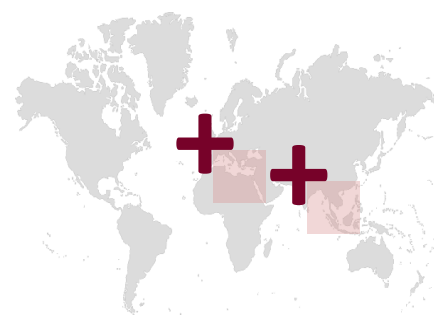


Enhancing Risk Assessments (ERA) for Improved Country Risk Financing Strategies



AT A GLANCE

Name of Project

Enhancing Risk Assessments (ERA) for Improved Country Risk Financing Strategies

Duration

Jan 2023 – Dec 2024

Focus area

Thailand and Egypt

Brief description

The project offers participating government partners an enhanced risk assessment and subsequent understanding of selected climate risks in both countries. By utilizing the Economics of Climate Adaptation ([ECA](#)) framework in combination with non-economic and macroeconomic impact modelling, a comprehensive risk analysis for specific sectors and populations is obtained. In addition, the cost-benefit ratios for possible adaptation measures are examined to advise the governments on most suitable adaptation strategies. Besides risk reduction efforts, the project will highlight the importance of incorporating financial risk retention and transfer instruments, like climate insurance or contingency budgets, in order to address residual risk.

Target group

Ministries and similar agencies of Egypt and Thailand involved in or responsible for the countries' and/ or sectoral comprehensive (Climate) Risk Management and Risk Financing approaches; as well as climate risk modelling experts across the globe.

Funds available

The project is self-funded by GIZ and has a volume of close to 1 Mio. EUR

The project is jointly implemented by...

the Risk Finance and Insurance Team of GIZ, GIZ Thailand, GIZ Egypt and the Munich Climate Insurance Initiative ([MCII](#)) hosted by the United Nations University – Institute for Environment and Human Security ([UNU-EHS](#)). Implementing partners in country are the Financial Regulatory Authority (FRA) of Egypt and the Department of Agriculture (DoA) of Thailand.

The overall aim of the project is ...

to provide the government partners in Thailand and Egypt with an enhanced risk assessment for the development of climate change adaptation and, subsequently climate and disaster risk financing strategies.



BACKGROUND

Climate change contributes to increasingly frequent and severe extreme weather events, causing economic downturns, and reducing food security and socioeconomic stability in climate vulnerable countries like Thailand and Egypt. Investing in risk reduction measures and arranging climate and disaster risk finance and insurance before a disaster happens in an effective and cost-efficient manner requires a good understanding of risks. However, estimating climate and disaster risks and their impact on macroeconomic (e.g., GDP, employment) as well as non-monetary indicators (e.g., access to health, education and mobility) still faces various challenges, making comprehensive strategies for (financial) protection against these risks difficult.

OUR APPROACH

The project employs the Economics of Climate Adaptation (ECA) framework and enhances its underpinning open-source risk assessment tool 'CLIMADA'. CLIMADA¹ is used to conduct a probabilistic risk analysis with data collected from government partners, academic institutions and open-sources. The project team and government partners jointly identify the most suitable adaptation measures for the hazards and economic sectors selected in the beginning of the project. Moreover, trainings are conducted with partners on topics such as integrated risk management, data management, and how to utilize the newly created CLIMADA GUI.

The scope of activities of the project is hence as follows:

1. Enhancing the risk assessment tool – CLIMADA:

The project expands the open-source risk assessment tool CLIMADA to:

- Encompass different hazards and their economic and non-economic impacts (e.g., access to health and access to education);
- Analyse impacts on macroeconomic indicators (e.g., GDP, employment) by integrating CLIMADA and the dynamic general equilibrium model developed under the GIZ Climate Resilient Economic Development (CRED) project; and
- Enable dynamic application by partner institutions through the creation of an accessible and intuitive Graphical User Interface (GUI).

2. Conducting the risk assessments and identifying adaptation options:

- Defining the scope of the assessments together with various stakeholders in Thailand and Egypt at the start of the project (refer to the Table below for details);
- Gathering and validating the required data as well as conducting the risk modelling in CLIMADA;
- Selecting suitable adaptation measures and conducting a cost-benefit analysis of these;
- The combined results of the impact and adaptation analyses will inform the policy making process.

3. Capacity building:

Throughout the project, stakeholders are offered training sessions to build capacity on data management for risk modelling, on integrated climate risk management including risk finance and on using the newly developed GUI for CLIMADA.

¹ CLIMADA is a modelling platform that enables probabilistic climate risk modelling and estimating the averted damages (benefit) of different adaptation measures, including nature-based solutions, infrastructure interventions, and risk transfer (<https://eca-network.org/climada/>).

Outputs of the project

1 Maps & datasets showing the expected impact of selected hazards today and in 2050 under SSP2 - 4.5 & SSP5 – 8.5 climate scenarios on various assets:			3 Maps and datasets for Egypt and Thailand on the expected risk reduction benefits of selected adaptation measures	5 Simple graphical user interface (GUI) of CLIMADA to facilitate climate risk assessment & display of results
	In Thailand	In Egypt		
Hazards	Floods Droughts/ Heatwaves	Flash floods Heatwaves		
Economic assets	Tree crops Grass crops Markets	Crops Livestock Hotels Power plants		
Non-economic assets	Farmers Mobility Education Water system Cultural / religious sites	Mobility Education Water system Health system	4 Cost-benefit analysis of these adaptation measures	
2 Information on the impact of selected hazards today and in 2050 under SSP2 - 4.5 & SSP5 - 8.5 on macroeconomic indicators (e.g., GDP, employment, value added etc.) of the sectors:				
Sectors	agriculture tourism energy manufacturing food & beverages input products textiles	agriculture tourism energy manufacturing real estate financial sector health		

CHALLENGES

Comprehensive risk assessments and climate adaptation planning calls for a **cross-ministry, cross-discipline, and cross-department coordination** – a task that can be resource and time consuming. Likewise, the coordination among multiple partner organisations and external stakeholders requires substantial efforts. In addition, **the availability and quality of data** needed for the risk analysis presents itself a big challenge. Similarly, the **understanding of risk models and technical capacities** are distributed unequally among stakeholders, making effective and clear communication essential.

OPPORTUNITIES

By substantially enhancing the CLIMADA tool, **more thorough risk analyses** may be carried out in other contexts, for other sectors and in other countries in the future. The GUI also enhances the risk assessment capabilities of government stakeholders and other agencies, **increasing local ownership** and accessibility of the project's outcomes and possibly triggering interest in acquiring advanced risk modelling capacities. Lastly, the project offers a platform for various stakeholders to discuss the importance of **integrated climate risk management** and creates opportunities for the development of new project ideas, in particular risk finance initiatives.

EXPECTED OUTCOMES

It is expected that government partners and other stakeholders in Thailand and Egypt have an **enhanced understanding of climate-driven disaster risk** in their countries now and for the future. With this understanding, the analysis of adaptation measures, as well as the acquired capacities allow the authorities to **make risk-informed decisions** and implement appropriate adaptation **measures and risk financing strategies**.





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For more information please refer to the InFocus documents of
the project (*forthcoming*).

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