© UNDP Macedonia / Jodi Hilton

UNDP Global Policy Network Brief

Choosing Your Tomorrows:

Using Foresight and Anticipatory Governance to Explore Multiple Futures in Support of Risk-Informed Development

by Paul Conrad, Sahiti Sarva, Rebecca Smith[1]

The future is full of complex uncertainty and unknown risk; with this in mind, how we can achieve meaningful, sustainable development which is not undermined by crises? Foresight and the concept of working with alternative futures grants policymakers and decision-makers the ability to become anticipatory and to support both risk-informed and forward-looking development. By embracing foresight as a key component of the risk-informed development process, we can foster governance processes that are genuinely risk-conscientious and ready to take on the challenges of our different tomorrows.

As devastating as the COVID-19 pandemic, the ongoing climate crisis and the current war in Ukraine have been, they were not entirely unforeseen. The same can be said of the looming global *food* and *energy* crises. *In fact, these are the result of known risks manifesting as crises*. The hyper-connected world in which we live amplifies systemic risk and causes cascading and compounding failures across sectors, timescales and geographies. As they increase in frequency and severity, the manifestation of risks as crises has the potential to undermine significant progress towards sustainable development with local and global repercussions.

Events such as these demonstrate the systemic nature of risk and highlight the need for governance that is anticipatory—capable of preparing for future uncertainties—rather than only responding to what has already happened. Foresight, methods for working with alternative futures, grants policymakers and decision-makers the ability to become anticipatory and to support development that is both risk-informed and forward-looking[2].

As with all forms of risk, systemic risk is a product of the interrelationship between a hazard, the exposure of a community, system or asset and its vulnerability. It shows us that risk is not a one-off external factor, but an inherent characteristic of systems that manifests when triggered. Pre-existing patterns of vulnerability and exposure often dictate the impacts of a crisis rather than the hazard trigger itself[3].

As such, crises disproportionately affect those who are already disadvantaged, frequently leaving them further behind. Managing systemic risk requires the synthesis of past trends with a deep understanding of the interconnections within and between present-day systems. To this end, UNDP is championing risk-informed development to ensure that systemic risk is at the centre of development pathway planning.

Risk occurs not just *to* development but *from* development[3]. When we modify urban landscapes through large-scale infrastructure projects, when we expand agricultural land by means of deforestation or when populations shift towards cities, finite resources are depleted and systemic risk is magnified. Magnified risk, of course, leads to the potential for magnified impact. However, the future is inherently uncertain, and policymakers must, therefore, be able to navigate uncertainty and anticipate risk to progress towards sustainable development. For the last several years, UNDP has been exploring applications of foresight to facilitate the systematic understanding of future uncertainties for use in current-day sense- and decision-making. We suggest that foresight (exploring multiple futures) can be used in combination with hindsight (learnings from the past) and insight (systemic risk in the current system) to advance risk-informed development.

Drawing upon the diverse experiences of UNDP practitioners, this paper explores how foresight can be used by those working across the development sphere to advance anticipatory governance as a means of achieving risk-informed development. It serves as a first step in placing systemic risk and uncertainty at the centre of development policy pathway formulation, ensuring that governance systems are forward-looking and better able to govern the management of risks to and from development.

Why is foresight a key element of risk-informed development?

Risk-informed development is a risk-based decision process that requires decision makers to acknowledge and understand the risks and trade-offs associated with development choices and incorporate this knowledge into policymaking[4].

It aims to promote development that is resilient and sustainable, minimizing the impact of risks *to* development and avoiding the creation of risk *from* development.

