

## **Risk KAN Low elevated coastal zones and cities Working Group**

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### **Rationale**

Disaster risk hampers development prospects. It is already perilous and escalating because of demographic and development trends compounded by global change and climate change - especially at the coast. Sea-level rise is unstoppable and will have devastating consequences for many coastal communities. The coastal zone is the frontline of the global endeavor to reduce disaster risk and build more adaptive, resilient and sustainable communities. Many countries, for example, BRICS countries, have been developing their coastal cities which are now a crucial development engine in the global system. It is imperative to strength capabilities in these regions to reduce disaster impacts. It has been recognized that the growth path currently taken emerging market countries is, however, generating new systemic risks that threaten their development prospects. Despite knowledge about coastal risk, and current risk management efforts, effective institutionalization of risk reduction, adaptation and resilience building is elusive. Even after extreme events, it is common for recovery efforts to re-entrench vulnerabilities that pre-disposed people to disaster. Transformative change is needed because business as usual is unsustainable, especially in coastal cities.

## **Aims**

The Risk KAN LCZC WG will focus on (1) coordinating international interdisciplinary research communities to create new knowledge about coastal disaster risk based on transdisciplinary research involving coastal and disaster specialists and key risk governance actors; (2) To identify innovative ways to institutionalize practices which reduce risk and build adaptive capacity, resilience and sustainability.

## **Approach**

By developing a transdisciplinary, user-inspired, action-oriented and collaborative global research platform, this WG will firstly assess the vulnerabilities of coupled social-ecological systems in coastal zones around the world. It hopes to provide new insights about how different disciplines and governance actors frame coastal disaster risk, risk discourses and which are dominant, the root causes and drivers of disaster risk, and new ways to assess risk. Secondly, the WG will engage all kinds of stakeholders in order to improve understanding about coastal risk governance, including current governance systems, the key actors and their interactions, policy and legal frameworks, knowledge sources, and barriers and enablers for risk reduction; and identify ways to improve risk governance in coastal urban areas. It hopes to develop an integrative conceptual framework that can be used by at-risk communities to chart pathways that reduce risk and build adaptive capacity, resilience and sustainability.

## **Research Activities**

### **(1) Risk Assessment in Coastal Zone**

In the 21st century, humankind as a whole will have to learn to avoid the systemic risks generated by traditional economic growth. It is urgently needed by national policy makers to better addressing local risks like extreme events so as to pay attention to possible disaster cascades as well as how to keep risks in an acceptable domain, including learning from experiences of disaster, relief and reconstruction. With fast development in social-economic system, the distinction between natural and man-made disasters loses its grip, requiring new skills and know-how in dealing with disaster risks. The outcome of the risk assessment

can be used by policy and decision makers in all governments for making appropriate prevention and contingency plans.

#### (2) Risk Governance based on Case Comparison

The WG will coordinate researchers to conduct comparisons of case studies in the world for the purpose of systematical understanding how one and the same society deals with different risks and how different societies deal with one and the same risk. It is our hope that through this collaborative research, new ways of thinking will be explored and developed which investigate what kinds of institutions might turn them into adequate pattern of risk governance in order to support the government policy makers better deal with global systematic challenge.

#### (3) Improving Interface between Scientific Community and Decision Makers

As emphasized by UN-ISDR, turning good science into good decision making is extremely crucial in the disaster risk reduction efforts. It has been recognized for quite a long time that to make systematic decisions across different spatial and temporal scales, a two way communication between scientists and decision-makers is needed. Unfortunately, developing appropriate applications of relevant scientific understandings of risk to policy problems has always been a major challenge. And bridging the gap between policy-making and scientific expertise is even harder because there is no common language between both ends. The WG will pay great attention to explore more effective interaction between the two communities, including development of a visualization toolbox which integrates relevant scientific understandings of risk and policy makers' needs, and so to support more effective co-production of knowledge in integrated risk governance.

### **Activities and Outcome**

For use-inspired, innovative research about the above focal research topics to be successful, it must be organized as a global complex network itself. The WG will take the coordinating role to support development of global database, models and methodologies for risk assessment at country level. Workshops and a conference will be organized with other Future Earth KANs and GRPs annually.