Governing and communicating risks in a post-truth era

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Three global transformations

- Globalization
- Digitalization
- Sustainabilization

Unitended side effects

- Global environmental changes (climate, biodiversity, environmental health)
- Increase of vulnerability with respect to the interactions between the technological, social and natural risks
- Urbanization, demographic changes, migration
- Governance deficits (corruption, re-nationalization, authoritative leaderships)
- Severe equity problems in vulnerability between and among nations

Special Challenge: Systemic Risks

- Characteristics
  - Global threat (ubiquity)
  - Highly interconnected
  - Stochastic (second order uncertainty)
  - Non-linearity (trigger effects)

- Problems
  - Limits of quantification
  - Plurality of knowledge claims and assessments
  - Contra-intuitive implications
  - Inadequacy of trial and error learning mode
  - Bad record for risk reduction everywhere

Risk Perception Orientations

- *Simple causality models*
- *Reliance on trust where immediate experience is missing*
- *Amplification by virtual reality*
- *Confusion by plurality of truth claims*

The new Systemic Challenge: Populism and Anti-modernity

- *Confusion: Living in a post-experience society*
- *Driven by beliefs: Living in a post-factual society*
- *Distrust in elites: Living in a post-trust society*
- *Coping with ambiguity: Living in a post-ethical society*

