



## Concept Note

### Risk governance deficits

An analysis and illustration of the most common deficits in risk governance

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## Project outcomes

The project deliverables will be in the form of:

- A policy brief on risk governance deficits: spring 2009  
The policy brief will conclude on what lessons can be learned from the past for the improvement of the governance of current and future emerging systemic risks.
- Possibly an edited volume of all contributions made by experts in the course of the project work, which will include case-studies prepared for a selection of risk issues.
- A learning tool to be used in interactive sessions on risk governance deficits.

The project's conclusions will also inform future work focusing on emerging risks and how to improve the early stages of risk governance, the anticipation of risks before they materialise.

## Project resources

This project will be conducted by IRGC under the leadership of the IRGC's Scientific and Technical Council and with the active cooperation of:  
Swiss Re, Emerging Risk Management  
Oliver Wyman, ERM Center of Excellence  
Swiss Federal Institute for Technology, Zurich (ETHZ), Center for Security Studies (CSS)

## 1. Introduction

IRGC is an independent organisation whose purpose is to improve the understanding and management of global risks that may have a significant impact on human health and safety, the environment, the economy and society at large by:

Developing concepts of risk governance that have relevance across different fields, organisations and countries;

Anticipating major risk issues and improving the understanding and assessment of them and the ambiguities involved;

Providing policy recommendations to key decision-makers in governments and other large organisations.

IRGC generally confines its efforts to risks that lead to physical – generally adverse – consequences in terms of human life, health, and the natural and built environment. It also addresses their impacts on financial assets and investments, the economy at large, social institutions, cultural heritage or psychological well-being<sup>1</sup>. For this particular project, IRGC focuses not only on physical risks but also on financial and other risks with implications for the economy and society at large.

It is generally accepted that weaknesses and shortcomings in public and private governance hinder sustainable economic and social development. Thus, it is important to improve public governance and to provide guidance on how governments, industry and the public can engage – in partnership – in efforts to strengthen the effectiveness of the associated processes, structures and institutions.

Many of today's global and regional problems are too large and complex to be solved by traditional intergovernmental processes alone. Knowledge and expertise from a variety of disciplines, stakeholders, and regions is often required. It is no longer generally acceptable for 'experts', governments or an individual business to decide by themselves how best to manage new risks, particularly where there may be genuine complexity, uncertainty or ambiguity about the knowledge or technical aspects, or where there are perceived or actual conflicts between value systems. In many cases, the technical "management" of the risk needs to be accompanied by a more comprehensive "governance" of the risk.

It is not possible to consider either governmental or industry structures and processes as being separately responsible for the effective governance of specific major risks. The public and private sectors increasingly work together in assessing and managing risks. Both are in charge of dealing with the issues they are directly responsible for, and both must participate together in broader governance processes, for problems that require the engagement of all societal actors.

IRGC defines risk governance as the identification, framing, assessment, management and communication of risks in a broad context. It includes the

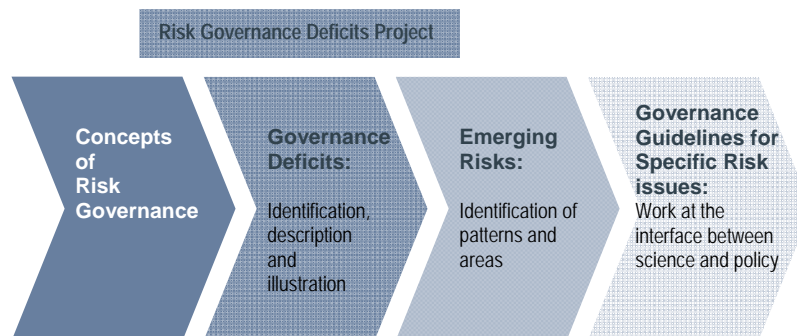
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<sup>1</sup> IRGC White Paper No1, p.19

totality of actors, rules, conventions, processes and mechanisms and is concerned with how relevant risk information is collected, analysed and communicated, and how management decisions are taken. When the governance process fails or is inadequate, either the risk is not mitigated effectively or controls are imposed which themselves prevent the desired benefits of the activity from being secured. Understanding how these risk governance deficits arise and how they can be minimised is an important part of dealing with new risks and, in some cases, of revising approaches to existing risks. This is important not just for governments and regulators who may have to codify the approaches to new risks, but also for industry and, in general, all those who are potentially drivers of the risks or are affected by them, including society at large.

