# **RiskKAN Working Group:** Systemic Risks, Existential Risks, Polycrisis

## **Working Group Leads**

- Lara Mani (lm881@cam.ac.uk)
- Pia-Johanna Schweizer (pia-johanna.schweizer@rifs-potsdam.de)
- Reinhard Mechler (mechler@iiasa.ac.at)
- Sirkku Juhola (sirkku.juhola@helsinki.fi)

#### Rationale

Contemporary risks are increasingly complex and interdependent, reflecting a global reliance on tightly coupled socio-technical systems. Recent events—including the COVID-19 pandemic, the Suez Canal blockage, Pakistan flooding, and Spain/Portugal power outage—illustrate how vulnerabilities in just-in-time supply chains and insufficient system resilience (e.g., lack of modularity and redundancy) can precipitate widespread disruptions. Notably, global impacts do not require large-scale shocks; disturbances within interconnected systems can escalate rapidly and cascade through systems, crossing sectoral and geographical boundaries.

Systemic risk assessment offers a critical framework for mapping these interdependencies, understanding their dynamics, identifying leverage points, and informing interventions that enhance resilience and reduce cascading failures. However, the effectiveness of such measures depends on proactive and adaptive governance at regional, national and multinational levels. Anticipatory action, undertaken before crises unfold, is essential to avoid severe consequences and costly, reactive responses. This imperative raises pressing analytical, policy and governance questions: How to analyse systemic risk comprehensively, what policy action may be conducive, what are the distinct features of systemic risk governance, which actors bear responsibility for systemic risk management, and what institutional mechanisms exist to coordinate timely, cross-scale responses, and how can we account for procedural justice?

The working group seeks to advance systemic risk scholarship and practice through the following objectives. **The WG aims to:** 

- Fostering a vibrant, interdisciplinary community of researchers engaged in the study of systemic risk, global catastrophic risk, and the polycrisis. This community will serve as a platform for sustained collaboration and intellectual exchange.
- Promoting the sharing of methodologies, frameworks, and empirical insights to deepen collective understanding of systemic risk, resilience and its governance.
- Committing to capacity development, particularly by supporting early-career researchers through mentorship, active engagement, and opportunities for joint work.
- Working towards integrating research and practice by engaging directly with stakeholders and embedding systemic risk assessment into resilience policy and governance processes.
- Pursuing collaboration for impact, developing joint research proposals, multi-partner projects, and policy-relevant outputs that strengthen resilience and reduce systemic risks at multiple scales.

# The Working Group will focus on advancing:

- Conceptual understanding of systemic risk and its analysis and assessment methodologies.
- Governance frameworks for managing interconnected, cascading, and global risks.
- Relevant resilience concepts, policy and actions for addressing systemic risks.
- Cross-sectoral and multi-level collaboration (national, multinational, global).
- Application of systemic risk insights for addressing salient real-world crises.

## Planned Activities for 2025-2027

- Seminar Series: Regular online seminars exploring themes such as global catastrophic risk, systemic risk governance, resilience and the polycrisis.
- Workshop: Organisation of a conference or major workshop on systemic risk and the polycrisis.
- Collaborative Publications: Joint perspective pieces, policy briefs, and academic articles to advance the discourse.
- Research Funding Applications: Submission of proposals to support collaborative systemic risk projects.