Factors for success and failure in Integrated Water Resources Management

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Definition IWRM

Integrated water resources management (IWRM) is the process of coordinating conservation, management and development of water, land and related resources across sectors within a given river basin, in order to maximise the economic and social benefits derived from water resources in an equitable manner while preserving and, where necessary, restoring freshwater ecosystems. “ (GWP 2000)
The problem (?) with IWRM

- Vagueness of the concept
- Not clear: Implementation into practise
- What shall be integrated
- Practicability
- ...

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Our approach

- **Hypotheses:** „Factors for successful Integrated Water Resources Management can be identified”

- **Objective:** Identification of factors for success (and failure)
  - Development of an assessment sheet (guidance)
  - Identification of supporting factors
  - Catalogues of good practice examples (?)

- **Methodology:**
  - Literature study
  - Developing a category system and an assessment sheet
  - Document analysis of case studies along the assessment criteria
  - Refining the assessment sheet
Basis of the category system

■ Dublin Principles
  ▪ Fresh water is a finite and vulnerable resource
  ▪ Water management should be based on a participatory approach
  ▪ Women play a central part in provision, management and safeguarding
  ▪ Water has an economic value in all its competing uses/ economic good

■ 4 Basis principles of IWRM [Neubert/Theesfeld 2000]
  ▪ Orientation along river basins
  ▪ Integration of the natural and social system
  ▪ Cross-sectoral water management
  ▪ Support of participative and cooperative structures

■ 3 Implementation elements [GWP 2004]
  ▪ Role of Institutions
  ▪ Management instruments
  ▪ Enabling Environment

■ 4 Integration axes [Cardwell et al. 2006]
  ▪ Time, Objectives, Institutions, Space

The 4 Integration axes (Cardwell et al. 2006)
The case studies

Criteria for selection
- EU Research projects, GWP-Toolbox, HELP
- Representativeness
- Quality of documents / language
- 33 case studies, 24 countries

Kartengrundlage: www.welt-atlas.de
6 Assessment categories

■ 4 Integration axes

■ Culture/Gender

■ Enabling Environment

■ Management

■ Participation/Cooperation

■ Knowledge management and Capacity Development
Example Enabling Environment / Management

Enabling environment
- Resources and financial structures
- Legal conditions, boundary conditions
- Political and government structures (government as an „enabler“)
- Data (availability, quality)

Management
- Structures
  - Integration
  - Cross-sectoral cooperation
- Processes
  - Trigger
  - Flexibility
  - Power relation
- Institutions
  - Competences
  - Resources
  - Cooperation ability
- Instruments
  - Socio-technical I.
  - Planning I.
  - other I.
Some (general) results

- Importance of legal structures and frameworks
- Cross-sectoral cooperation (horizontal and vertical)
- Readiness /ability for cooperation of the political leadership and other involved parties
- IWRM-Processes are mostly „top-down“ initiated; „bottom-up“ Ex. Loire (F), Varbitsa (BG)
- Responsible process coordinator with decision competences; however: cooperation is crucial
- Integration of scientific institutions is beneficial
- Programmes are supportive (Room for rivers, Miljömål, etc.) → flexible, long-term perspectives, more public integration
Some results management instruments

- Manifold management instruments
  - Voluntary agreement (e.g. Denmark)
  - Water User Association (e.g. Rumania, Olifants/SA)
  - Le Plan Loire Grandeur Nature (e.g. Loire/F)

- Use of socio-technical Instruments often supportive, diversity of tools is used [Ex: Nile: Nile Regional DSS, Mesta-Nestos: TRANSCAT, Upper Guadina: DSS, Motala: ICECREAM]

- Important: appropriate model, adapted systems and processes

- Integration of different areas (z.B. health, economy)

- Cooperative development together with end users is crucial
  - transparency of tools and processes
Some results participation / culture

- Participation plays a big role – divers participation models and elements
  - Committees (cooperative); working groups (Murray-Darling Basin/AUS, Loire/F, Eden/UK)
  - Stakeholder Meetings; „Varbitsa Council“ (Varbitsa/BG)
  - Regional cooperation, expert groups, advisory board, regional conferences, regional Fora (Weser/D)
  - Workshops (Chaguana/EQD, Brabantse/NL, Davao PHI, Pilica/Pl)
  - Public discussion (Viru-Peipsi/Est)
  - Participative Planning (Hertogenbosch/NL)
  - WUA (ongoing Form of Participation) (Olifants / SA)
  - Seminars (Vänern/SWE)
  - Focus Groups and Citizen Juries ((Maas/NL, River Dialogue Project) (Motala/SWE)
  - Communication plan, shared decision making, discussions with Key-Stakeholder, Workshop series „Ribble Vision“ (Ribble/UK)

- Culture- und Gender-Aspects are not regarded or not documented
Concluding remarks

- Assessment sheet worked well to analyse case studies
- Some important factors could be identified (confirm & new aspects)
- Framework could also work for conceptualisation of IWRM projects (and their evaluation)

→ need for analysis of more case studies and detailed studies (esp. online questionnaire, expert interviews)
Thanks for your attention!

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Literature