Figure 1: The role of foresight in risk-informed development.
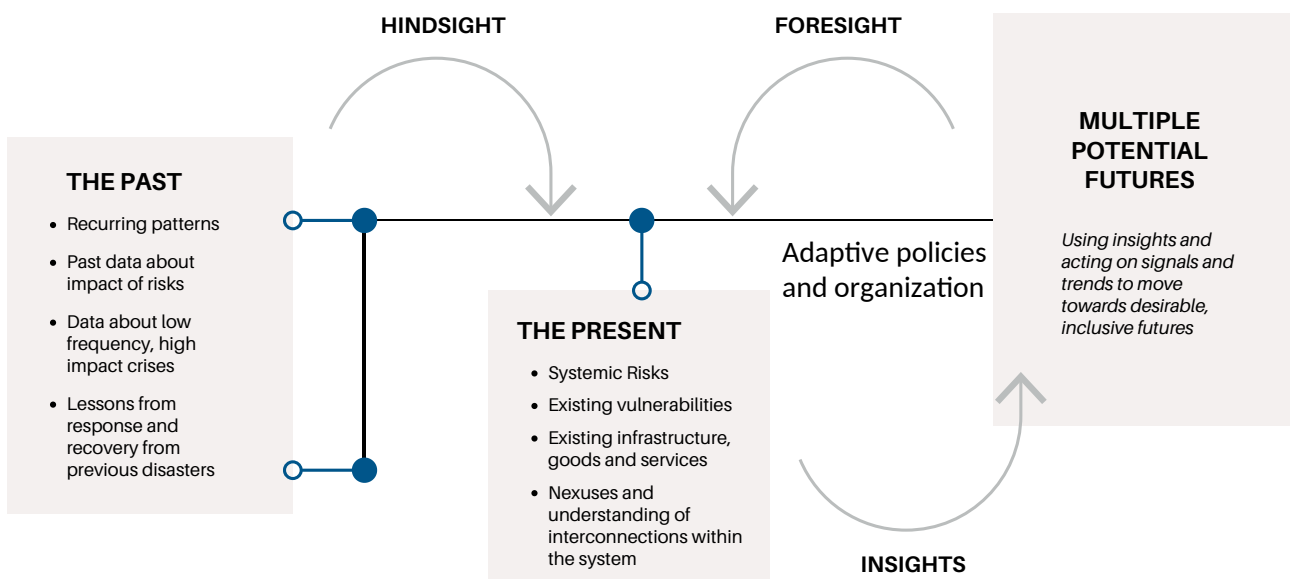
Reactive risk management is rooted in *hindsight*. Data from past events are used to inform present-day action to avoid repeating the same mistakes in the future and break past patterns and cycles. However, this assumes a degree of predictability and repetition. It is often overlooked that past development creates systemic risk and determines the current state of infrastructures, economies and societies[3]. In tandem, present-day actions dictate future resilience[5,6]. By considering emerging trends in current decision-making, policymakers can use the feedback loop between the present and the future to proactively course-correct for sustainable development.

The premise of *foresight* is that the future is still in the making and can be actively influenced or even created. For this, governance must be anticipatory by nature. Anticipatory governance involves *applying* foresight, alongside the shifts necessitated at the level of institutional processes, infrastructure, operational agility, culture, relationships and mindsets. This makes space for the meaningful application of knowledge about future risks and opportunities in decision-making, planning and implementation of policies and programmes. By using foresight for risk-informed development, we build on an existing framework that puts risk at the centre of the development process, using hindsight from the past, foresight of multiple changing futures and insights of current-day systemic risk to give policymakers the power to remain resilient under multiple futures.

## What does it take to strengthen foresight capabilities in risk-informed development?

The Theory of Change for risk-informed development proposes five broad entry points, which put risk at the centre of development[3]:

- **Knowledge and evidence:** Driving the risk-informed process through evidence, risk awareness and understanding the links between risk and development.
- **Organization and implementation:** Strengthening capacities in risk governance; adaptive planning; coordination; application of procedures and tools in support of risk-informed development; and pursuing portfolio approaches that foster integrated programming.
- **Policy coherence:** Fostering complementarities, co-benefits and no-regrets solutions that address multidimensional and systemic risk; managing policy trade-offs between competing policy objectives; and supporting long-term collective goal setting and prioritization through futures analysis and scenario-building.
- **People-centred and stakeholder-driven policymaking and implementation:** Ensuring no one is left behind and that the most vulnerable and at-risk populations have agency in the risk-informed development process and benefit directly from it.
- **Sustainable financing for risk-informed development:** Supporting financing solutions that blend public, private, domestic and international resources; accelerating allocations to the local level; and increasing access to pooled and global funds.

