plans.

5. Policy recommendations

In order to address the barriers and challenges that SMEs face in adopting adaptation strategies, some general and policy recommendations drawn from the case study above and existing literature are:

To address the knowledge gaps:

- Enhancing the understanding of climate impacts into the operations of SMEs through comprehensive climate change education and outreach programs, which are designed in a business language and provides case studies (best practices).
- Provide capacity building to SMEs to increase awareness and understanding of the importance of climate adaptation/resilience.
- Develop and enforce capacities for intermediaries to provide business services on resilience.
- Develop a platform/database to provide information about where to access climate data and finance for adaptation.

Knowledge gaps practical example.

The University of the Philippines has been developing an Integrated Sustainability, Climate Resiliency, Energy, and Environment Management (ISCREEM) guidebook. ISCREEM aims to be an easy and understandable guidebook that enterprises can use to understand, embed, and improve the integration of climate resilient thinking, actions, practices, and habits in all aspects of business operations. The implementation of ISCREEM has been designed in a multi-stakeholder environment, including universities, government institutions, and international organizations.

To address the financial gaps:

- Promote mechanisms to engage financial institutions in helping SMEs overcome financial gaps.
- Define and promote an understanding of adaptation investments.
- Promote and foster the creation of public and private partnerships through a multi-stakeholder approach to increase outreach and reduce transaction costs.
- Develop policies that target the creation of incentives and other financial mechanism, in order to have a more efficient use of resources.



To address policy gaps:

- Adjustment of existing regulations in all sectors, in order to incorporate the perspective of climate change as a cross cutting element into the regulatory frameworks.
- Develop and adopt an integrated approach for the operation of SMEs that accounts for climate and non-climate factors and externalities.
- Adjustment of existing regulations and public investment.

6. Concluding remarks

Climate change poses significant challenges to the business operation of SMEs, especially in developing countries and emerging economies. Therefore, it is imperative to uptake adaptation strategies into their daily operations in order to reduce their vulnerability and increase their climate resilience.

Government intervention is pivotal to overcome the barriers faced by SMEs.

It is widely observed that SMEs are more likely to include adaptation measures after experiencing damages resulting from climate related impacts, such as a flood or degradation of infrastructure. This strategy threatens business continuity and survival of many SMEs, given the extra financial and human resources needed to reinstate. Cost-benefit calculations are needed to demonstrate this to the business community, and to prioritize those measures that cover higher risks at lowest costs or bring additional advantages. In many cases, the benefits of integrating adaptation measures as a risk reduction strategy would be higher than the costs.

One of the advantages of developing adaptation strategies within SMEs operations is that the options and incentives available are designed by policies and institutional arrangements that go beyond climate change. They include norms, policies and regulations in the infrastructure, water, industrial processes sectors and access to finance. Therefore, the integration of a flexible climate change perspective on the different sectors of the economy can help reduce climate risk exposure and increase the climate resilience of SMEs.

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