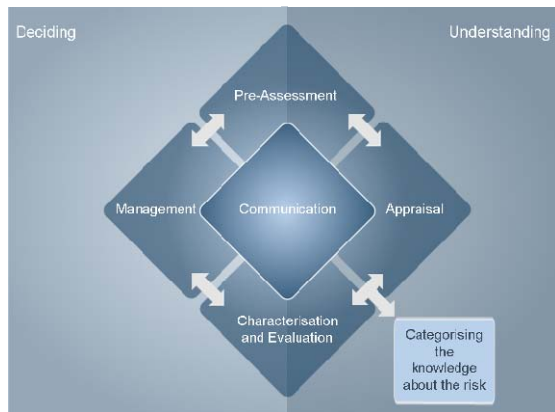
The work that IRGC is starting with this concept note is part of IRGC's core activity. Specifically, IRGC's work on risk governance deficits is designed to identify and explain a number of common deficits in the risk governance process and to use examples of past and current risk events to illustrate their impact. In doing so, IRGC intends to help risk managers and practitioners in government and industry better understand the governance structures of which they are a part, and identify and address any deficits they may find in them. The project's outputs will be used in a subsequent project on emerging risks.

The findings and outputs will also support IRGC's topic-specific project work which develops risk governance policy recommendations for key decision-makers on specific risks. When IRGC works on specific risk issues, it proposes recommendations for improving governance structures and processes as well as advice for how regulatory frameworks might be adapted to new circumstances or innovative technologies.



## 2. Failures in the risk governance process

IRGC's focus on identifying and describing risk governance deficits will ensure that the project concentrates on IRGC's core competence of governance rather than pure risk issues, thus complementing the work done since 2003 in developing the IRGC risk governance framework and applying it to various risk issues.



This framework has five interconnected phases, and deficits can be found at each stage of the risk governance process<sup>2</sup>.

A risk governance deficit is a failure in the identification, framing, assessment, management and communication of the risk issue or of how it is being addressed. As such, it can also be understood as a risk governance challenge.

Governance deficits are common. They may be found throughout the risk handling process, and limit its effectiveness. They are actual and potential shortcomings and can be remedied or mitigated<sup>3</sup>.

Potential consequences of risk governance deficits include:

Loss of opportunities

Cost of inefficient regulations

Loss of public trust

Inequitable distribution of risks and benefits between countries, organisations and social groups

Excessive focus on high profile risks, to the neglect of higher probability but lower profile risks

Failure to move from business as usual and trigger action.

By explaining and illustrating them, IRGC aims to help senior managers and risk professionals to better understand the causes of failures in the risk governance processes, as they occurred in the past, occur now and will probably recur in the future if framework conditions, institutions, and processes are not changed.

Compared to how other organisations address global risks, IRGC focuses first on the governance aspects: not just on which risks affect or may affect society, but what decisions should be made and by whom. In this project, it will use the risk governance dimension to understand "what went wrong" in the past and "what goes wrong" today.

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<sup>2</sup> See "Introduction to the IRGC Risk Governance Framework". available on [www.irgc.org](http://www.irgc.org)

<sup>3</sup> See IRGC White Paper No1: Risk Governance, Towards an Integrative Approach, 2005; and IRGC's Introduction to the IRGC Risk Governance Framework, 2008 (available on [www.irgc.org](http://www.irgc.org)). Also: Global Risk Governance, K. Walker, O. Renn, Springer, 2008.