Figure 2: Three aspects for integrating foresight within the Theory of Change for risk-informed development.
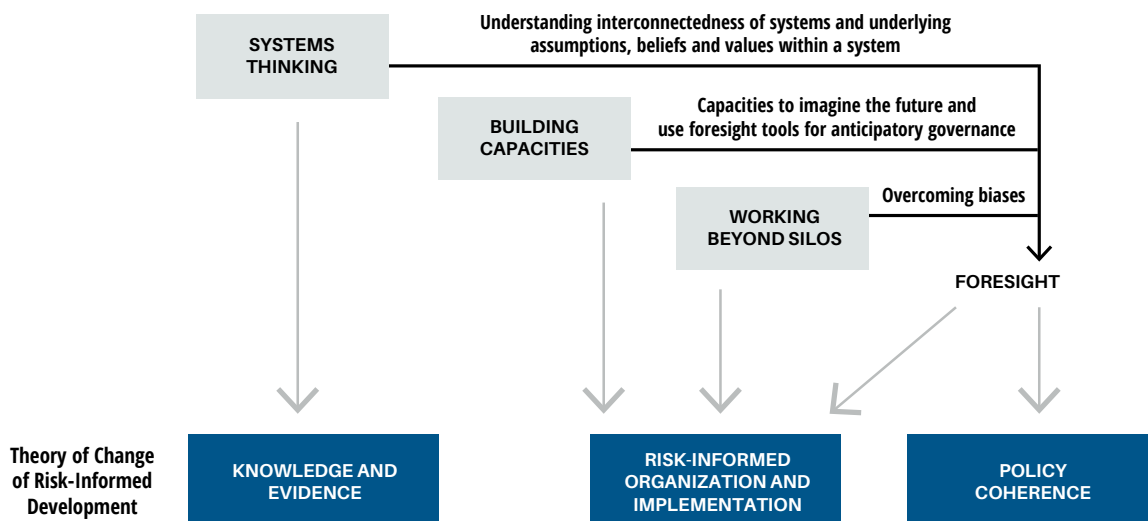
The Theory of Change for risk-informed development states that a combination and level of focus of these entry points is selected based on the country's context and prevailing opportunities in the political economy. Although elements of foresight can be integrated at each point, this paper discusses how it is best integrated within knowledge and evidence, organization and implementation, and policy coherence lines of effort. However, to meaningfully apply foresight tools within these entry points for risk-informed development, we identified three aspects that require particular attention: systems thinking, capacity building and working beyond silos. Figure 2 illustrates how these three aspects contribute to the selected entry points proposed by the Theory of Change for risk-informed development and foresight.
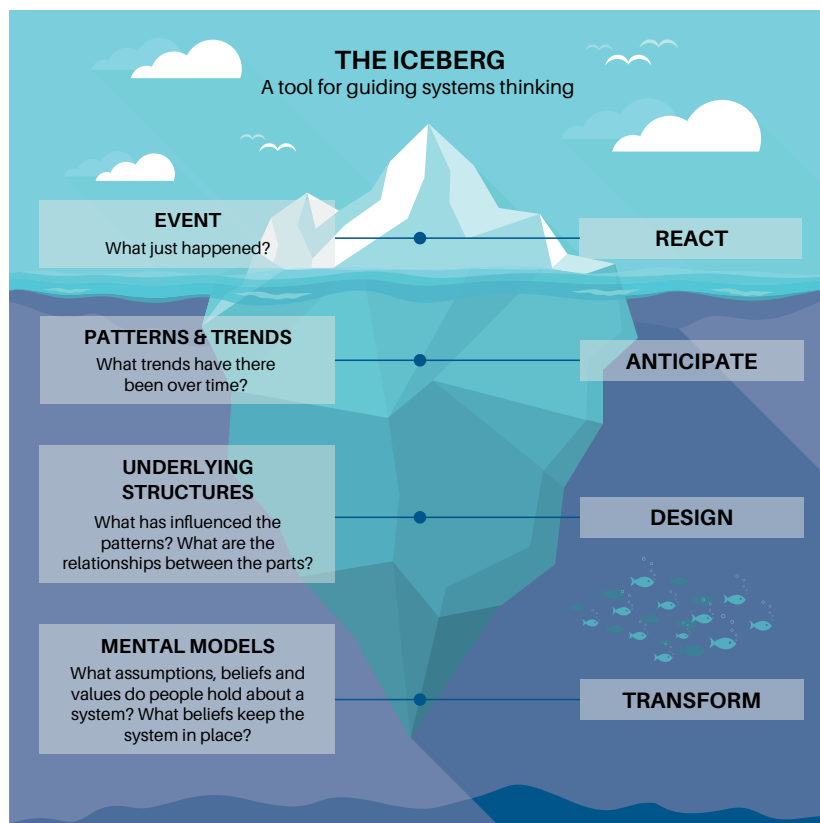
Integrating foresight within risk-informed development is, however, heavily context-dependent; what works in one context may not work in another. To understand how context changes the way these can be implemented, we met with practitioners from multiple UNDP Country Offices who have used foresight or risk-informed development as part of their work. The insights generated exemplify the need to combine efforts for systems thinking, capacity building and moving beyond silos, and this is embedded within the following sections, which discuss these aspects in greater detail.

