



Assessing the Adaptation Relevance of Businesses: A Selection of Tools

Background

Record-breaking droughts, heatwaves, flooding, storms, and wildfires already inflict substantial economic and social costs on businesses, governments, and communities around the world.

Recent cases such as in Pakistan, where a third of the country was flooded due to excessive rains¹, reinforce the urgent need to promote resilience and adapt to the impacts of climate change.

The concept of resilience refers to a positive transformation, through which people, communities, or businesses are enabled to bounce back faster and stronger from shocks or adverse situations by being better prepared and developing adaptation skills². In the climate context, these shocks are related to the climate change impacts, effects and risks that communities, businesses, and governments are currently facing.

According to the [Intergovernmental Panel on Climate Change's](#) (IPCC) last report³, awareness, assessment, planning, implementation, and monitoring and evaluation are the five general stages of adaptation. In this case, **awareness and identification of significant climate effects and risks are one of the first steps in building adaptive capacity.**

As part of this urgency to adapt to the impacts of climate change, the role of the private sector is now more visible than ever. A growing number of companies, including small and medium enterprises (SMEs) in developed and developing countries, offer products and services that support their customers to adapt to climate change. In the context of this trend, we refer to companies offering adaptation solutions as “Adaptation companies” or “Adaptation SMEs”.

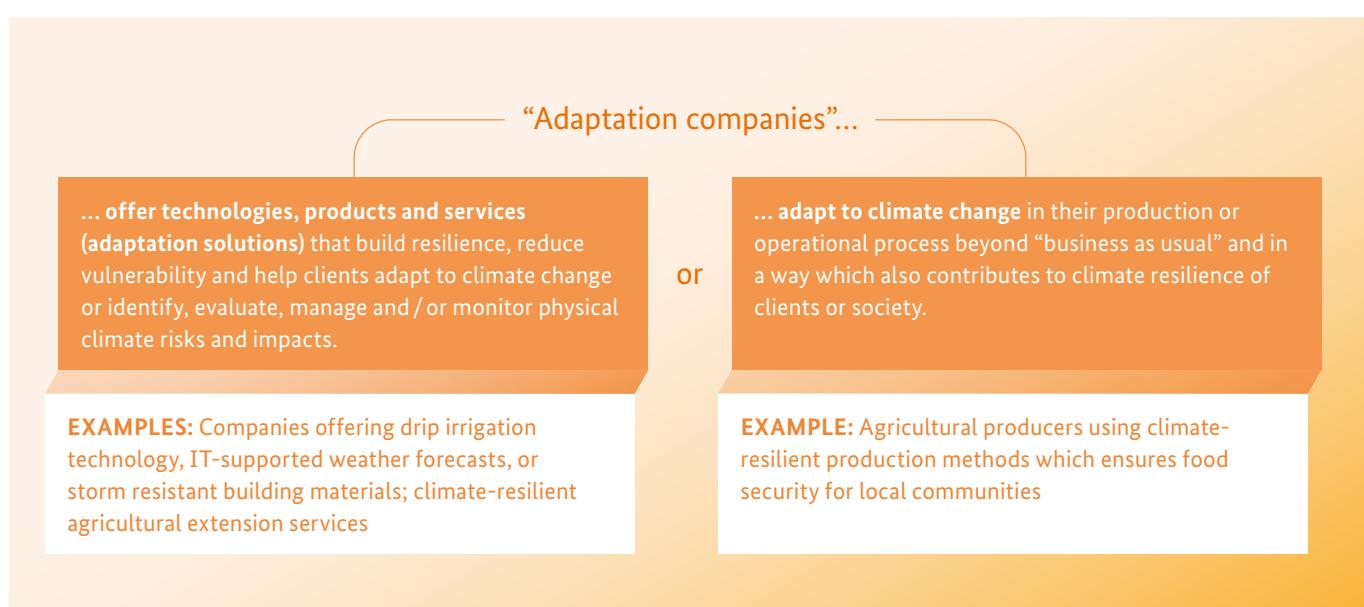


Figure 1: Two ways how companies can generate climate change adaptation impacts⁴

Understanding your business's climate change context: Why is this relevant?

