



Developing risk management approaches for climate risks



The Strategic Alliance GIZ-Allianz-BIMA is a collaboration between the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Allianz SE, Allianz Re and BIMA MILVIK, which joined forces to support governments, SMEs and households across the globe in strengthening their risk management plans. On the topic of climate risk, the project is currently working in Morocco and Ghana, developing integrated risk management solutions that incorporate insurance products.

The Challenges

Vulnerability to climate change and natural disasters is increasing worldwide. Strategies must be developed to better prepare for the risks and consequences of the increasing frequency and greater intensity of extreme weather events. Behavioural change, regulation, awareness, eco-friendly structural planning and green investment strategies must also be promoted and incentivised.

Impact of Exposure for SMEs

Global evidence shows that businesses needing to suspend their operations for more than one month after a major natural disaster are usually forced to declare bankruptcy. Because of their size, SMEs are often unaware of risks from outside of their usual business operations, including climate-related risks. They are also largely unaware of risk-management strategies and the instruments available with which to reduce the impact and consequences of extreme weather events, making them particularly vulnerable.

This project aims to pioneer risk management solutions, piloting and testing them on Morocco's Aït Melloul industrial park, which has faced major floods on three occasions since 2010 – with flood damage compounded by the industrial park's poorly maintained drainage system. Morocco suffers greatly from flooding in general,

with nine of the top ten natural disasters between 2002 and 2011 being floods. Aït Melloul also has immense economic importance, hosting over 300 enterprises and either directly or indirectly employing over 25,000 employees.

Impact of Exposure for Urban Zones

Likewise, cities are engines of economic growth and social change, with a high complexity of manifold interests, agendas and variety of critical infrastructure. Over 50% of the world's population lives in cities, and urbanisation rates are increasing globally. Cities are also innovation hubs and axes for trade and value chains. They have a high concentration of SMEs; often clustered in industrial zones on urban peripheries.

Most years, the Greater Accra Metropolitan Area (GAMA) also suffers from rain-related floods. This is likely the result of several factors, including a rapid expansion of sealed-off surfaces, unplanned urbanization, weak infrastructure, an inefficient waste collection and disposal system, as well as a changing climate with more intense rainfall events compared to earlier decades.

GAMA is the economic hub of Ghana with 5.1 million inhabitants – making it the seventh largest metropolitan area in Africa¹. The severe flood event of 2015 served as a wake-up call to many stakeholders – in 2015, it was among the ten deadliest disasters worldwide, affecting 52,622 people and causing 150 deaths. Damage to infrastructure totalled US\$55 million, and rebuilding costs are estimated at US\$105 million².

¹ [City Population \(2018\)](#), accessed 15 March 2018.

² [World Bank \(2017\)](#), Enhancing Urban Resilience in the Greater Accra Metropolitan Area, accessed 15 March 2018.



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The Solutions

An integrated Disaster Risk Management (IDRM³) approach can improve the resilience of societies and promote sustainable development. An IDRM includes measures within 5 phases: prevention, preparedness, response, recovery and 'retention & risk transfer'. In practice, these steps can overlap, merge and influence each other. For example, risk transfer solutions such as insurance can improve post-disaster situations (response) by providing timely financial resources. What is less evident is that insurance can incentivize risk reduction (prevention) too. At the same time, risk transfer solutions are not stand-alone remedies to manage climate risks but often need to be part of a holistic risk management approach to enable insurability. An IDRM is based on a risk assessment (assessments of hazards, exposure and vulnerability) that covers both the past and the future. It feeds cost-benefit analyses, which – together with a Disaster Risk Finance Strategy covering public and private sources – serves as a basis for decision making processes that identify the best mix of adaptation measures according to each case or target group.

Our services

IDRM Approach for Climate Risks in Morocco and Ghana

The project does groundwork preparations for implementing risk transfer solutions within an integrated natural disaster risk management approach for industrial parks in Morocco and for three municipalities in the greater Accra area in Ghana. Services include:

- Implementing measures to improve climate-, disaster- and financial literacy
- Enhancing the technical capacities of data providers such as the Ghana Meteorological Agency
- Risk analysis based on historical damage and loss as well as the generation of hazard maps (hazard modelling) and vulnerability curves, e.g. flood maps and vulnerability curves for floods⁴.

- Reviewing existing IDRM measures and assessing potential demand for new risk transfer solutions.
- Developing a cost-benefit analysis and risk profiles for most vulnerable assets
- Identify risk reduction and preparedness measures as well as respective funding sources
- Designing risk transfer solutions
- Engaging in capacity building and identifying suitable distribution channels

Expected Outcomes

To develop the first ever holistic IDRM approach suitable for urban development and industrial zones, encompassing:

- Understanding and quantifying the regional flood risks in the participating industrial park(s) and municipalities, respectively.
- To improve the quality and analysis of gathered meteorological, geographical and financial data and to capture the need for improvement and suitable tools.
- To grasp the potential to reduce the climate risk of all stakeholders by encouraging cost-effective investments in risk reduction measures.
- To develop adjusted risk transfer solutions in the insurance sector, thereby providing financial stability to the stakeholders and a greater freedom of action for when disaster strikes.
- Identify synergy effects between preparedness and response measures.
- To develop training materials and further research on various angles.
- To compile best practices, guidelines and / or critical success factors for the various activities, and thus inspire innovation and facilitate replication by GIZ, Allianz and the overall international development community

³ For more details on iDRM, see [link](#)

⁴ For more details risk analysis, see [link](#)

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