Thinking systems: identifying the compounding and cascading effects of risks

Systems thinking can be used to describe the fundamental relationships and interconnections between risks and other development issues at multiple levels (i.e. global, regional, national and subnational) and across timescales[5], informing subsequent trade-off analysis. It also sheds light on some of the underlying assumptions that drive the system. The iceberg model (Figure 3) is often used to understand systems thinking[7]. The event or crisis, is what we see; but this model allows us to also question that which we do not see, such as the patterns, trends, underlying structures and mental models that have caused the crisis to occur.

Figure 3: The iceberg model can be used to understand the levels of complexity associated with systems thinking and how crisis events materialize based on multiple levels of the underlying risks[7,8].

THE ICEBERG
A tool for guiding systems thinking

EVENT
What just happened?

REACT

PATTERNS & TRENDS
What trends have there been over time?

ANTICIPATE

UNDERLYING STRUCTURES
What has influenced the patterns? What are the relationships between the parts?

DESIGN

MENTAL MODELS
What assumptions, beliefs and values do people hold about a system? What beliefs keep the system in place?

TRANSFORM

Applying a systems lens can help create a useful knowledge base for policymaking, forming a core component of foresight studies[2]. For example, in Bangladesh, through the UN-supported National Resilience Programme, the Government launched the Disaster and Climate Risk Information Platform (DRIP) in February 2022. This digital platform adopts a system lens to view risk and development, providing vulnerability assessments and information on disaster and climate risks that may impact proposed development projects. Furthermore, it offers suggestions for adaptation and mitigation measures to minimize risks caused or amplified by these projects. Thus far, DRIP has provided reliable data for all 64 districts in Bangladesh, with 13 layers for hazard and exposure and 9 for vulnerability. It allows government stakeholders and development actors to identify and understand the interrelationships between development and risk, and in so doing, facilitate and build capacities in systems thinking, offering a knowledge base that allows development planning, budgeting, policies and programmes to be risk informed.

Adopting systems thinking can also go beyond supporting risk-informed policy and development decisions to driving governance reform. The COVID-19 pandemic emphasized the need to approach emergent and complex challenges with institutional infrastructure that is anticipatory, adaptive, systems-oriented and equipped to deal with long-term challenges and unknowns. In response, in 2021 the UNDP Pacific Office and the Strategy, Policy and Partnerships Team at UNDP's Regional Bureau for Asia Pacific engaged in an initiative to support government and civil society partners to leverage foresight to build resilient and adaptive policies and programming in the Pacific. The initiative's initial pilots focused on identifying and testing entry points for applications of foresight and pathways for anticipatory governance. Lessons learned from this phase are informing the iterative development and co-creation of a

© 2014 Morgana Wingard / UNDP

To tackle the re-emergence of Ebola within vulnerable communities, we must have a clear picture of the systems that enable the issue.

framework for more future-fit, anticipatory models of governance appropriate for Pacific realities and institutional contexts, using foresight as a mechanism to reorient decision-making.

But what does "future-fit" governance look like in practice? The UNDP Pacific Office has partnered with Vanuatu's Ministry of Internal Affairs (MoIA) to future-fit strategic planning for development in Vanuatu. In this context, future-fitting governance involves harnessing the inherently forward-looking indigenous traditions and mindsets of Ni-Vanuatu communities and combining this knowledge with new approaches and innovations. Initial efforts to future-fit the restructuring of internal priorities and modes of working are based on foresight. A component involves leveraging futures research to bring new perspectives to existing policy and broadening the MoIA's definition of risk-informed programming based on global and local intelligence on risk. To include more anticipatory approaches implies working in more systemic ways, and systems thinking is, therefore, central to this process of governance reform.

In discussions with practitioners, systems thinking was highlighted as an area for improvement within UNDP. Practitioners mentioned that significant resources are often used to tackle crises, for example, the six Ebola outbreaks in the Democratic Republic of the Congo since 2018[9]. However, comparatively little has been designated towards at-risk and vulnerable communities to address the root, systemic causes of the issue. To tackle the root causes, it is important to address the underlying systemic risks that led to the outbreak. Similarly, when focusing on advancing progress towards one SDG, risks directly associated with that SDG are considered, but risks that indirectly impact progress towards it are often left out. Through systems thinking, previously unknown risks may become visible, leading to different and often improved development pathways. For those working across the development perspective to truly navigate levers of change, it is vital that we have a clear understanding of the wide-ranging implications of the work in which we are involved. This sits at the core of risk-informed development.