As literacy on climate risk and the development of adaptation solutions is expanding, the attention of investors is also increasing. Consequently, investment funds progressively started to include SMEs and their goods, services, and technologies in their portfolios. SMEs globally comprise more than 50% of all jobs and approximately 90% of all businesses, having a substantial impact on most economies, particularly in developing markets⁵. Therefore, SMEs possess a great potential to contribute significantly to the development of climate adaptation solutions. Despite this, it is necessary to significantly increase financial flows going toward adaptation business development.

Micro, small and medium-sized enterprises face multiple barriers to investing in adaptation, one of the main ones being the lack of climate knowledge and risk assessment⁶. In addition, adaptation businesses often fail to be identified by investors as a result of limited communication of the adaptation relevance by the solution providers.

To establish their adaptation relevance, SMEs need to ask themselves what climate-related risks and impacts are relevant for their region, and which of those they are intending to address. This information will allow the businesses to:

- Identify urgent and maybe unattended and time-sensitive **climate impacts** allowing them to seize new opportunities.
- Identify **new regions** and geographies where their products, services, or technologies can be applied.
- Improve their **marketing and communication strategies**, to promote or communicate their impact investment case to stakeholders.

■ Improve and implement their **impact measurement**, by identifying how their solution fits into the climate change context and proving how it benefits the target group.

■ Improve their **access to funding**. For example, early-stage businesses may employ impact forecasting to raise capital, by approaching investors who are concerned about climate change or attract funding from financial entities by integrating climate risk management in their operations⁷.

To scale their impact and attract the attention of customers and investors, Adaptation SMEs must understand the context they operate in and be able to articulate and communicate their climate adaptation relevance and business model. The following figure presents four practical steps to build an adaptation and resilience “narrative” for your company.

This guide focuses on the first step, where SMEs start by determining their climate change context. SMEs should determine, identify, and understand the implications of climate change risks, impacts, and vulnerabilities based on:

- **Geography:** region, country or specific geographic regions.
- **Sector / industry:** agriculture, infrastructure, transportation, water, etc.
- **Customer / Beneficiary:** smallholder farmers, communities, businesses, local governments, etc.

The following chapter provides an overview of selected tools that SMEs can use to identify climate risks and impacts in their regions and economic sectors, and how this information can be used to build SMEs’ narrative towards their adaptation relevance.

