

Words Into Action

Science-Policy-Society Ecosystem for DRR

Concept Note

December 20, 2022

The overarching purpose of the *Words Into Action* (WiA) series is to bring together global expertise and provide practical, specific advice on implementing a people-centred approach to Disaster Risk Reduction (DRR) in line with the *Sendai Framework for Disaster Risk Reduction 2015–2030*. The guidelines are not exhaustive handbooks that cover every detail, and those who need more in-depth information will find references to other sources that can provide them with it. Applying a knowledge co-production methodology, the WiA workgroups take a participatory approach that ensures wide and representative diversity in know-how sources. WiA is primarily a knowledge translation product, converting a complex set of concepts and information sources into a more straightforward and synthesised tool for understanding risk and learning. It is also meant to catalyse engaging partners and other actors.

The WiA presented here aims to provide knowledge and practical guidance on creating fertile conditions for a successful flow of knowledge and practice among the science-policy–society stakeholders in relation to DRR. The guide highlights core aspects and challenges to consider in fostering and developing these relationships by providing a wealth of examples, case studies and effective practices. The guide's usefulness lies in showcasing how intrinsic and contextual factors might influence the effective uptake and use of scientific knowledge in DRR. The publication is not necessarily meant to be read from the first page to the last. It may instead be used as a knowledge resource for discussions, reflections, and development. Online resources will accompany the printed version with additional case studies, knowledge hubs, links to networks, and individual experts.

This concept note describes the scope of the present WiA on *Science–Policy–Society Ecosystem for DRR* (SPSE). It presents the topic in general and delineates four elements of scientific knowledge and DRR pertinent worldwide. The concept note ends with a draft outline of the WiA guide.

While the relationship between science and policy is a well-established field of academic study and professional consideration, this WiA adds *Society* to the equation to highlight the importance of social relevance and action-oriented implementation of policies. The addition of *Society* also points to the necessity of including a large variety of stakeholders and interests in DRR policy processes.

In addition to *society*, this WiA applies an *ecosystems* approach. The term does not refer to nature-based solutions for DRR or exclusively to disasters caused by natural hazards. Instead, it refers to the complex dynamic system of actors and relationships involved in science and policy for DRR.

Conceptual description

For decades, we have witnessed a tremendously increased demand for scientific evidence and advice to inform policies and decision-making on climate change, new technologies, and environmental regulation. Most recently, this demand has been highlighted in the COVID-19 pandemic with its social and economic consequences and in the severe heatwaves, droughts, and weather extremes sweeping the world with increasing intensity. The radical changes in ecological and social systems that we are experiencing across multiple dimensions and scales happen more quickly and surprisingly than we ever thought possible. Non-linear, systemic change occurs, and new risks and correlations emerge in ways we have not anticipated. Because of the vast challenges inherent in these problems, no one policy area can deal with them, and no one discipline can provide sufficient knowledge; Solutions to complicated problems with complex interactions call for multi-dimensional understanding.

The Sendai Framework for Disaster Risk Reduction 2015–2030 reflects the certainty that in an ever more populous, networked, and globalising society, the very nature and scale of risk have changed to such a degree that it surpasses established risk management institutions and approaches. The *United Nations office for Disaster Risk Reduction's* (UNDRR) *Global Assessment Report* (GAR) of 2019 articulated the need to understand interconnected systemic risks better. With a better knowledge of the properties of systemic risks—extreme complexity, high nonlinearity, transboundary causality, and deep uncertainty— we have a better chance of averting cascading poly-crises.

The subsequent *GAR 2022* explores how a range of sectors, including the financial, governmental, development, insurance, and risk management sectors, may achieve the goal of transforming governance for a resilient future for all. To this end, bold policy-making is needed. The *GAR 2022* recommends that DRR policies are guided by the following: *Measure what we value; Design systems to factor in human decision-making; Reconfigure governance and financial systems to work across silos; and Design in consultation with affected people*. Therefore, informed by the best available scientific knowledge, target-oriented policy packages are called for to avoid further exacerbated poly-crises. For this reason, it is more urgent than ever to increase our understanding of how the best available knowledge may be put into action through policy to reduce disaster risks and improve the life and well-being of humans.

In this line, this *WiA on Science-Policy-Society Ecosystem* will contribute to the knowledge of complex and dynamic relations between science and our societies, addressing their multifaceted aspects applied to policy processes and decision-makers and the implementation of social action for DRR. By bringing together expertise and experience from around the world, the guide will deliver examples and problematization of SPSE domains. This may lead to a better understanding of ways to improve the SPSE for more effective DRR.

