Guest editorial: GAR 2022 special issue: addressing systemic risk – the future of risk governance

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In line with the central question of the UN Global Assessment Report on Disaster Risk Reduction 2022 (GAR 2022), how governance systems can evolve to better address the systemic risks of the future? This Special Issue looks at current and future approaches to risk management that enable DRR practitioners to address systemic risk.

Systemic thinking must underpin risk management and resilience building, as evidenced by recent experiences of the coronavirus disease 2019 (COVID-19) pandemic, the climate emergency and the impact of the Ukraine war on food, energy and fertilizer prices. Without systemic thinking, the consequences of the best-intentioned risk management interventions can be unpredictable at best and increase risk and undermine resilience and the broader sustainable development efforts.

GAR 2022 stressed that building resilience needs to focus on reducing the vulnerability, exposure and inequality that drive disasters and calls to action to reconfigure governance and financial systems to work across silos and design in consultation with affected people. Governance and financial systems are not yet embracing transdisciplinary approaches that are essential to effective systemic risk governance and tend to favor top-down approaches. Key actions need to embrace a new "risk language" that cuts across multiple disciplines and step-up participation, transparency and citizen dialog in risk decision-making to accelerate learning and necessary adjustments, while enhancing multi-scale risk management.

This special issue features the most innovative contributing papers that have fed into GAR 2022 addressing the governance of systemic risk.

Transforming risk governance

To unpack how risk governance needs to evolve to successfully manage increasingly complex and systemic risk, the special issue starts with the theoretic underpinning of risk governance and the basic premise that disaster risk is not natural but socially constructed.

The Special Issue's first paper, The social construction of systemic risk: Towards an actionable framework for risk governance (page 4), identifies guiding principles for systemic risk governance that can provide entry points for local and national governments, civil society and the private sector, particularly in low- and middle-income countries, to create risk-resilient development pathways.

The practice - country examples

Moving from the macro level to what this means at a country level, *Governance strategies in Indonesia for addressing systemic risks: Where do we stand and the future outlook (page 27)* examines the need to create new governing systems in Central Sulawesi, Indonesia that allow actors and institutions to simultaneously manage the interplays of single and multi-hazards, multi-temporal, multiple dimensions of vulnerabilities, poverty reduction, unplanned urbanization, environmental degradation and other residual risks.

Successful risk governance is strongly linked to political will and leadership. ***National leadership: How a change in thinking about vulnerability and systemic disaster risk is shaping nation-wide reforms and national programs of work in disaster risk reduction in Australia (page 49)*** looks at how the country is actively learning to navigate governance and capability challenges to enable all sectors to reduce complex systemic risks.

Another important aspect to transforming risk governance is to work across sectors and disciplines to successfully manage complex and systemic risk. ***Intersectoral research and multi-risk approaches in Québec: Systemic risk management and its psychosocial consequences (page 74)*** examines and describes the complexity and the challenges associated with climate change and systemic risks regarding psychosocial consequences of floods.

The elements - driving the transformation
GAR 2022 highlights the need to transform how we manage and govern risk, to better understand the root causes of vulnerability and exposure and design more targeted interventions.

Towards a critical technical practice in disaster risk management: Lessons from designing collaboration events (page 100) examines the perpetuation, and sometimes deepening, of vulnerability as narrowly defined technical interventions fail to address or recognize the ethical, historical, political, institutional and structural complexities of real-world community vulnerability and its causes.

GAR 2022 highlights the importance of designing risk communication collaboratively and across disciplines. ***Design and implementation of a relational model of risk communication (page 117)*** synthesizes decades of research on risk cognition and related themes and argues that the model is one that is well suited for disaster risk reduction practitioners, as it speaks to the importance of communication among members of the community as a potential vehicle for reaching everyone, including the most excluded.

Transforming risk governance needs adequate resources. ***Macroeconomic co-benefits of DRR investment: Assessment using the Dynamic Model of Multi-hazard Mitigation Co-benefits (DYNAMMICs) model (page 139)*** introduces a new macroeconomic framework for quantifying the multiple benefits of DRR investment to effectively design DRR investment options that yield synergies between DRR and other development aspirations.

Earth observations into action: Systemic integration of Earth observation applications into national risk reduction decision structures leveraging geospatial data infrastructures (page 163) demonstrates scalable and replicable methods to advance and integrate the use of Earth observations, to support risk-informed decision making, based on documented national and subnational needs and requirements.

An under-used and at times under-valued resource which GAR 2022 strongly advocates for is indigenous knowledge. ***Integrating indigenous knowledge and state-of-art Earth observation solutions for the Sendai Framework implementation (page 186)*** describes the important role Indigenous communities play in building disaster resilience, as well as hindering factors and inequalities they face that impede this role, highlighting lessons learned during the COVID-19 pandemic.

The bigger picture and the way forward – connecting risk governance to other global agendas
GAR 2022 advocates that DRR is not a stand-alone agenda but a tool to achieving the wider sustainable development agenda and the Paris Agreement.

Addressing the interplay of the Sendai Framework with Sustainable Development Goals in Latin America and the Caribbean: Moving forward or going backwards? (page 206) addresses the analysis of progress between the Sustainable Development Goals (SDGs) and Sendai Framework for Disaster Risk Reduction (SFDRR) agendas in Latin America and the Caribbean and its complementary features.

Managing systemic risk in emergency management, organizational resilience and climate change adaptation (page 234) looks into the use of disaster science in policy making for urban systems, where major risks need to be managed by bringing together emergency management, organizational resilience and climate change adaptation, illustrated by the example of the London public administration.

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