Participatory Risk Management for Water Planning and Climate Adaptation

- Distributed decision-making authority and resources for action
- High levels of conflict, uncertainty, complexity
- Ecological degradation vs. other social and economic interests

Water plans & their implementation?

→ Challenging negotiations over risks and responses based on differing values, beliefs, relations and practices
Multi-level risk management processes for regional planning

- **Management-driven process**
  - AUSTRALIA: Lower Hawkesbury

- **Research-driven process**
  - BULGARIA: Sofia Region

- **Multiple issues:**
  - Perception of climate change impacts
  - High population growth / urbanisation
  - Water use conflicts
  - Economic / environmental viability of industries
Multi-level risk management processes for regional planning

Lower Hawkesbury River

Use of Risk Management Standard
AS/NZS 4360:2004

Creation of a “risk response” plan for estuary management

AUSTRALIA

National
State
Regional
Community
Individuals
Multi-level risk management processes for regional planning

Sofia Region: Upper Iskar Basin

Participatory modelling process for joint management of flood and drought risks

BULGARIA

Transnational
National
Regional
Community
Individuals

AquaStress European Project
Multi-level risk management processes for regional planning

Series of participatory workshops:
- situation assessment (Bul)
- risks/values identification
- risk assessments (Aus)
- strategy development
- scenario testing (Bul)
- action planning

AUSTRALIA
- 2 groups
- 38 participants total
- 3 workshops
- external knowledge review
- evaluation programme

BULGARIA
- 6 groups
- 135 participants total
- 15 workshops
- 2 sessions of interviews
- evaluation programme
Procedural insights for multi-level governance

- **Successful multi-level dialogue**
  - Housewives ↔ ministers (Bulgaria) on complex issues
  - Harnessed advantages of procedural equity & inequity

- **Inter-sectorial dialogue** (some procedurally imposed)
  - Implementation plans developed

- **Multi-institutional groups for organisation**
  - Researchers, private consultants, government officials, NGOs
  - Participatory process design negotiated and implemented for contextual constraints
Substantive insights for multi-level governance: climate change examples

- **Australia (estuarine risk management)**
  - Ecosystem buffer zones
  - Adaptability to adhere to Sydney adaptation strategy

- **Bulgaria (flood and drought risk management)**
  - Still mixed perceptions on climate change
  - Integration of technical and non-technical options (infrastructure, community organisations, education, insurance)
  - All levels of management still face perceived larger issues: finances, institutional coordination, corruption, social capacity, pollution
Conclusions and Perspectives

- **Risk management is highly subjective**
  - Level / sector / individual assessments vary
  - Knowledge is dispersed
  - Participatory multi-level assessments → inter-subjective agreements for action

- **Strategically “co-engineered” informal multi-level processes**
  - One led to a new institution (Australia)
  - Which kinds of organisational champions are key and for which territorial levels?
  - Two complex participatory processes to organise
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Risk Management Standard
AS/NZS 4360:2004

- Workshop 1
- Document Review
  - Estuarine Processes
  - Management/ Legislation
- Estuary Report
- Workshop 2
- Workshop 3
- Written Plan
- Implementation
LHEMP Workshop 1: Establishing the context

Individual values and issues cards

Card classification

Spatial mapping

Issues/values matrix

Collective discussion on estuary visions & values
LHEMP Workshops 2 & 3: Risk Assessment and Treatment

Risk assessment
Definition of risks, consequences, likelihoods, uncertainties, management

Strategy mapping

Risk prioritisation

Strategy Prioritisation
Bulgarian Process Outline:
November 2006 – November 2007

PHASE 1
- Stating Expectations
- Modelling system and actors
- Eliciting values and visions

PHASE 2
- Developing options and strategies
- Framing scenarios
- Assessing strategies

PHASE 3
- Testing strategies
- Process evaluation
- Planning for the future

STAKEHOLDER PARTICIPATION & EVALUATION

- Individual interviews
- Workshops 1, 2 & 3
- Individual and group interviews
- Workshops 4a
- Workshops 4b & 5

(Ferrand, Hare and Rougier 2006)
Iskar WS1-4a: Expectations, Situation Models, Visions and Strategy Creation

- Expectations
- Visions et preferences
- Causal mapping
- Strategy creation and options evaluation
Iskar Workshops 4b & 5: vertical integration, fusion & analysis of strategies, action planning

- Strategy fusion
- Vertical integration
- Robustness analysis of new strategies
- Evaluation jury
- Action plan
- Google Earth
- Spatialisation of projects
- Voting on projects
- Project construction