



Core Science Initiative on Integrated Risk Governance

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In September 2007, 18 scholars from six countries met in Beijing to discuss research needs about Integrated Risk Governance (IRG). In the past years, the risk analysis community has made tremendous progress in dealing with a wide array of practical and theoretical issues.

Two broad strands of research can be distinguished. On the one hand, scholars from economics, mathematics, and decision sciences have developed tools for assessing and managing of financial risks. A key insight here concerns the possibilities to reduce the overall risk of a portfolio by diversifying its components. Among other things, this can lead risk managers to include instruments dealing with currency risks and instruments dealing with natural disasters in the same portfolio. Insurance and re-insurance companies as well as banks and other financial operators are using these tools on a routine basis and are continuously improving them. On the other hand, scholars from psychology, geography and other social sciences have developed an

in-depth understanding of processes of risk communication and decisions about what risks are deemed acceptable or unacceptable by different people. A key insight here concerns the difference between risks chosen by the exposed person – as in car driving or mountain climbing – and risks depending mainly on decisions by others – as with train accidents or failure of power plants.

Recently, however, the risk community has realized that a new kind of risk issues will become increasingly salient in the future: issues of Integrated Risk Governance. An instructive example is given by the current combination of increasing food as well as oil prices with the economic slow-down triggered by the crisis on the American mortgage market and the risks of global climate change. The combination of these risks makes it difficult to deal with any of them in isolation, but



Devastations of a flood in Kota Tinggi Johor, southern Malaysia
Photos (p. 27-28) Kamal Sellehuddin

current risk governance procedures make it equally difficult to address them in an integrated way.

In this situation, the CNC-IHDP/RG (Work Group of Risk Governance, Chinese National Committee for International Human Dimension Program of Global Change), supported by the Ministry of Science and Technology of the People's Republic of China, has proposed to IHDP to develop a core science project on Integrated Risk Governance. As a result, the Core Science Initiative on Integrated Risk Governance has been formed at the mentioned meeting. A scientific committee² (chaired by Profs. Shi and Jaeger) has been established and work on a science plan has started.

The purpose of this initiative is to study the risk governance issues arising in the context of global environmental change and globalization. In particular, the initiative strives to understand new challenges resulting from the combination of different scales, governance styles and risk events, and to develop policy advice in order to deal with those challenges.

We will focus on the relations between science, technology and management in order to identify ways of improving risk governance internationally. The knowledge generated by the integrated risk governance initiative shall foster policies that effectively reduce the vulnerability of individuals and communities to complex risks while avoiding the pitfalls of moral hazard and rent-seeking.

Building upon existing work carried out by the Academy of Disaster Reduction and Emergency Management, MOCA & MOE, China at Beijing Normal University, but also by other research institutes and major re-insurers, opportunities will be explored to build an international network of databases on risk governance. Such a network can enable governments to design comprehensive risk maps in order to develop strategies for integrated risk governance. These strategies may be implemented in various ways, perhaps including the appointment of government chief risk officers in analogy with the approach taken by risk professionals in other areas.

However, it is clear that in order to develop knowledge on integrated risk governance, including a network of databases, it will be appropriate to start by focusing on a few selected cases. Large-scale risks will be at the center of the integrated risk governance initiative, bearing in mind that many of these risks are rooted in regional or even local circumstances. Attention will be paid both to sudden events and creeping crises. Concrete risk areas to start with are currently being identified. Potential candidates include

- water-related risks,
- spread of diseases such as malaria or avian flu under conditions of global environmental change,
- risks bound to new technologies and their “mainstreaming”, e.g. wind power and power grid failures,
- possible linkages between climate risks, other global environmental risks and financial crises.

The selected risk areas will be investigated in view of the following research questions:

- a. How is risk governance implemented across scales, and how could multi-level governance of risks be improved?
- b. Are accountability, participation, and responsibility necessary/crucial conditions for effective risk governance?
- c. How can resilient institutions for effective risk governance be designed / what are necessary building blocks?

In order to successfully address these questions, original research is needed, research that will confront the basic issue that has emerged out of decades of risk studies and is re-emerging in the more recent field of vulnerability research: how can received notions of rationality be improved in view of the limitations they have shown in the face of complex risks? These notions include the strict separation of facts and values, of logical consistency and empirical content, and the belief that Western-style science can settle questions of consistency and factual accuracy in an objective manner even in the face of complex risks. This is a fascinating research challenge because those notions have shaped the concept of rationality that informs not only much of received decision theory, but actually key elements of modern thinking. A dialogue between researchers with widely varying cultural background is certainly useful, perhaps indispensable to tackle this research challenge. It is an urgent practical challenge, too, because improved notions of rationality are needed to establish global procedures of integrated risk governance that are both legitimate and effective.