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## Towards an Actionable Framework for Governing Systemic Risk

by Andrew Maskrey, Garima Jain, Allan Lavell, Angelika Planitz<sup>1</sup>

While systemic risk has always existed, its local and national expression is now complemented by more frequent manifestations of global systemic risk. Events since the turn of the 21st century indicate that economic globalization has resulted in increasing system interdependency, complexity and uncertainty and hence magnified systemic risk as we have seen during the COVID-19 pandemic. A result of this has been that the predominant approach to the governance of systemic risk has become synonymous with strengthening resilience to transboundary and global risks. Little concern has thus far been shown internationally with systemic risk at the local and national levels, especially in low to middle income countries (LMICs).<sup>2</sup> This policy brief, therefore, aims to foster the understanding of systemic risk and how UNDP, its partners and programme countries can adopt actionable ways of promoting systemic risk governance at local and national levels. Systemic and multi-dimensional risk are also recognized as key challenges in the UNDP Strategic Plan 2021-2025.<sup>3</sup>

### Expressions of Systemic Risk

**Systemic risk is characterized by high levels of interdependency, non-linearity, feedback loops and uncertainty and manifests as sequential, synchronous or simultaneous crises and failings.**<sup>4</sup> *Sequential* impacts can occur in complex ecosystems such as in global supply chains that have effects across spatial and temporal scales<sup>5</sup> (e.g. the fires in the ready-made garment industry in Bangladesh in 2012-13,<sup>6</sup> the Tsunami in Japan<sup>7</sup> and

the Chao Phraya floods in Thailand in 2011<sup>8</sup>, which affected European and North American markets). *Synchronous* systems failures<sup>9</sup> occur in multiple interdependent systems because of a primary hazard or threat that leads to the destruction of assets and infrastructure in diverse systems (e.g. in Dominica after Hurricane Maria or New York after Hurricane Sandy<sup>10</sup>).

*Simultaneous crises*<sup>11</sup> are associated with multiple triggers that can have compounded impacts (e.g. crises in Sudan, Syria or Zimbabwe, which are characterized by compounding hazards such as macro-economic crises, COVID-19, conflicts, refugees and migration, droughts, floods and epidemics).

**Systemic risk is also expressed in the form of existential risks in the nine critical and interdependent earth systems** when their thresholds or boundaries are breached. Earth systems are interdependent with social and economic systems. Small incremental changes in any one system can lead to a catastrophic breakdown in another (e.g. the dying of the Aral Sea or the global climate emergency with its looming consequences if not stopped).<sup>12</sup>

**Most people in LMICs experience systemic risk on an everyday basis** through the failure of local infrastructure systems (water and sanitation,

power, telecommunications, health and education), the interruption of local supply chains that are dependent on road, rail, or river networks and the degradation or collapse of local ecosystem services. This makes addressing everyday systemic risk critical for the achievement of many SDGs.<sup>13,14</sup>

#### **Systemic risk in local infrastructure systems in Cambodia:**

*In Cambodia, nearly one-fifth of the country's road network was damaged or destroyed by floods between 2000 and 2014. Of the total roads, 89 percent were rural, and 59% were roads connecting communes and /or villages, directly affecting the local supply chains on which these communities rely. This is the everyday experience of systemic risk for local people who rely on local infrastructure systems in LMIC.*

## The Social Construction of Systemic Risk

Systemic risk, like all other risks, is the result of the interrelationship of hazard, exposure and vulnerability. These variables are socially constructed through a range of underlying drivers, including poverty and inequality, badly planned and managed urban and infrastructure development, environmental degradation, climate change, conflict, displacement and weak territorial governance.<sup>15</sup> Resilience compensates risk through various mechanisms, for example redundancy in systems. "Socially constructed" means that they have been created and accepted by the people in a society, and thus can change as society changes.