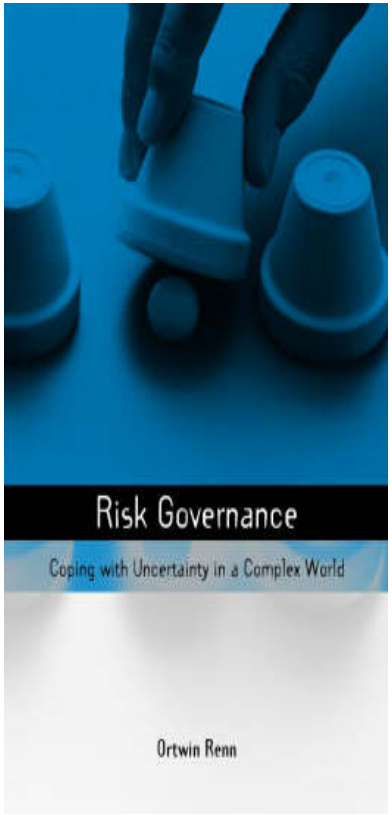
Requirements for Risk Governance

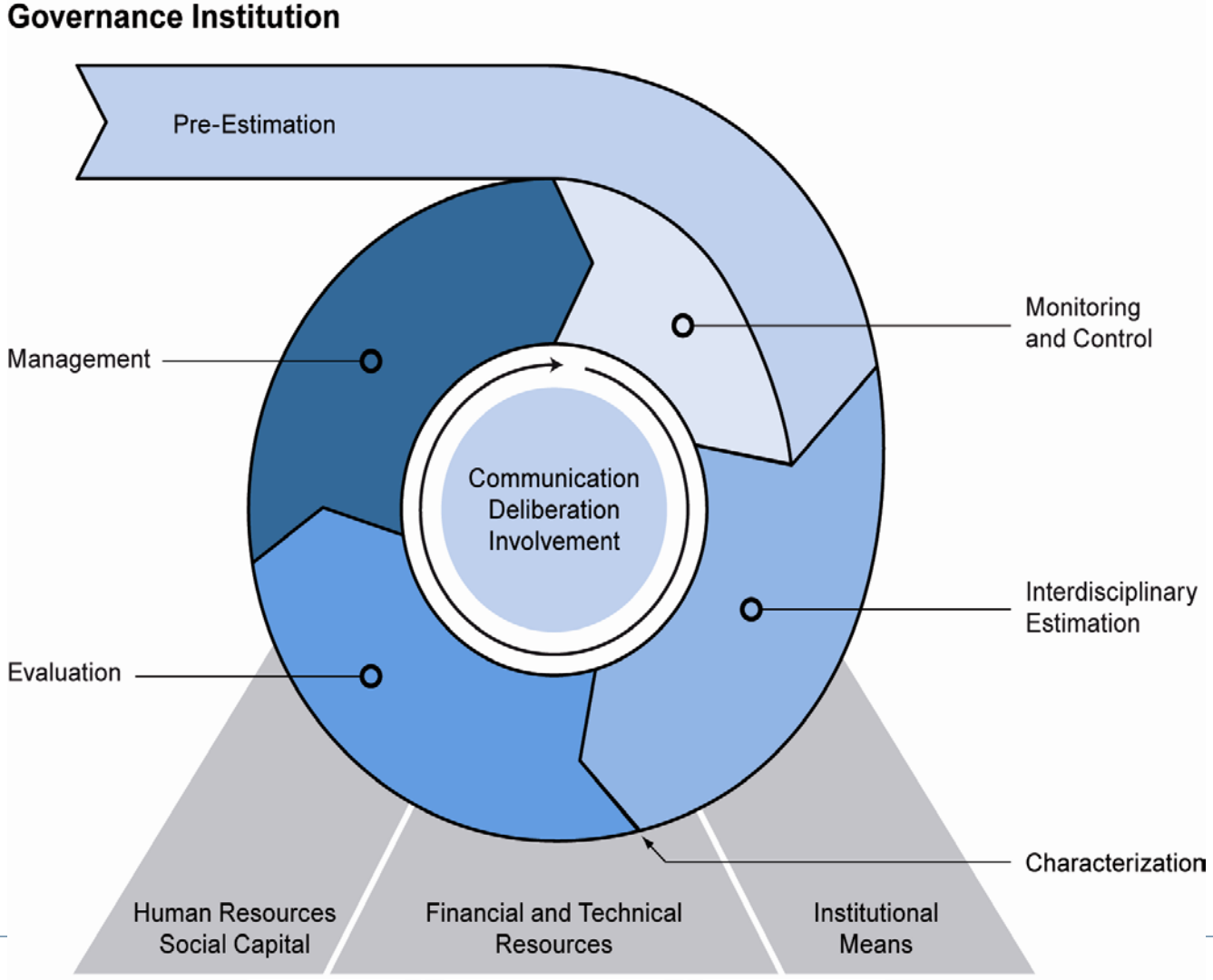
Need for integration

- Concept that links risk assessment with risk perception and socio-cultural processing of risk
  - Avoiding relativist view of knowledge
  - Including social constructions of risks;
- Concept that links physical and environmental risk analysis with financial, economic and social risk;
  - Explore complex cause-effect relationships between and among different risk domains
  - Look for cross-fertilization
- Concept that addresses the properties of systemic risk
  - Appropriate responses to psychological and social fallacies
  - Emphasis on inclusive governance models capable of providing adequate input

Premises of Risk Governance

1. Both “real” and perceived dimensions of risk are included
2. Risk scenarios reflect complex causal connections (non-linear, stochastic).
3. Risk management is a multi-criteria decision process based on effectiveness, efficiency, resilience and fairness
4. It is based on an inclusive model of integrating governments, private sector, civil society and experts




Governance Institution
Pre-Estimation
Monitoring
and Control
Management
Communication
Deliberation
Involvement
Interdisciplinary
Estimation
Evaluation
Characterization
Human Resources
Social Capital
Financial and Technical
Resources
Institutional
Means

Three Challenges of Knowledge about Risk

Complexity

Refers to the **difficulty of identifying and quantifying causal links** between a multitude of potential causal agent and specific observed effects

Large infrastructure network, e.g. electricity grid, internet

Uncertainty

A state of knowledge in which, although the factors influencing the issues are identified, the likelihood of any adverse effect or the effects themselves **cannot be precisely described**.