IRGC's emphasis on risk governance contributes to improving the totality of the risk handling process, including the early identification and framing of risks and the optimal means of involving stakeholders and the public at large in risk decision-making.

**IRGC assumes that the analysis of causes and drivers of risk governance deficits will allow organisations to improve their early assessment and management of emerging systemic risks.**

This does not imply that risk originates from failures in the risk governance process but that governance failures may prompt certain issues to turn into threats or, conversely, that reducing risk governance deficits may both help prevent risks from materialising and improve the effectiveness of risk assessment and management.

### 3. Emerging and systemic risks

With this work, IRGC embraces all risks of a systemic nature. It proposes to focus on when they emerge, at the early stages of their development, before they become institutionalised. Many of these risks are complex, uncertain, or even ambiguous. In most cases, the potential benefits and negative side-effects interconnect.

■ **An emerging risk is a new risk. It can also be a familiar risk in a new or unfamiliar context or under new context conditions (re-emerging).** It may also be changing (in nature) rapidly. Thus, risks related to, for example, car or air traffic accidents, air or water pollution, smoking, malaria or cancer will most probably not be analysed in this project work, except if new events, rapid changes or new systemic impacts develop. However, certain risks related to natural disasters may be included due to fundamentally changing conditions, such as rising sea levels.

■ **Systemic risks are risks affecting the systems on which society depends.**

As described in the IRGC White Paper 1<sup>4</sup>, the term 'systemic'<sup>5</sup> "denotes the embeddings of any risk to human health and the environment in a larger context of social, financial, and economic consequences and increased interdependencies both across risks and between their various backgrounds. Systemic risks are at the crossroads between natural events (partially amplified by human action such as the emission of greenhouse gases), economic, social and technological developments and policy-driven actions, both at the domestic and the international level". They affect several sectors in society, the economy and the environment. Economic repercussions are probably their most challenging universal feature. Systemic risks are characterised by complexity, uncertainty and ambiguity. Most often, they are also transboundary".

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<sup>4</sup> IRGC White Paper No1, p. 19

<sup>5</sup> The term systemic risk has long applied to financial risks, but IRGC has adopted the OECD approach.  
OECD Futures Project on Emerging Systemic Risks, 2003

Handling systemic risks requires a holistic approach to hazard identification, risk assessment, evaluation, judgements and management. Value trade-offs are unavoidable.

Such issues are insoluble outside a framework of global collective action. For example, the spread of some new viral diseases (that have a capacity to become global pandemics), and the complexity of multi-stakeholder international coordination (for prevention and action, e.g., for drug distribution), represent a systemic risk for which global evaluation and action is needed.

## 4. The most common risk governance deficits

### Clusters

In considering the causes of risk governance deficits, this report is organised in two clusters related to **(A) the assessment and understanding of risks** (including early warning systems), and **(B) the management of risks** (including issues of conflict resolution).

*Cluster A* describes 10 types of deficit that can arise when there is a deficiency of either scientific knowledge or knowledge about the values, interests and perceptions of individuals and organisations.

*Cluster B* describes 13 types of deficit related to the role of organisations and people in managing risks, showing the need for adequate risk cultures, structures and processes.

These clusters of deficits are no more than a decomposition of stages in a risk handling process, thus following a conventional framework that starts with risk assessment and concludes with risk management, and with communication about the issues at each stage of the process.

### Deficits

#### **CLUSTER A: Assessing and Understanding Risks**

- A1 Detecting early warnings of risk
- A2 Factual knowledge about risks
- A3 Perceptions of risk, including their determinants and consequences
- A4 Stakeholder involvement
- A5 Evaluating the acceptability of the risk
- A6 Misrepresenting information about risk
- A7 Understanding complex systems
- A8 Recognising fundamental or rapid changes in systems
- A9 The use of mathematical models
- A10 Assessing potential surprises