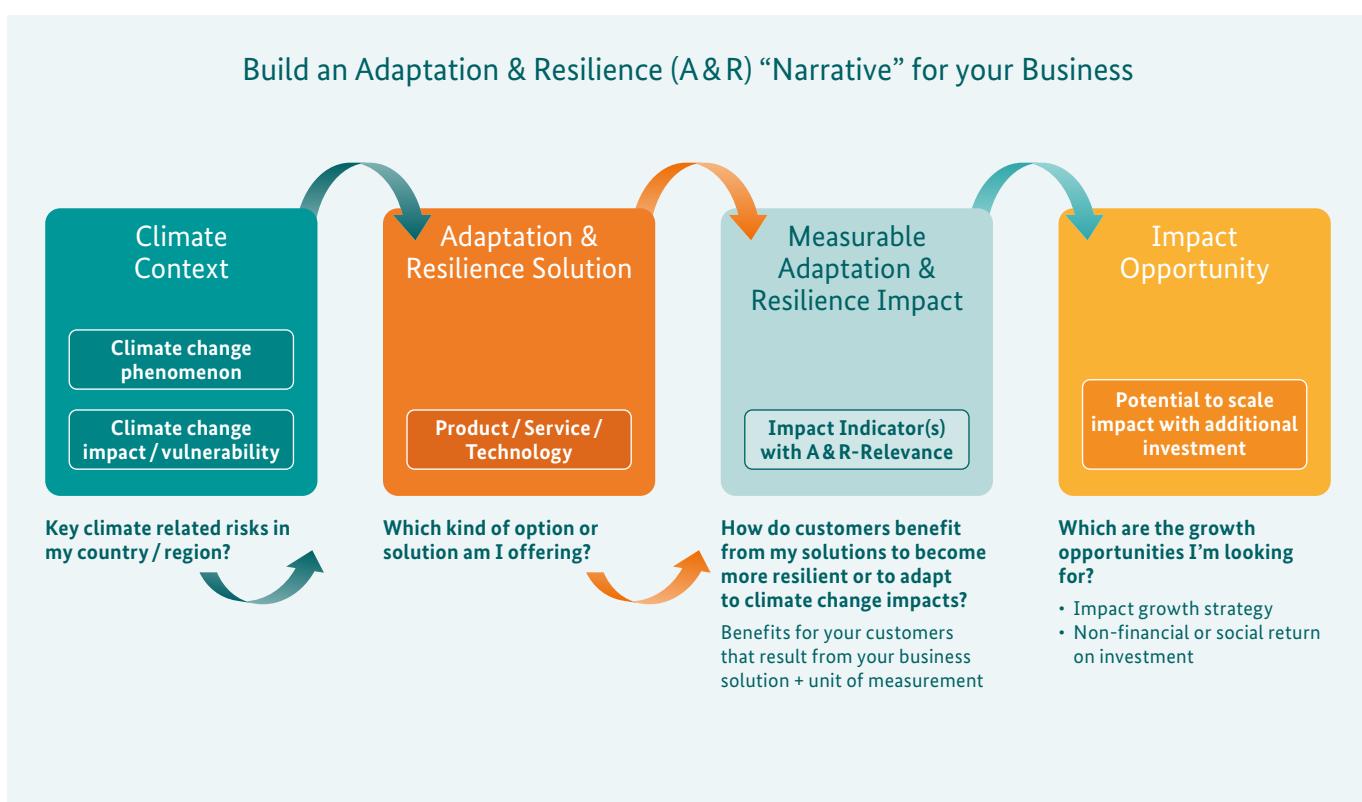


Figure 2. Build an Adaptation & Resilience “Narrative” for your Business

Tools for climate risk and impact identification

This section presents a selection of five available tools that Adaptation SMEs can use to find information about climate risks and impacts in their specific regions and sectors, as well as adaptation strategies that are being implemented.

1

World Bank Group Climate Change Knowledge Portal

The World Bank created this portal to provide an online tool for access to comprehensive global, regional, and country data related to climate change. In this portal, users can find information on historical and projected climate impacts and data for regions including East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, South Asia, and Sub-Saharan Africa. The platform also provides access to country summaries, which provide general context of how climate change is affecting a specific country. These country summaries include:

- Climate zones and their seasonal cycle for mean temperature and precipitation;
- Access to the Nationally Determined Contributions;
- Additionally, the portal grants access to **summarized climate risk country profiles** to provide a deeper understanding of climate risks and adaptation measures implemented in the countries. This resource presents information concerning country climatology characteristics, climate related natural hazards, climate change impacts on key sectors and related adaptation options.

As an example, Figures 3 and 4 show Nigeria's Country Summary and Country Climate Risk Profile respectively. It also shows the content and type of information that is available in this source.



Figure 3. Climate Change Knowledge Portal, Nigeria's Country Summary.

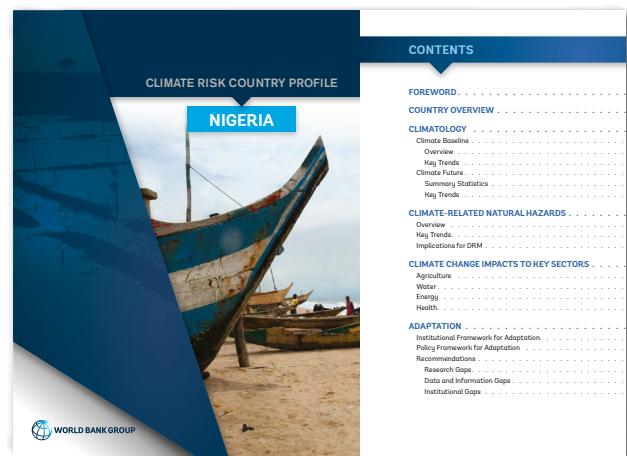


Figure 4. Content of Nigeria's Country Risk Profile.

