

## Tools to prepare for future global shocks (Future Global Shocks: Improving Risk Governance)

Most systems that involve multiple interactions by humans and their various activities are inherently complex. These systems are at the heart of future global shocks and, as a result, merit the increased attention of policy makers. Advances in information and communication technology have enhanced the capacity of a new generation of mapping and modelling tools to demystify complex systems, by helping to anticipate, prevent and mitigate adverse extreme events. This chapter describes the need for and utility of such tools as risk maps and threat models to improve situation awareness and support decision making at the planning and operational levels. Mapping and modelling techniques applied to complex systems have made important progress, but their accuracy and predictive power face limitations, some of which could be improved upon with changes to public policy. Even with greater access to data and information, they will require continued refinement to translate results into actionable and effective policies and interventions.

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