

📍 Yangon, Myanmar

MYrisk

Multiple risks management of extreme events in fast growing (mega)cities in Myanmar

Based on modern risk research, the MYrisk project focuses on disaster risk reduction and the reduction of the consequences of multiple risks in the megacity of Yangon, Myanmar. The aim is to improve the risk prevention of institutions and households and to reduce the socio-economic consequences of multiple risks. Scientific concepts for maintaining and ensuring basic services are developed, implemented on site and made feasible for other (mega)cities.

Project Objectives

The aim of the transdisciplinary research project MYrisk is to improve the risk prevention of institutions and households and to reduce the consequences of multiple risks in Yangon, Myanmar. Scientific concepts of integrative, sustainable risk management are developed and made feasible for other (mega)cities. A holistic risk management system will be developed with the participation of decision-makers from government, administration, scientific partners, the private sector and civil society in the megacity of Yangon as well as Nay Pyi Taw, Mandalay, Taunggyi and Mawlamyine. This includes a metadata inventory, a cooperation and communication concept of institutional risk prevention, culturally adapted risk prevention (awareness and education programmes, protection of personal documents), a precautionary concept for system-relevant small/medium-sized enterprises (protection of critical infrastructure) and exchange platforms for sustainable »build back better« strategies.

Challenges

Megacities in developing countries face enormous challenges: Rapid economic and urbanisation dynamics are threatened by multiple natural and anthropogenic risks. The megacity of Yangon, the leading economic centre of Myanmar in the opening process and political transition, will be better protected against multiple risks – earthquakes, floods, tropical cyclones and the Covid pandemic – by the development of an integrative, sustainable risk management concept. After cyclone Nargis (2008), legal frameworks were created and institutional restructuring for risk prevention was initiated. A systematic knowledge base, culturally appropriate concepts and the implementation of a holistic risk management against multiple risks will be set up.

Addressed Sustainable Development Goals of the United Nations





Yangon city center, Myanmar. Image provided by Frauke Kraas

Research Approach and Methods

The transdisciplinary research project aims to develop and implement an integrated risk management concept for the megacity Yangon. The expertise of international and Myanmar partners from research, government, administration, private sector, public and civil society institutions will be combined.

In a mixed-methods approach, quantitative (primary statistics, standardised surveys) and qualitative risk-related data (in-depth expert, problem-centred household interviews and focus group discussions) are collected, combined with high-resolution remote sensing data in a geographic information system, analysed in transdisciplinary workshops and used in the development of a culturally adapted concept of integrated risk management. In addition, information and training programmes, courses and interdisciplinary research qualifications are developed.

Focus Topics

- Integrative, sustainable risk management
- Concepts of multiple risk prevention
- Culturally adapted risk prevention
- Protection of personal documents
- Securing of critical infrastructure
- »Build back better« strategies



Expected Solutions and Innovations

For the first time, a holistically oriented integrated risk management concept for a tropical megacity will be developed using the example of Yangon. Through the exchange of international scientific and transdisciplinary knowledge, new concepts of culturally appropriate institutional and civil society risk prevention, a cooperation and communication concept of institutional risk prevention and information and qualification programmes for reducing the consequences of multiple risks will be developed. Innovations are particularly the focus on concepts for the protection of personal documents, a precautionary concept for system-relevant small/medium-sized enterprises (securing critical infrastructure) and an exchange platform for sustainable »build back better« strategies. Innovative risk analysis and visualisation procedures in urban space are developed by integrating existing databases in conjunction with high-resolution remote sensing data.



»The aim of the transdisciplinary research project to create a comprehensive concept of integrated multiple risk management that brings together decision-makers from government, academia, the private sector and civil society, based on the example of megacity Yangon. The project will improve institutional, private sector and personal risk prevention and thus reduce the consequences of multiple risks.«

Prof. Dr. Frauke Kraas



Symposium on Disaster Risk Reduction 2019.

Image provided by Sophie Heinkel

Cooperation Partners

German Partners

- Institute of Geography, University of Cologne
- Flood protection center of the municipal drainage operation Cologne
- Fire Department of the City of Cologne
- German Committee for Disaster Reduction (DKKV)

International Partners

- Hotel Resilient Certifications
- ICLEI Southeast Asia

Myanmar Partners

- Yangon City Development Committee
- Yangon Region Government
- Department for Urban and Housing Development, Ministry of Construction
- University of Yangon
- Myanmar Environment Institute



Project Coordination

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