2

Climate Risk and Adaptation Platform – AGRICA

The second tool presented in this document is AGRICA, a climate risk analysis tool for adaptation planning in Sub-Saharan Africa. This initiative is implemented by the Potsdam Institute for Climate Impact Research (PIK) in cooperation with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ).

AGRICA provides climate risk analyses and climate risk profiles, granting access to an overview of current and future climate impacts and risks, for example concerning soil moisture, precipitation or temperature, and sector-specific climate change risk assessments in sectors such as agriculture or infrastructure, as well as adaptation strategies at a national level for relevant sectors of Sub-Saharan African countries. As an example, Figure 5 and 6, show the platform's interface focusing on Kenya's Climate Risk Profile and the content and type of information that is available in these profiles.

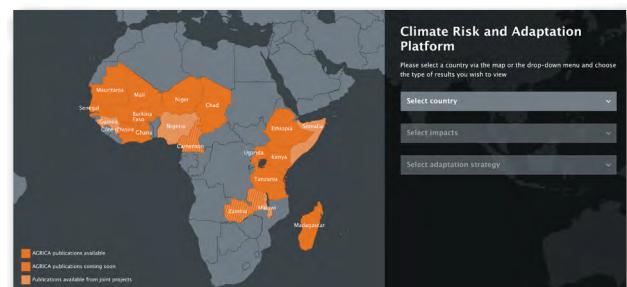


Figure 5. AGRICA platform interface



Figure 6. Kenya's Climate Risk Profile.

3

The Knowledge Exchange platform from The Global Center on Adaptation (GCA)

The Global Center on Adaptation (GCA) is an international organization working to accelerate action and support for adaptation solutions. The GCA platform aims to make knowledge on adaptation accessible and actionable in a comprehensive online tool and includes data from multiple sources such as the African Development Bank Group (AfDB), International Monetary Fund (IMF), IPCC, the Organisation for Economic Co-operation and Development (OECD), and the World Bank. The platform offers specific regional information through country profiles, including country context and climate data (see Figure 7). It also presents climate finance information and an overview of NDC updates and adaptation projects implemented in the countries, specifically from the climate risk and impacts perspective. Typical information includes:

- Future climate scenarios;
- Climate projections;

- Climate hazards, showing information concerning hazard levels of coastal floods and cyclones, among others;
- Governmental initiatives and policies;
- Impacts for specific sectors such as agriculture and health.

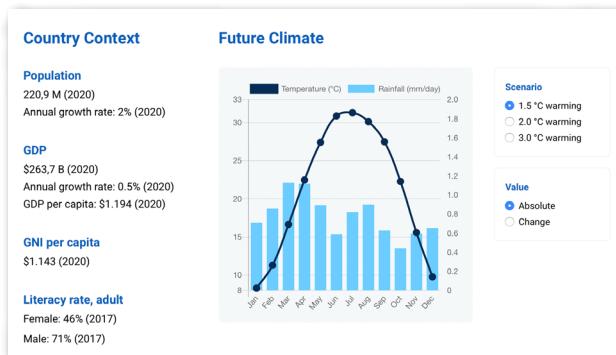


Figure 7. Pakistan Country Profile: Context and Climate data.

4

ThinkHazard!

This initiative from the Global Facility for Disaster Reduction and Recovery (GFDRR) of the World Bank Group allows users to consider and assess the level of hazard of disasters such as floods, landslides, tsunamis, and water scarcity, in specific regions. For each hazard, the tool also provides relevant recommendations to follow. As an example, Figure 8 shows the visualization of Rwanda river flood hazard levels.

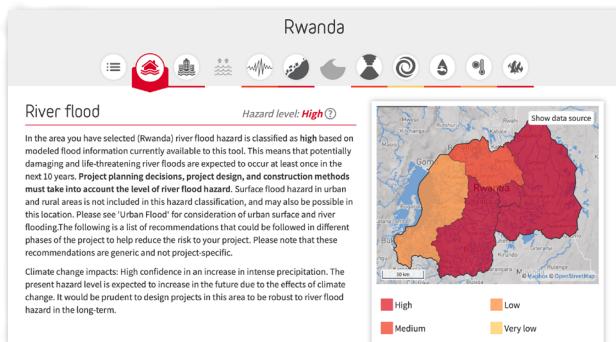


Figure 8. Rwanda river flood hazard levels.

