



# Climate Risk Insurance for Infrastructure

## Advisory Service

### The challenge

Climate change is exacerbating the severity and frequency of extreme weather events. The impacts cause damage to infrastructure and disrupt economic activities. Water, energy, ICT and mobility-related infrastructure are critical for the maintenance of important societal functions such as health, safety as well as economic and social well-being. In the case of infrastructure damage due to an extreme weather event, climate risk insurance (CRI) can quickly minimise economic losses through pay-outs, thereby reducing the duration of disruption. CRI is thus one tool to sustain the availability of functioning public services. It can apply to the construction and operational phase of new and existing infrastructure. CRI safeguards governments and other insurance policy holders against business interruptions and losses to the economy and thereby enables countries to maintain positive development pathways, also under post COVID-19 green recovery efforts. However, due to unawareness, regulatory uncertainties, insufficient implementation of building codes, budget constraints and other barriers, affordable CRI is often not available in developing countries.

### Our approach

Given the long lifespan of infrastructure and its key role in ensuring the resilience of communities including lives, livelihoods and physical assets, GIZ takes a long-term view on infrastructure planning and development. We consider the latest scientific findings and climate projections and combine them with in-depth engineering knowledge and digital approaches. We use an integrated climate risk management (ICRM) approach. Hazard, exposure and vulnerability analyses form the basis for systemic decision making to address risk reduction, risk transfer (including insurance), risk retention and their financing require-

ments. We also consider nature-based solutions and other innovative measures. Our neutral perspective enables us to evaluate all relevant options in the best interest for our developing and emerging country partners. We work with national and local government authorities, small to medium-sized enterprises (SMEs), non-governmental and civil society organisations that have a need to plan for and/or upgrade to climate resilient infrastructure in a broad range of sectors such as energy, water, transport or buildings (e.g. schools, hospitals). We provide dialogue platforms with national and international (re-)insurance companies, engineering organisations, and other stakeholders to jointly prepare and design customised CRI products and adaptation measures.

### Our services

Our advisory services bring together all major actors in CRI for infrastructure to enhance the resilience of communities, businesses and the overall economy of developing and emerging countries, in line with the Paris Agreement, Sendai Framework, New Urban Agenda and Sustainable Development Goals, in particular the leave-no-one-behind principle:

- › Acting as a facilitator and conducting public-private dialogues, offering contacts to international (re-)insurers, access to experts and providing an interdisciplinary approach tailored to the planning and implementation needs of our partners.
- › Strengthening the capacities of stakeholders at different levels in all aspects of CRI, enabling them to make risk informed decisions, create institutional structures and enabling frameworks for the climate resilience of long-term infrastructure planning and investments. This includes capacities for the maintenance of infrastructure as a way of preserving its functionality, resilience and insurability.



- › Assisting governments at national and local level in planning and prioritisation processes for climate resilient infrastructure development and adequate infrastructure governance systems.
- › Supporting the provision of climate information and services, conducting climate risk assessments to analyse climate-related hazards, exposure & vulnerability of planned and existing infrastructure. We advise on climate risk standards or certification schemes for new and existing infrastructure.
- › Designing and assisting in the implementation of climate risk management plans. This includes the identification of risk reduction (e.g. climate proofing of infrastructure), risk retention (e.g. contingency funds), and risk transfer measures (e.g. CRI), the analysis of respective costs and benefits, and prioritisation of adaptation measures (e.g. ECA methodology, Climate Expert tool).
- › Assisting with the institutional set-up, digital infrastructure and capacities for data collection, processing and analysis as a basis for the design of CRI products, premium calculation and pay-outs after extreme weather events.
- › Designing and widely disseminating knowledge products, facilitating the exchange of experiences between countries and regions, based on lessons learned from CRI applications for different types of infrastructure.

## The benefits

We are a long-standing and trusted partner in advising on CRI with a diverse network and broad portfolio in climate change, disaster risk management, financial systems development and infrastructure, and presence in almost all developing and emerging countries. Our partner countries benefit from our established collaborations with renowned stakeholders in the (re-)insurance sector (e.g. Munich Re, Swiss Re, Hannover Re, Allianz), engineering

companies (e.g. World Federation of Engineering Organisations), disaster risk management practitioners (e.g. German Federal Agency for Technical Relief, German Federal Office of Civil Protection and Disaster Assistance, Global Infrastructure Basel Foundation), national hydrological and meteorological services (e.g. German Weather Service) and research institutions (e.g. Potsdam Institute for Climate Impact Research). GIZ is involved in early-stage planning processes of infrastructure development and can include potential insurance providers to identify insurable resilient infrastructure projects from the beginning. Through our advice and facilitation, we aim to achieve reduced insurance premiums for our partners if suitable adaptation measures are implemented in infrastructure planning, construction and operation.

## Examples from the field

In **Ghana**, GIZ and Allianz Re assessed the impact of flood risks on municipal public infrastructure assets in Accra, identified green and grey adaptation measures and conducted cost-benefit analyses. The municipalities received support to develop fiscal, budget and contingency plans and to implement adaptation measures. Allianz RE developed hybrid (combined index and indemnity) insurance products. In **Morocco**, GIZ and Allianz Re improved climate risk management for SMEs active in industrial zones, which raised their awareness, encouraged cost-effective investments in risk reduction measures and developed transfer schemes for the residual risks. **Globally**, GIZ supports the Coalition on Disaster Resilient Infrastructure (CDRI) in contributing to the resilience of critical infrastructure and strengthening of risk governance structures. Understanding the requirements for climate and disaster resilient infrastructure will not only ensure that critical infrastructure is less vulnerable to extreme weather events but also allow for the development of tailor-made insurance products.

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