## CLUSTER B: Managing Risks

- B1 Responding to early warnings
- B2 Designing effective risk management strategies
- B3 Considering a reasonable range of risk management options
- B4 Designing efficient and equitable risk management policies
- B5 Implementing and enforcing risk management policies
- B6 Anticipating side-effects of risk management
- B7 Reconciling time horizons
- B8 Balancing transparency and confidentiality
- B9 Organisational capacity
- B10 Dealing with dispersed responsibilities
- B11 Dealing with commons problems and externalities
- B12 Managing conflicts of interests and ideologies
- B13 Acting in the face of the unexpected

## 5. Illustrations

Each governance deficit will be illustrated by a number of examples or illustrations of good and bad governance of systemic risks from the past, as well as examples of relevant current or emerging risks. Illustrations include:

### Asbestos

Delayed and inadequate action to deal with the health risks of asbestos is a symptom of a *failure to respond to early warnings* and of the difficult challenge of *reconciling time horizons* when the costs of damages (compensation) will only be payable in the far-off future;

### Bovine Spongiform Encephalopathy (BSE, or “mad cow disease”)

The UK governmental assurances that British beef was safe to eat seriously downplayed the scientific uncertainties regarding transmissibility of BSE to humans. This *intentional misrepresentation of knowledge* resulted partly from conflicting risk policy objectives, as well as *dispersed responsibility between organisations*;

### Chlorofluorocarbons (CFCs)

The degrading effects of CFCs on stratospheric ozone were not observed until more than forty years after their widespread use began. This is an example of a *failure to anticipate side-effects*. However, the Montreal Protocol is a good example of a successful institutional and industrial solution to a risk: a model of reference for *how to deal with commons problems and externalities*;

### Electromagnetic fields (EMF)

*Factual knowledge about risks* is, in the case of EMF, not straightforward. Scientific uncertainties regarding potential health risks create difficulties for risk governance and make *stakeholder involvement, designing efficient and*



*equitable risk management policies, and reconciling time horizons* complicated questions to address;

#### The collapse of Enron

Enron's incredibly complex and opaque accounting and auditing practices contributed to the severity and surprise of its collapse and constitute an example of an inadequate *balancing between transparency [openness] and confidentiality* in corporate risk governance;

#### Fisheries depletion

Fisheries, as services provided by ecosystems, are common property resources. Their depletion indicates failures of risk governance in *dealing with a commons problem* and, in some cases, also failures related to *recognising fundamental and rapid changes in risk systems and/or designing effective risk management strategies*;

#### Genetically modified crops in Europe

The difficulty of *acknowledging different perceptions of risk* (and the values and interests underlying them) led European governments to adopt regulations that potentially refrain innovation and international trade and fail to deal with *conflicts of interests and ideologies*;

#### Hurricane Katrina

The inadequate response to the hurricane's devastation and the crisis generated within the US Administration were largely a result of failures of *organisational capacity*, problems with *dispersed responsibilities* and difficulties in *acting in the face of the unexpected*;

#### Nuclear power generation and management of nuclear waste

Governance experience in this domain has demonstrated how important *acknowledging different perceptions of risk* can be, but also how this must be balanced with consideration of *issues of cost-efficiency and equity*;

#### The sub-prime crisis

This crisis demonstrated how difficult it can be to *act upon early warning signals, to understand the dynamics of complex systems* (including scale, scope and properties), and how *the use of mathematical models* has limitations.

#### The Toronto case of Severe Acute Respiratory Syndrome (SARS)

This outbreak of SARS in Toronto revealed weak *organisational capacity*, disorganisation stemming largely from *dispersed responsibilities* between responders, and showed how problems can be multiplied if there is a lack of *key stakeholder involvement*.

## About IRGC

The International Risk Governance Council (IRGC) is an independent organisation based in Switzerland whose purpose is to identify and propose recommendations for the governance of emerging global risks. To ensure the objectivity of its governance recommendations, the IRGC draws upon international scientific knowledge and expertise from both the public and private sectors in order to develop fact-based risk governance recommendations for policymakers, untainted by vested interests or political considerations.

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