5

Tool for Assessing Adaptation in the NDCs (TAAN)

The last tool presented in this document is an interactive platform implemented by GIZ that aims to provide an overview of and detailed information on the adaptation content included in countries' Nationally Determined Contributions (NDCs). NDCs are national commitments and long-term goals adopted by signatory countries of the Paris Agreement to reduce national emissions and adapt to the impacts of climate change. According to the Lightsmith Group, adaptation is a key priority for many developing countries, with 75% of NDCs submitted featuring a section on climate adaptation⁸.

According to the most recent IPCC report, at least 170 nations and several cities now include adaptation in their climate policies and planning procedures as a result of an increasing political and public awareness of climate impacts.

TAAN provides SMEs with valuable information to identify and understand the status of adaptation policies and validate how aligned or articulated their efforts are with these national policies. Additionally, it provides information about

main sector topics for adaptation measures and climate risk vulnerabilities. The portal further allows users to download country factsheets. For example, in the case of Kenya (see Figure 9), it is possible to identify the specific policies adopted such as the National Adaptation Plan (NAP) 2015 – 2030 or the Kenya Climate-Smart Agriculture Strategy (2017 – 2028).



Figure 9. Overview of Kenya Climate Policies.

Case Example: Determining the climate context of a drip irrigation SME from Kenya

Using information from GCA's Knowledge Exchange platform, the following figure presents information available for Kenya, where climate impacts such as droughts and rising temperatures are impacting the agriculture sector, and the use of water-efficient technologies is being proposed as an adaptation strategy.

With this information a drip irrigation SME can start developing their adaptation and resilience narrative, as illustrated in the figure below. This is a basic example that SMEs can use to understand their contribution to climate change adaptation and the resilience of their key stakeholders.