#### **COVID-19 manifests systemic risk that was accumulated over time:**

*The ongoing COVID-19 pandemic exemplifies the systemic internalization of risk drivers in the global political economy in all its dimensions. The dominant interpretation of the COVID-19 pandemic continues to be that of an exogenous and unforeseen pathogen (the SAR-CoV-2 virus) taking national health systems and economies by surprise. However, the pandemic can and should be understood as the manifestation of endogenous risk that was socially constructed and accumulated over time.*

Although hazards are often interpreted as natural, they are often times socially constructed (e.g. extreme weather events that are related to endogenous climate change, flooding associated with deforestation or urban development, zoonotic pathogens, or conflict).<sup>16</sup>

The underlying drivers of risk are also reflections of the prevailing political economy. **In all political economies, there is a tension between the privatization of benefits and the socialization of risks**, namely when some elements of society benefit from risk taking, whilst others bear the costs in the case of failure.<sup>17</sup>

In a globalized economy, risks and the related costs may be transferred to geographically and temporally disconnected systems. While some countries and economic sectors apparently manage their risks and strengthen their resilience, this may disguise and veil risk transfer to other sectors and geographies. When this hidden risk accumulates in any system and is activated by a hazard trigger, it then materializes in the form of crises with potential impacts across other systems. The impacts can circle back into the risk scenarios of the system from which they emerged and back into the underlying political economy, which in time seeds new risks. This means that risk will become even more serious in the future if action is not taken to control and reduce it.

The dynamics of the social construction of systemic risk also explains why risk always tends to disproportionately concentrate in the same social groups (defined by social status and class, ethnicity, race, gender, age, employment and work type, and various conditions of intersectionality) and geographies (excluded, marginal or insecure areas due to socio-spatial segregation).

**The kind of hazard trigger, whether physical, biological, technological or social, is ultimately of secondary importance.**<sup>18</sup> This conclusion is fundamental for conceiving ideas and approaches to actionable systemic risk governance, whether in highly developed or low- and middle-income countries.

## Towards a New Paradigm for the Governance of Systemic Risk

The understanding and practice of systemic risk and its governance is still new and evolving. Based on the above insights of how systemic risk manifests, several fundamental challenges

that are inherent in predominant risk governance solutions will need to be tackled to be able to shift the underlying paradigm for the governance of systemic risk (see Figure 1).

**Figure 1: The old versus the new risk governance paradigm for systemic risk<sup>19</sup>**



Considering the wide range of countries' governance arrangements, capacities and gaps, there are no blueprint approaches for strengthening the governance of systemic or conventional risk. However, there are several general characteristics that can be nurtured to support the shift from the old to the new paradigm (see Figure 1).

**Strengthen the management of conventional risk to govern systemic risks:** Systemic risk usually develops from conventional risk. This means that if conventional risk can be effectively managed and reduced, then systemic risk can be as well. The governance of systemic risk, therefore, should not be a new exotic governance specialty; rather, it requires the strengthening of conventional risk governance arrangements as a precondition to reduce systemic risk.

**Focus more on understanding the risk drivers:** When the focus of risk governance lies on protecting development from supposedly exogenous (meaning external to development),

unexpected and difficult to anticipate threats, then the attention of risk analysis inevitably becomes preoccupied with the hazard trigger. On the contrary, when conventional and systemic risk are understood as a social construct, the focus of risk analysis shifts from the hazard trigger to the existing and known patterns of exposure and vulnerability that can be corrected.

**Give more attention to prospective risk management:** Understanding risk as a social construct, opens the door to an increased emphasis on prospective risk management. This ensures that new risks are avoided by controlling the development of risk drivers such as environmental degradation, unsustainable urban and territorial practices, poverty and inequality. It also allows for a clear definition of who owns and is responsible for the risk and who is accountable and liable for risk transfer to other sectors and territories. For this to happen, committed participation in decision-making is required for all parties involved and potentially affected.

**From a global phenomenon to local action and territorial governance:** Managing systemic risk at the local level has a profound global impact. Systemic risk in local infrastructure systems, supply chains and ecosystems, is not an autonomous local issue. It sheds light on underlying global risk drivers and how the social construction of systemic risk manifests in geographies and territories. It is only at the territorial level that the interlinkages between different systems can be articulated and risk management issues can be resolved, offering an actionable entry point for addressing systemic risk as the national and global level.

**Strengthening the governance of sustainability and resilience:** Addressing systemic risk requires strengthening the already existing overall, holistic governance framework for social, economic, territorial and environmental development that can curb the underlying risk drivers in a way that promotes sustainability and resilience and generates development benefits. By doing so, it directly addresses the trade-offs between privatizing gains and socializing risks in search of a new political economy that strengthens competitiveness whilst favouring prospective risk management (rather than addressing mere technical and administrative challenges).