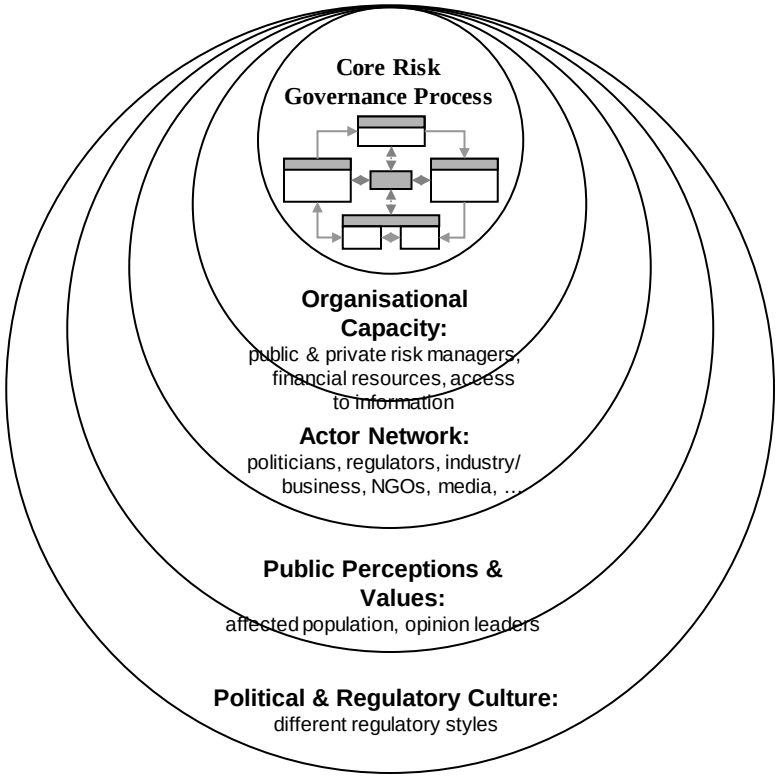
E.g. climate change, biodiversity loss

Ambiguity

Giving rise to **several meaningful and legitimate interpretations** of accepted risk assessments results