Building capacities for foresight: understanding how information about the future can be generated and used

Once systems analysis is performed, new capacities are required to use that information with foresight tools. During a series of online interactive webinars that examined technology readiness for early warning and preparedness initiatives in 2021, UNDP Country Offices emphasized that internal capacities related to data analysis and insight generation were limited. Additionally, data availability and access to tools that support the analysis of larger amounts of digital data were highlighted as limitations[10]. Even if data were collected, it is often data of the past—the magnitude of the crisis, its impact and its cascading effects. Truly *imagining* the future is a learned skill. To move from reactive risk management to anticipatory governance, historic data need to be combined with the *imagination* of the multiple futures that are probable, plausible and preferable.

Foresight studies have identified multiple different tools and methods to gather information about the future (including horizon scanning and scenario analysis), which can be used to identify desirable futures to inform current-day policy[2] . However, to appropriately use these tools or apply their insights to different contexts, it is important to build capacities locally amongst leadership and throughout organizations focused on development work. Structurally, this will establish local champions who are equipped to meaningfully use foresight and risk-informed development to drive the development processes suited for their contexts.

The DRIP initiative has overcome gaps in the systematic collection and sharing of data in Bangladesh. It enables capacity building amongst government and development actors in systems and future thinking by furnishing them with useful knowledge on possible future scenarios, compelling them to think beyond the *now* to the *what if*. For example, the platform is considered a breakthrough in risk-informed development planning through its fine resolution spatial mapping of future climate scenarios for multiple time horizons until 2050. This information allows the platform's users to consider longer-term climate change in development planning, prompting enhanced discussions on the adaptability and resilience of new and existing development projects to climate change impacts. Whilst the platform offers an invaluable knowledge base, for development to be truly risk-informed, it is necessary to also look beyond DRIP to consider the underlying factors that drive vulnerability to climate change, for example.

In North Macedonia, building capacities for foresight have extended beyond leadership and development organizations to all of society. The North Macedonia Accelerator Lab[i], as part of a project with the country's Democratic Governance Unit (DGU) (discussed in greater detail in the following subsection), adopted an initiative called the Citizen Dream Labs, where citizens were invited to imagine and co-create the future. This mechanism aimed to decentralize and build citizen capacities in futures thinking and rebuild citizen trust in public institutions to deal with long-term challenges and uncertainties.

UNDP practitioners noted that the time and resource allocations required for risk-informed development are often considered a luxury, with perceptions of risk varying significantly within the organization. Teams often face a continuous string of responsibilities that are prioritized over adapting our work to emerging risks. As a result, teams often struggle to understand and identify emerging future risks and underlying systemic risks. In addition, donor and internal reporting systems are rarely set up to allow for the meaningful reflection of emergent risks. When a risk is identified, internal systems frequently lack the level of flexibility necessary to adapt and minimize the risk. Yet, building capacities and allowing teams the time to anticipate the future will allow us to be cognizant of emerging risks and become more anticipatory in our processes. Going forward, we need to create a working culture that acknowledges the importance of understanding risk. We need to work with our donors while improving our internal systems so that risk becomes a core and understood component in our monitoring, evaluation, accountability and learning processes. By building the core capacity to understand complex risk, we will enable those working with communities to understand the root causes of issues and start to truly build sustainable development rather than continuing down the vicious cycle of crisis response and recovery.

---

i   The Accelerator Labs are the largest and fastest learning network on sustainable development challenges within UNDP. Working across 115 counties, they aim to change the way development is done by learning what works and what does not in sustainable development.

Moving beyond the silos: working together to make faster, inclusive and holistic decisions

Practitioners also noted that effective policymaking should take place by bringing multiple and diverse actors together. Decision makers are often prone to cognitive biases when thinking about risk. As humans, not only are we bad judges of probability, but our estimations depend on how risk is presented (framing effect)[11] and how many factors we consider in the decision-making process (focusing effect)[12]. Judgments also depend on the first piece of information received (anchoring effect), how we choose to measure the quality of the decision (outcome bias)[13] and the amount of data available for consideration (selection bias)[14]. "Our behavioural biases too often place potential disasters away and far into the future"[15]. This stops us from acting on risk and uncertainty with urgency and anticipation. By pooling capacity from various parts of society, we increase the perspectives and information available, which could potentially alleviate important policy decisions falling prey to undesirable cognitive biases.