An ecosystem-approach

The relationship between science and policy is often referred to as an interface. We use the term ecosystem to better reflect the large number of actors, interests, and interactions—mutual and collaborative—in science and policy for DRR. The ecosystem analogy aims to represent complex and dynamic relations comprehensively. The ecosystem metaphor captures many dynamic aspects as they apply to policy-making processes, decision-making instances, and citizen behaviour with an all-of-society approach. The policy-making process includes a variety of actors in the public, private and civil sectors and the interactions among them. These actors include policymakers, volunteer organisations, think tanks, experts, private enterprises, community activists, lobbyists, educational organisations and others interacting in a broader governance setting.

The term interface usually indicates that the relationship between science and policy is neither a simple one-dimensional interface nor a mechanically causal one. Instead, the relationship is a complex web of multiple interrelated entities with competing interests embedded in larger structures of trust and power. While these interests and relationships affect the balance and

structure of the system, there is also (ideally) redundancy to overcome disturbances. Secondly, *Ecosystem* alludes to the dynamic nature of the science-policy-society relationships. An open system is constantly subject to internally and externally driven change. In effect, no one solution to a science-policy-society relationship will be applicable at all times and in all places, nor is there a perfect state of the relationship to be reached; Science is ever-evolving, and so are societies. The helpfulness of the ecosystem analogy lies in the organic understanding of the living and multi-faceted relationship between scientific knowledge production and policymaking for DRR.

SPSE Elements

The capacity of policymaking institutions to incorporate expert knowledge in decision-making processes and implementation is one of the elements of national *policy capacity* and *inclusiveness*, which comprise the concept of policy style in the academic literature. Related concepts are those of *trust* and *politicisation*. We use these concepts to frame and discuss DRR policies seeking good practices, i.e., processes or methodologies that have been shown to be effective in one part of the world and might be effective in another too, and a way to make these practices transferable across geographical and political contexts.

Transferring good practices across national contexts is a complex task. This is because administrative arrangements strongly affect public policy-making. These arrangements involve key policy actors and include the interactions among them, thus speaking to governments' approach toward problem-solving. Policy is often made not in formal institutions such as national and subnational legislatures, but in informal institutional arenas and networks, in 'policy communities' involving 'invisible' policy actors who deliberate, learn, broker, and advocate. These formal and informal administrative arrangements may be understood as (administrative) *policy capacity*, defined as the set of competencies and capabilities necessary to carry out essential functions in public policy. Capacity ensures that legal, organisational, and human competencies may be pulled together (available and coordinated) in a given context. Capacity refers to resource adequacy and implies that there exists political support to legitimate the adequacy and use of these resources. Conversely, *inclusiveness* captures state-society relations because it refers to the degree that societal actors can participate in and influence the policymaking process in a meaningful way, typically through societal consultations.

While policy style sets the scene for political decision-making, we should also consider the nature of the relationships between those governing and those being governed. These relationships refer to expectations and may be explored using the concept of *trust*, which is, among other things, a way to cope with uncertainty. Trust is fundamentally relational and situational, essential for a functioning society. In its most general form, trust conveys the expectations of social actors about their future actions, with no or limited power to influence each other's actions. There exist different kinds of trust, but here we focus on political trust, which is defined as trust in government and the political system. The level of political trust may change over time. Moreover, there are nuances in the level of trust citizens bestow on their polity; some institutions may be trusted more than others within the same national or regional context.

A final concept that is affected and, in turn, influences policy capacity, inclusiveness, and political trust is that of politicisation. An issue becomes politicised when it becomes the subject of public deliberation contingent on human agency when previously it was not. The terms politics, political, politicisation, and politicised are contested; they are loaded and depend on the context in which they are discussed. These terms exist in a continuum bookended by the normative on one end and the objective on the other and have both positive and negative connotations. From a negative, normative perspective, issues become politicised when they successfully become partisan fodder for blame games. The critical thing to remember is that politicisation is not always negative. For example, politically informed science is one that makes knowledge claims taking into account contextual and democratic dimensions of knowledge production (such as who was allowed to be part of the process) and application (such as ensuring the benefit of a large swath of society). In summary, the concepts of administrative policy capacity, inclusiveness, political trust, and politicisation may be used to scaffold the contributions to this Words into Action Guide.

Publication structure

The substantive parts of the WiA publication will be structured in three major sections. The first section will articulate critical themes and points of departure: it will frame policymaking in the DRR field, address scientific knowledge production for DRR, discuss policy in theory and practice, and explain the ecosystem approach.

The publication's second and most extensive section will showcase the interaction between scientific knowledge production and policy through case studies worldwide. The goal of this section is to display a varied selection of good practices regarding policy in DRR. These deep dives may focus on experiences and lessons learnt in various national and regional contexts, policy fields, specific hazards, and disaster events. While the printed publication offers limited space for case studies, additional deep dives and supplementary material will be published online. A separate guide for authors provides instructions for contributors.

The third section will synthesise the material into conclusions and suggest ways forward.