## The Elements of an Actionable Risk Governance Framework

UNDP has been a global leader in both governance and risk governance, having substantially contributed to shaping the concept and related practices in its programme countries.<sup>20</sup> The following actionable entry points are suggested for UNDP and partners to accompany LMICs on their journey towards a framework for the governance of systemic risk, which is based on an understanding of its social construction.

- **Fostering risk-informed development:** Risk-informed development aims to embed “risk” at the heart of development (rather than dealing with it as an add-on) including policy making, planning, budgeting, programming, implementation, monitoring and evaluation and at all scales. It ensures that a resilience lens permeates development and helps negotiate complex decisions over trade-offs between seemingly conflicting policy objectives in favour of a new political economy. Adaptive and anticipatory governance capacities will provide the basis for an enabling environment that provides space for flexibility and innovation so that human societies can live in and with uncertainty.<sup>21</sup>
- **Strengthening risk identification and estimation:** Giving attention to understanding the multi-dimensional characteristics of risk (rather than a single risk approaches) with a clear focus on the underlying conditions of exposure and vulnerability, will help better understand its social configuration. Since exposure and vulnerability are pre-existing conditions, they can be more easily modelled and estimated (compared to predicting hazard triggers that are extreme, infrequent and difficult to estimate such as black swan events).
- **Improving territorial governance arrangements:** While national governments have normative responsibilities, these are unlikely to lead to implementation on the ground unless backed up by well-resourced territorial governments with the necessary capabilities. Territorial governance at the local level is critical for addressing systemic risk in local infrastructure systems, supply chains and ecosystem services. At the territorial level the social construction of systemic risk can be understood, and the interlinkages between different systems articulated with a view to resolve risk management issues. This will have a wide reaching impact at the global level and on the achievement of the SDGs.
- **Setting financial incentives:** Financial mechanisms that encourage the allocation of public and private capital for investments that reduce risk and build resilience are a key building block. The suite of potential solutions is long, including budgeting, fiscal/financial management, risk-informed Integrated National Financing Frameworks, insurance, risk-financing, and pooling, social protection schemes, accessing pooled and global funds, and many more.
- **Cultivating new forms of public and societal accountability:** Addressing the diffused responsibilities among a complex network of actors that have a role in the construction and management of systemic risk, will require the capacity to bring together a broad range of perspectives and viewpoints by connecting formal and informal institutions and networks in a multi-stakeholder and people-centered approach to decision-making on the common future of our local and global societies.

These entry points offer an actionable way to support countries in *transforming the governance of risk* towards an approach that is able to break the cycle of systemically creating new risk.

For more information, please consult the [UNDP Discussion Paper “The Social Construction of Systemic Risk: Towards an Actionable Framework for Risk Governance”](#) (June 2021).

### Brief Glossary of Terms:

**Conventional risk:** The probable direct impacts that can occur, such as injury and death, loss or damage to physical assets and economic losses associated with existing stocks and provisions.

**Hazard trigger:** a condition or other event that will cause a risk to manifest itself in the form of negative impacts on people, assets or systems.

**Risk driver:** Processes or conditions, often development-related, that influence the level of disaster risk by increasing levels of exposure and vulnerability or reducing capacity.

**Systemic risk:** The ripple-effects of direct loss and damage, indirect impacts and wider effects, such as the disruption of infrastructure systems and essential services; failure of economic, financial or social systems; effects on employment and income; national and family debt profiles and ecosystem collapse.

