The Twin2Go Project:

From applying panaceas to mastering complexity: Towards adaptive water governance in river basins
From panaceas to context sensitive analyses and recommendations

- Water governance reform dominated by waves of simplistic recipes – privatization, decentralization, basin management plans, water user associations…..
- Hardly any systematic monitoring of success and testing of effectiveness
- Hardly any comparative studies of large number of water governance systems
The Twin2Go Project

- "Coordinating Twinning partnerships towards more adaptive Governance in river basins"
- EU project in the 7th Framework Programme
- Running from 2009 to 2011
Objectives

1. Review, compare, synthesize and consolidate the outcomes of several EU projects
2. Draw context-sensitive, but transferable approaches for improved (adaptive) water governance
3. Formulate policy-relevant best practices and tools for implementing adaptive water governance
4. Disseminate outcomes effectively to relevant stakeholders at the policy level
Projects & Case Studies

Case studies

STUDY BASINS
EC FP6 / FP7
TWINNING PROJECTS
- CABRI-Volga
- NEWWATER
- BRAHMA_TWNN
- ASEM
- WETWIN
- TWINBAS
- TWINLATIN
Framework of analysis for diagnostic approach

.... analyse how certain characteristics of a water governance system influence its performance and how this is affected by the context in which the system is embedded
Methodological Approach

• Develop pragmatic methodology to map knowledge from basins in one coherent structure
• Conduct comparative analyses across all basins guided by a set of hypotheses
Knowledge Base - Twin2Go Questionnaire

- 98 indicators - Governance regime, context, performance

A) Water governance regime

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicator</th>
<th>Score</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>I)</td>
<td>Characteristics of environmental governance regimes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a)</td>
<td>Water policy, institutional &amp; legal framework (formal and informal)</td>
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<td></td>
</tr>
<tr>
<td>1.</td>
<td>Domestic water legislation (laws, by-laws, etc.) in place?</td>
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<tr>
<td>2.</td>
<td>Domestic Water Law: Public character of water and legal status of water use rights</td>
<td></td>
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<tr>
<td>3.</td>
<td>Domestic Water Law: Explicit recognition of traditional and indigenous water uses</td>
<td></td>
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<td>4.</td>
<td>Domestic Water Law: On flow availability, third party rights and ecological requirements</td>
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<tr>
<td>5.</td>
<td>Integration of domestic water legislation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Multilevel structure of domestic water legislation and subsidiarity</td>
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</tbody>
</table>

Guidance

6. Multilevel structure of domestic water legislation and subsidiarity

- Allocation of responsibilities and dependencies across levels

- More distributed and legally institutionalised functions, responsibilities and power to improve performance.

- A
- B
- C

(A) Functions, responsibilities and authority are allocated to various levels
(B) Functions and responsibilities are distributed, but no authority
(C) Legislation only at one level, no distribution at all

see: Administration
differentiated in decentralisation, federal countries, RSM, water user’s associations, local administration;
FAO/WHO Water Law and Standards Database
Case Study Review Workshops

• 5 workshops held
• Each one with a regional focus
• Data collection (questionnaire)
• ~ 100 case study experts
• 29 (sub-)basins
Comparative Analyses

Complementary approaches

1. Qualitative examination of hypotheses
   - Case-sensitive: case studies clustered in 3 groups - supporting, neutral, contradicting

2. Statistical modelling
   - Regression and correlation methods
### Statistical Analyses

**Table 2** Results from statistical analyses

2a) Associations between performance and regime measures.

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>P1 MDG goals</th>
<th>P2 Good governance</th>
<th>P3 Adaptation policies</th>
<th>P4 Environ. conditions</th>
<th>P5 Environ. management</th>
<th>P All Aggregated over all</th>
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<tbody>
<tr>
<td>R1 Legal frameworks</td>
<td>0.06</td>
<td>0.67***</td>
<td>0.47**</td>
<td>-0.02</td>
<td>0.19</td>
<td>0.25**</td>
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<tr>
<td>R2 Basin principles</td>
<td>0.15</td>
<td>0.56***</td>
<td>0.23</td>
<td>-0.14</td>
<td>0.17</td>
<td>0.23*</td>
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<tr>
<td>R3 Polycentricity</td>
<td>0.18</td>
<td>0.81***</td>
<td>0.54***</td>
<td>0.04</td>
<td>0.21</td>
<td>0.36***</td>
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<tr>
<td>R4 Vertical integration</td>
<td>0.07</td>
<td>0.78***</td>
<td>0.35**</td>
<td>0.01</td>
<td>0.21</td>
<td>0.29**</td>
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<tr>
<td>R5 Horizontal integration</td>
<td>0.04</td>
<td>0.44**</td>
<td>0.36***</td>
<td>-0.10</td>
<td>0.12</td>
<td>0.19*</td>
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<tr>
<td>R6 Knowledge</td>
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<td>0.79***</td>
<td>0.22</td>
<td>0.02</td>
<td>0.27*</td>
<td>0.26*</td>
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<tr>
<td>R7 Handling Uncertainty</td>
<td>0.35</td>
<td>0.84***</td>
<td>0.69***</td>
<td>-0.04</td>
<td>0.13</td>
<td>0.37***</td>
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</table>

Values are regression coefficients (*P<0.05, **P<0.01, ***P<0.001).
Qualitative Analyses - Regime Typologies

<table>
<thead>
<tr>
<th></th>
<th>Polycentric</th>
<th>Fragmented</th>
<th>Centralized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution of formal power</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Multi-level distribution of functions and resources</td>
<td>High</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Coordination vertical</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Coordination horizontal</td>
<td>High</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Typical countries - cases</td>
<td>Netherlands</td>
<td>India</td>
<td>Uzbekistan</td>
</tr>
</tbody>
</table>
Performance in geographic regions
WFD - Classification of Surface Waters in Germany

Ecological Status

Chemical Status
Becoming richer no guarantee for improvement.....
Insights Twin2Go
Governance System -> Performance

- No support for simple recipes (panaceas)
- Regulatory frameworks necessary but not sufficient
- Associations rarely confounded by context – but context important to explain variation in associations
  -> Transfer of general principles that can be tailored to context
- Adaptive capacity (CC adaptation) strongly related to polycentric governance, knowledge management and innovative ways for dealing with uncertainty
- Economic development leads to fulfilling needs of human population but to a much lesser extent of the environment
- Cases where rivers are (still) in good condition have often poor governance and management systems
CONTRIBUTIONS WELCOME!!

www.twin2go.eu