Moving beyond silos allows stakeholders from interconnected parts of a system—identified through systems analysis—to effectively communicate with one another about how they may each be impacted by policy or organizational decisions. It allows room for inclusive decision-making, joint agenda-setting and creating strategy at a higher level.

In North Macedonia, a review of past policymaking and planning processes by the UNDP Accelerator Lab and DGU noted several blind spots caused by working in silos within government institutions. The Lab and DGU are, therefore, working to catalyse system transformation and redesign the process of public policymaking to advance good governance practices in North Macedonia. To overcome blind spots and ensure a diversity of perspectives, they are adopting a whole-of-society approach (including the aforementioned Citizen Dream Labs), allowing different government and civil society segments to work hand-in-hand.

In this approach, the Lab and DGU have designed a process of sensemaking and future-imagining (both foresight tools), decision-making, experimenting, learning and developing to support the evolution of a 20-year National Development Strategy for North Macedonia. The formulation of this strategy is to be led by a quadruple helix, an innovation systems model that emphasizes the interaction between the government, civil society organizations, academia and the business community on development challenges. Through this process, the Lab and DGU are working to improve the existing methodology so that institutions can develop future strategies that are both agile and anticipatory, that is living documents that account for emerging risks and uncertainty by enabling flexibility, further experimentation and continuous learning.

Practitioners recognized the role existing internal processes play in propagating a siloed approach to working within UNDP and how such approaches often prevent teams from seeing the risks that emerge in other sectors and the impact that these can have on their own sector of work. Despite UNDP's integrator role, practitioners noted a disconnect between UNDP teams, governments and the communities we serve and across the UN System. Colleagues situated in headquarters tend to work in a silo away from Country Offices, often lacking the level of contextual knowledge and perspective of what those working in-country want and need. The same is true across departments and thematic sectors, with each coming from a knowledge base that has been adapted to fit the needs of a particular context but might not be entirely suited to another sector. Additionally, it was mentioned that the work of Country Offices typically remains siloed from one another, with knowledge-sharing limited to brief interactions through webinars and workshops.

Siloed approaches make us blind to risks from outside a sector; they often hinder the flow of information and knowledge needed for long-term development. Practitioners highlighted that it is critical to accept that experts and professionals within one silo might not have all the answers, and much can be learned from looking outside it. Going forward, we must be able to break away from this siloed approach to work as the complex and systemic nature of the work we are currently involved in requires this. Within UNDP specifically, we must fully embrace our integrator role, both externally with partner organizations and internally within our current structures and build an infrastructure of shared ownership and sustained long-term collaboration.

Conclusion

Our tomorrows lie ahead of us and are inevitably linked with risk. Risk should be viewed as multidimensional and systemic, with high levels of interdependency, non-linearity, feedback loops and always fraught with uncertainty. But how then do we tackle the challenges associated with risk? To push towards a future that leads to sustainable development, we must have a clear understanding of risk and how it is inextricably linked with the past, present and future. Current systems often disproportionally rely both on past information and present bias to make decisions and often do not consider a futures perspective. In doing so, we are only seeing part of the picture.

The Theory of Change for risk-informed development proposes five broad entry points within existing governance structures to put risk at the centre of development. Although foresight processes can be linked to every part of the Theory of Change, they are most closely integrated within knowledge, organizational and policy coherence entry points. By reviewing a series of case studies and speaking to practitioners applying a risk-informed approach and foresight, it was found that three key aspects need to be focused on to best inform a future-looking governance structure that leads to sustainability: thinking in systems, building capacity for foresight and moving beyond a siloed approach.

To achieve risk-informed development going forward, those working on development can benefit from fully embracing foresight as a key component of the process. The key findings from this paper are that foresight (exploring multiple futures) should be used in combination with hindsight (learnings from the past) and insight (systemic risk in the current system). In addition, systems thinking and having a clear understanding of the entire lurking "iceberg" is vital to risk-informed development and futures thinking. Local level capacities need to be fostered, especially within leadership, such that futures thinking is part of the new status quo and embedded in accountability frameworks around decision-making and management processes. Finally, we need to try and overcome the cognitive biases that often surround how risk decisions are made, by moving away from a siloed approach. By doing this, we will be able to foster governance arrangements that are risk-informed, fit for purpose and ready for the systems of our possible tomorrows.