Risks related to genetically modified crops

IRGC Risk Governance Framework



Combining three management strategies

Target

Impact

of the risk

- exposure
- vulnerability

Strategies directed at the risk absorbing system

Source

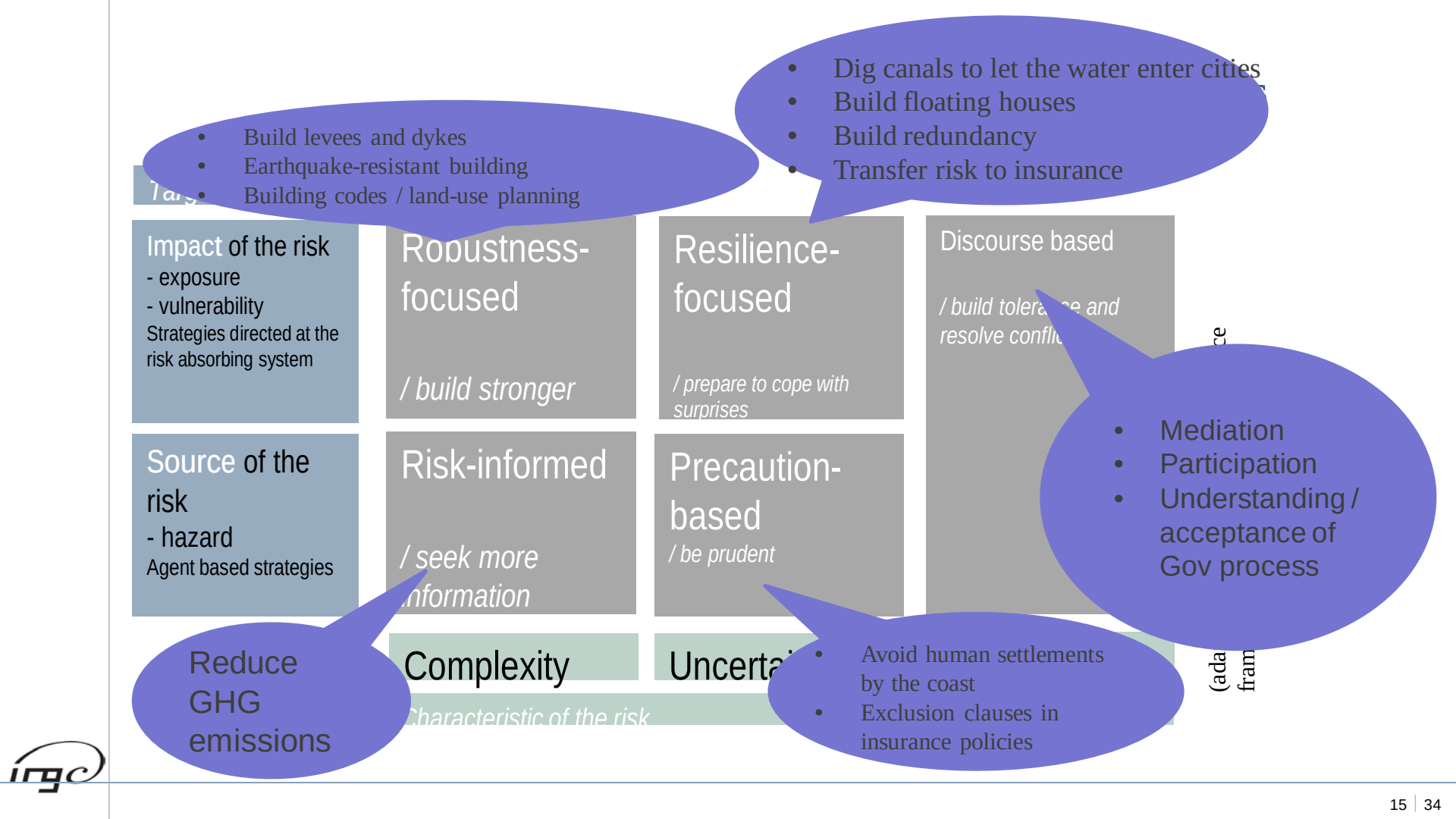
of the risk

- hazard

Agent-based strategies

Characteristic of the risk

(adapted from: IRGC risk governance framework, 2005)


Dig canals to let the water enter cities
Build floating houses
Build redundancy
Transfer risk to insurance
Build levees and dykes
Earthquake-resistant building
Building codes / land-use planning
Impact of the risk
- exposure
- vulnerability
Strategies directed at the risk absorbing system
Robustness-focused
/ build stronger
Resilience-focused
/ prepare to cope with surprises
Discourse based
/ build tolera e and resolve conflic
Source of the risk
- hazard
Agent based strategies
Risk-informed
/ seek more nformation
Precaution-based
/ be prudent
Mediation
Participation
Understanding / acceptance of Gov process
Reduce GHG emissions
Complexity
Uncerta
Characteristic of the risk
Avoid human settlements by the coast
Exclusion clauses in insurance policies