## Endnotes

- 1 Angelika Planitz is a Senior Policy Advisor at UNDP’s Disaster Risk Reduction and Recovery for Building Resilience Team, email: [angelika.planitz@undp.org](mailto:angelika.planitz@undp.org); Andrew Maskrey, Allan Lavell, and Garima Jain are Associates of the Risk Nexus Initiative (<http://ihs.co.in/rni/the-initiative/>), email: [andrew.maskrey@gmail.com](mailto:andrew.maskrey@gmail.com); [allanlavell@gmail.com](mailto:allanlavell@gmail.com); [garimajain2002@gmail.com](mailto:garimajain2002@gmail.com). Acknowledgements: The authors would like to thank Aarathi Krishnan and Jan Kellet from UNDP for their helpful comments to this policy brief.
- 2 Renn et al. (2020). Systemic Risks from Different Perspectives. Risk Analysis. December. UNISDR (2011). Revealing Risk: Redefining Development: The 2011 Global Assessment Report on Disaster Risk Reduction. Nausser (2015). Systemic Risks and Environmental Governance: Final Report. Swiss Federal Office for the Environment.
- 3 This policy brief heavily draws upon the findings of the UNDP Discussion Paper by Maskrey, Jain, Lavell, [The Social Construction of Systemic Risk: Towards an Actionable Framework for Risk Governance](#) (June 2021) and its five case studies, and by chiselling out in greater detail the policy implications for UNDP’s support to strengthening the governance of systemic risk in line with the new [UNDP Strategic Plan](#) (2021-2025).
- 4 IRGC (2018). Guidelines for the Governance of Systemic Risks. International Risk Governance Center (IRGC). Renn (2016). Systemic Risks: The New Kid on the Block. Environment: Science and Policy for Sustainable Development, 58(2). UNDRR (2019). Global Assessment of Disaster Risk. Bangkok, Thailand.
- 5 <http://sdg.iisd.org/news/report-reveals-pockets-of-inequality-in-all-oecd-countries/>
- 6 Jain, Lavell, Maskrey (2021). The Social Construction of Systemic Risk: Towards an Actionable Framework for Risk Governance – Country Case Study: Bangladesh. United Nations Development Programme.
- 7 Todo, Nakajima, Matous (2013). How Do Supply Chain Networks Affect the Resilience of Firms to Natural Disasters? Evidence from the Great East Japan Earthquake (R10, L10, Q54). RIETI Discussion Paper Series.
- 8 UNISDR (2013). Global Assessment Report on Disaster Risk Reduction - From Shared Risk to Shared Value: The Business Case for Disaster Risk Reduction.
- 9 Homer-Dixon (2006). The Upside of Down: Catastrophe, Creativity, and the Renewal of Civilization. Knopf Canada. UNISDR (2011). Global Assessment Report on Disaster Risk Reduction.
- 10 Haraguchi, Kim (2016). Critical Infrastructure Interdependence in New York City during Hurricane Sandy. *International Journal of Disaster Resilience in the Built Environment*, 7(2), 133–143.
- 11 Homer-Dixon et al. (2015). Synchronous Failure: The Emerging Causal Architecture of Global Crisis. *Ecology and Society* 20(3).
- 12 <https://www.stockholmresilience.org/research/planetary-boundaries/the-nine-planetary-boundaries.html>. Hoskins (2014). Cotton Production Linked to Images of the Dried-Up Aral Sea Basin. *The Guardian*.
- 13 UNISDR (2015a). Making Development Sustainable: The Future of Disaster Risk Management. Global Assessment Report on Disaster Risk Reduction. OECD (2018). Assessing Global Progress in the Governance of Critical Risks. Organisation for Economic Co-operation and Development.
- 14 UNDP and ADB (2017). Managing Disaster Risk in the Road Sector Cambodia Disaster Damage and Loss Database: A Tool for Enhanced Decision Making.
- 15 The way in which underlying root causes lead to the configuration of vulnerability and risk has been postulated in modern disaster literature since the 1970s and was further developed in Latin America in the 1990s. See for example, O’Keefe et al. (1976). Taking the Naturalness Out of Natural Disasters, Nature, London. Maskrey (1993). Los Desastres no Son Naturales, LA RED.
- 16 Lavell et al. (2020). The Social Construction of the COVID-19 Pandemic: Disaster, Risk Accumulation and Public Policy. LA RED & Risk Nexus Initiative.
- 17 Krugman (2009). The Return of Depression Economics and the Crisis of 2008. W.W. Norton Company Limited.
- 18 Wisner et al. (2003). At Risk: Natural Hazards, People’s Vulnerability and Disasters, second edition.
- 19 Adapted from Maskrey, Jain, Lavell (2021). The Social Construction of Systemic Risk: Towards an Actionable Framework for Risk Governance. United Nations Development Programme. Discussion Paper.
- 20 Planitz (2015). Disaster Risk Governance and the Principles of Good Governance. In: Davis et al. (2015). Disaster Risk Reduction for Economic Growth and Livelihood. Investing in Resilience and Development. Routledge.
- 21 For more information see the upcoming UNDP Offer on Risk-Informed Development and related consultations at <https://www.sparkblue.org/consultationRID>. On resilience building also see: [The UN Common Guidance on Helping Build Resilient Societies](#) (2020).