© 2014 Morgana Wingard / USAID

Endnotes

1   Paul Conrad is a Climate and Disaster Early Warning and Preparedness Specialist for UNDP's Disaster Risk Reduction and Recovery for Building Resilience Team (DRT), Crisis Bureau, email: paul.conrad@undp.org; Sahiti Sarva was a Junior Research Analyst for UNDP's DRT, Crisis Bureau; Rebecca Smith is Programme Analyst in Foresight and Anticipatory Action for UNDP's DRT, Crisis Bureau, email: rebecca.smith@undp.org. **Acknowledgements:** The authors would like to thank Nadia Ben Ammar, Head of Exploration, UNDP Tunisia Accelerator Lab, Marine Destrez, Vaka Pasifika Accountability Project Manager, Zainab Kakal, Innovation Specialist, UNDP Pacific Office, Igor Izotov, Head of Exploration, and Lazar Pop Ivanov, Head of Experimentation, UNDP North Macedonia Accelerator Lab, Moortaza Jiwanji, Technical Advisor, UNDP Resilience Hub for Africa, Aisha Marzuki, Head of Exploration, UNDP Indonesia Accelerator Lab, Sudipto Mukerjee, Resident Representative, UNDP Bangladesh, Marc Wajnsztok, Chief Technical Advisor, UNDP DRC, and Christine Wellington-Moore, Regional Lead Advisor on SDG Integration, UNDP Bangkok Regional Hub, for their invaluable insights on applications of foresight and RID in practice; Ioana Creitaru, Global Disaster Preparedness Lead, DRT, UNDP Geneva, Ronald Jackson, Head of the DRT, UNDP Geneva, Angelika Planitz, Team Leader, DRT, UNDP Geneva, Aarathi Krishnan, Senior Advisor on Strategic Foresight, UNDP Regional Bureau for Asia and the Pacific, for their review, guidance and valued feedback through the development of the paper; and Tanya Pedersen and the DFS Team for their insights and efforts to incorporate this exploratory paper as part of the Development Future Series publication.

2   UNDP. (2018). *Foresight manual: Empowered future of the 2030 agenda.* Singapore: UNDP Global Centre of Public Service Excellence.

3   UNDP. (2022). *The UNDP approach to risk-informed development.* Geneva: UNDP.

4   Opitz-Stapleton, S. N. (2019). *Risk-informed development: From crisis to resilience.* UNDP.

5   UNSCEB. (2017). *Report of the high-level committee on programmes at its 34th session (International Labour Organization headquarters, Geneva, 26 and 27 September 2017).* New York: UNSCEB.

6   UNDP. (2021). *The social construction of systemic risk: Towards an actionable framework for risk governance.* Geneva: UNDP.

7   Adapted from: Hall, E. T. (1976). *Beyond culture.* Chicago.

8   Adapted from: NWEI. (2022). *A systems thinking model: the iceberg.* Retrieved from Ecochallenge, Northwest Earth Institute: https://ecochallenge.org/iceberg-model/.

9   World Health Organization. (28 April 2022). *Ebola virus disease – Democratic Republic of the Congo.* Retrieved from World Health Organization: https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON377.

10 UNDP. (July 2021). *Collaborative design webinars on the digital future of UNDP's early warning and preparedness, Event Summary Report.* Geneva: UNDP.

11 Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Behavioral Decision Making*, 25-41.

12 Cherubini, P., Mazzoccob, K., & Rumiatic, R. (2003). Rethinking the focusing effect in decision-making. *Acta Psychologica*, 67-81.

13 Baron, J., & Hershey, J. C. (1988). Outcome bias in decision evaluation. *Journal of Personality and Social Psychology*, 569-579.

14 Nunan, D., Bankhead, C. & Aronson, J. (2017). *Selection bias.* Retrieved from Catalogue of Bias Collaboration: http://www.catalogofbias.org/biases/selection-bias/.

15 Mizutori, M. (April 2022). *Global disasters are coming harder and faster. Here's how we can cut the risks.* Retrieved from The Guardian: https://www.theguardian.com/global-development/2022/apr/26/global-disasters-are-coming-harder-and-faster-heres-how-we-can-cut-the-risks.