RISK MANAGEMENT STRATEGIES (IV): COPING WITH SYSTEMIC RISK

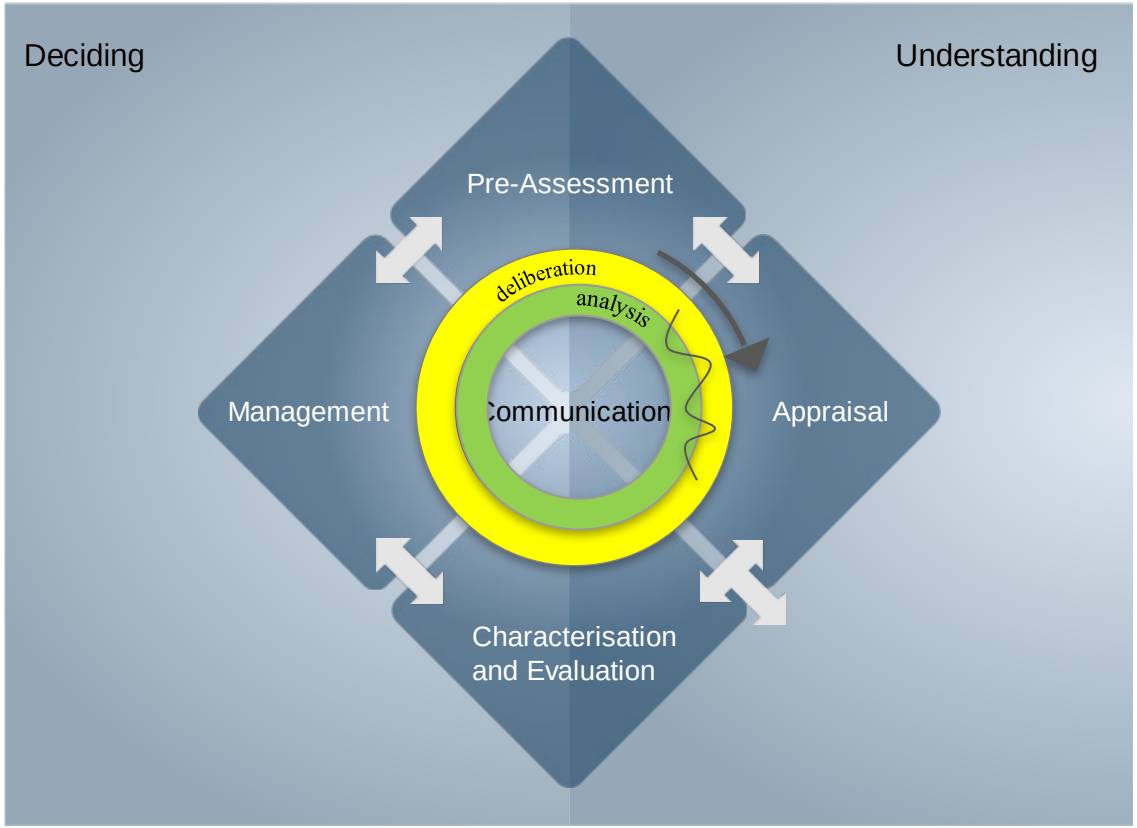
Multi-Layered Management

- High complexity, uncertainty and ambiguity

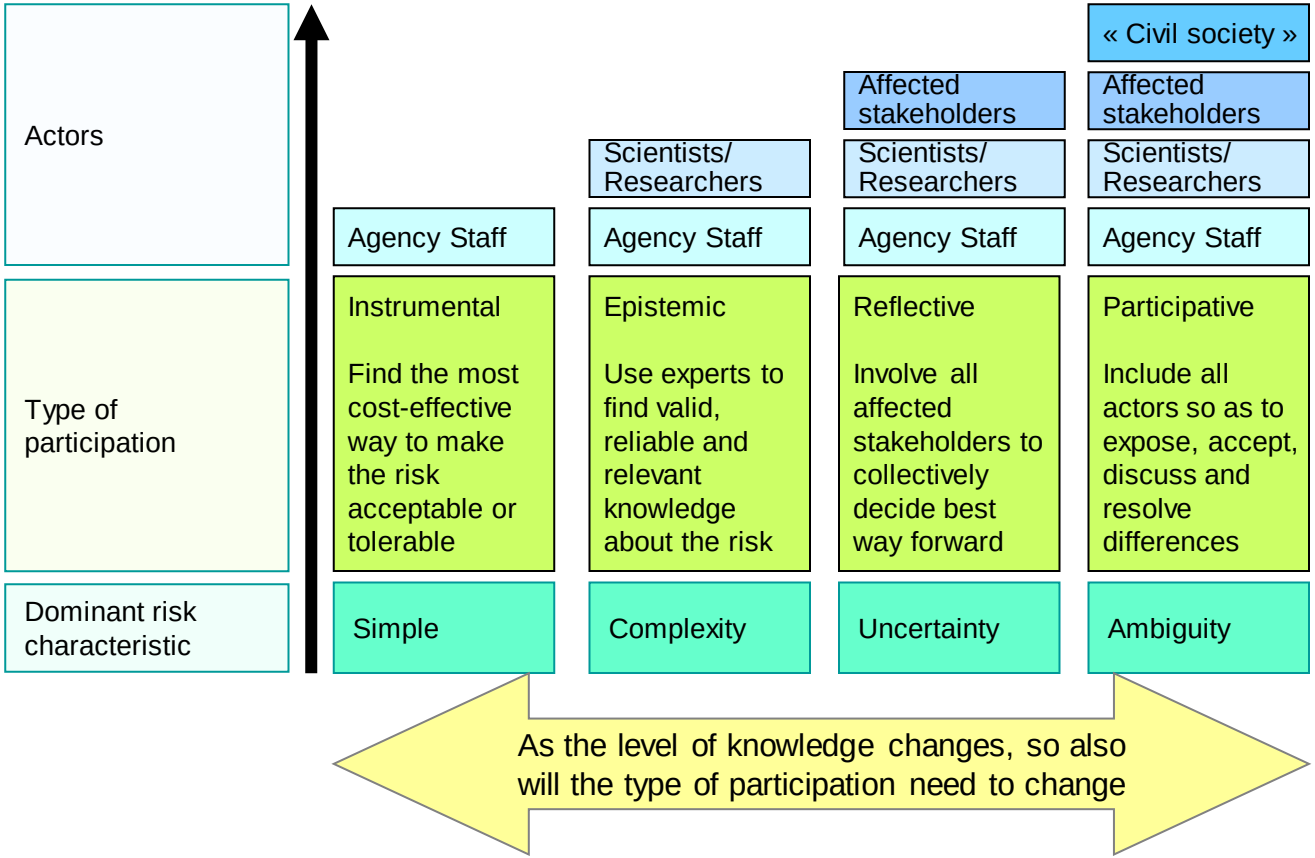
- Three interconnected levels:
  - Mobilization of epistemic communities for addressing complexity
  - Stakeholder involvement for dealing with uncertainty and equity
  - Societal discourse for identifying and addressing ambiguity

Requirements for Risk Communication and Stakeholder Involvement

Risk Governance Process



STAKEHOLDER INVOLVEMENT



Lessons for Risk Governance

Conclusions I

- **Emphasis on the process!**
- **Communication, deliberation, management, assessment according to what we know about the risk**
- **Integration of social scientific knowledge and natural science expertise**

Conclusions II

- Three risk management regimes need to be combined to deal with systemic risk
  - *risk-informed management:* expanded risk assessments; seeking expert consensus and epistemic clarification
  - *resilience-based management:* negotiated safety level under uncertainty; seeking stakeholder consensus and relying on containment and resilience
  - *discourse-based management:* value-based orientation; seeking more public input and stakeholder involvement for interpretative variability and normative controversy

THANK YOU!

QUOTE

- “What man desires is not knowledge but certainty.”
  Bertrand Russell

- Policy makers cannot produce certainty but can help people to develop coping mechanisms to deal prudently with the necessary uncertainty that is required for societies to progress

Psychological and Social Fallacies

- Psychological
  - Availability
  - Causal anchoring in space and time
  - Reliance on trial and error
- Social and cultural
  - Common pool dilemma
  - Efficiency fallacy
  - Autonomy fallacy
  - Hybris fallacy