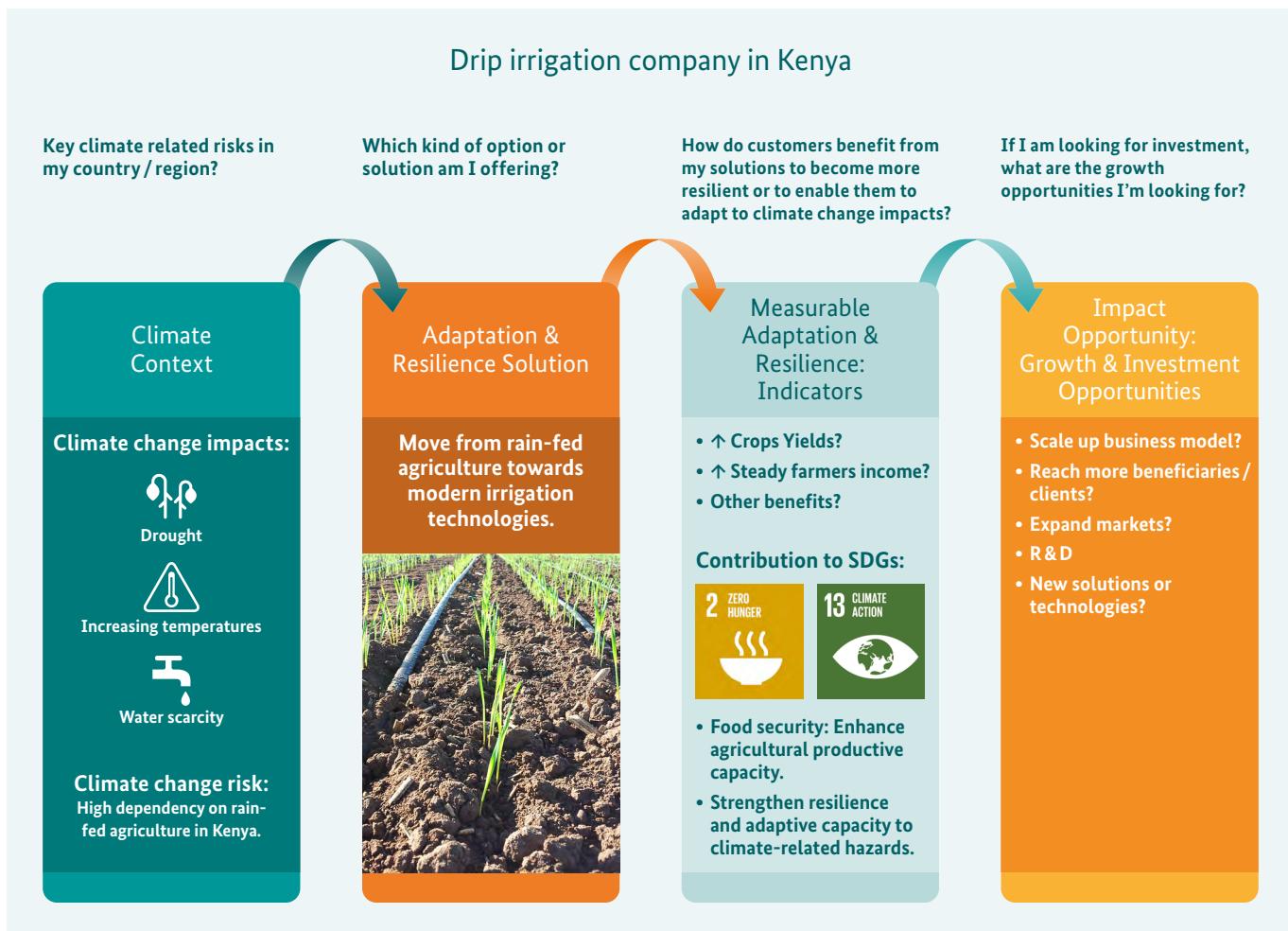
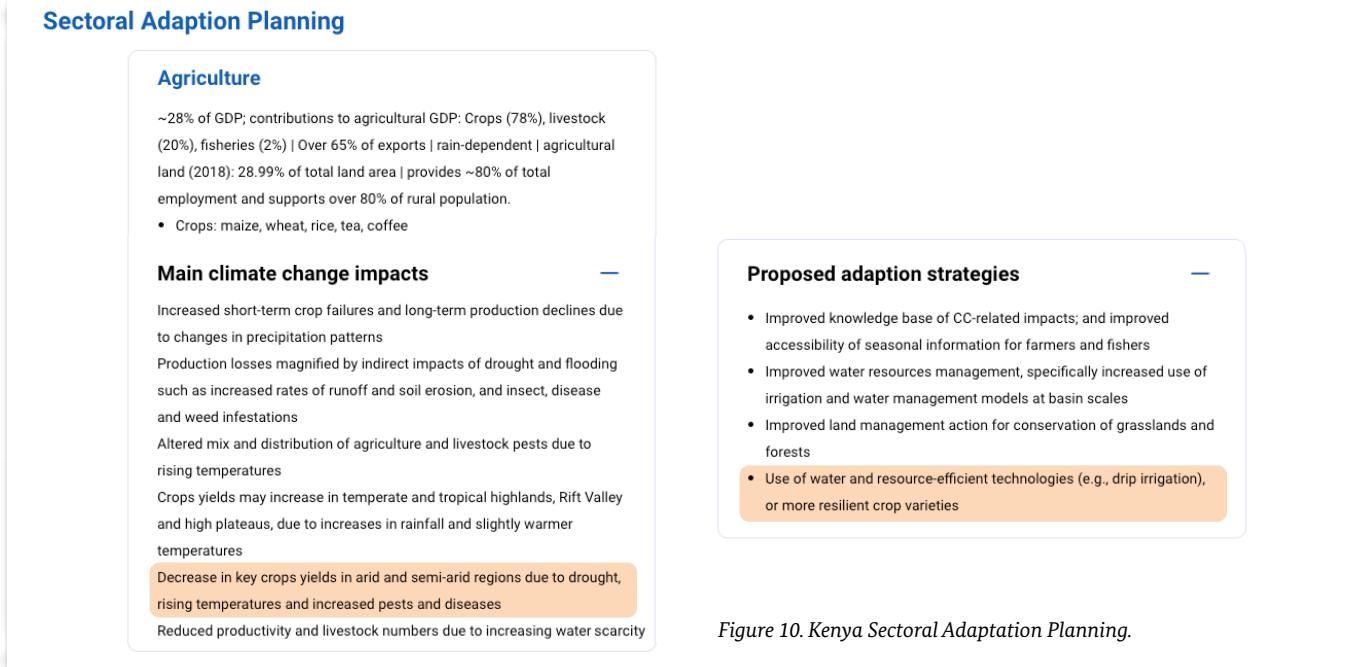


Figure 11. Example of a basic adaptation and resilience narrative of a drip irrigation SME.

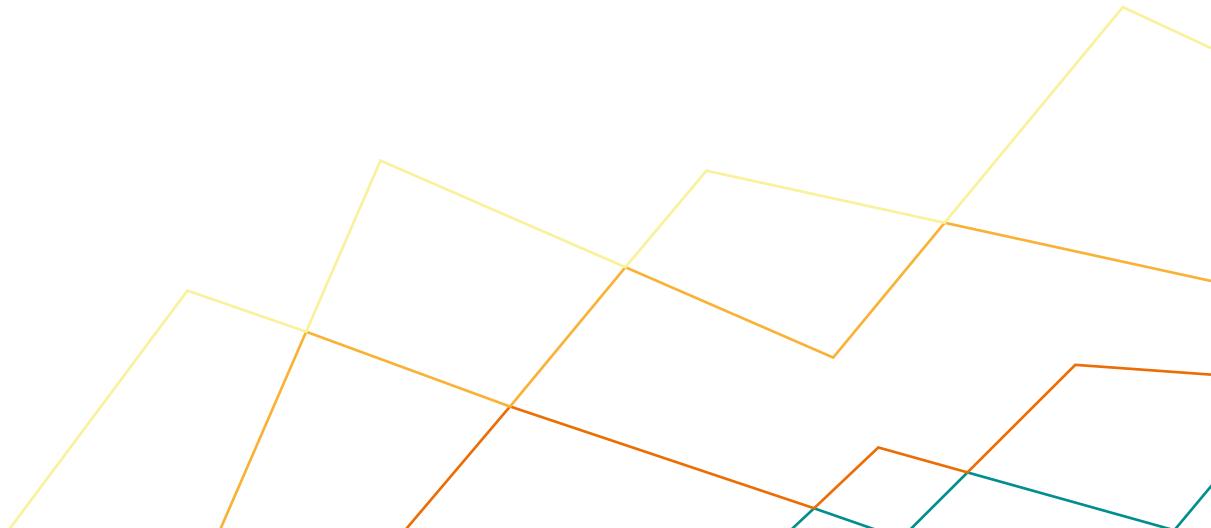


Private Adaptation Finance

This publication has been developed as part of a project on *Private Adaptation Finance*, implemented by the *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH* on behalf of the *German Federal Ministry for Economic Cooperation and Development*, which aims to mobilize investment in private sector solutions for climate change adaptation. The project supports the supply and demand side of capital for climate change adaptation & resilience investment in a holistic approach that includes ecosystem building and peer-learning, and connects the global debate to the local context and stakeholder scene. For more information please contact denise.engel@giz.de or visit www.adaptationcommunity.net/private-sector-adaptation.

Endnotes

- 1 Lakhani, N. (2022). 'We couldn't fail them': how Pakistan's floods spurred fight for climate justice. The Guardian. Available [here](#).
- 2 Pechlaner, H., & Innerhofer, E. (2018). *Linking destinations and resilience – challenges and perspectives*. Destination Resilience, 3 – 13. Available [here](#).
- 3 IPCC (2022). *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. Available [here](#).
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- 8 Trabacchi et al. (2020). *Adaptation Solutions Taxonomy*. Available [here](#).



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