Building robust strategies for climate proof fresh water supply

Tagus basin: Looking into solutions, dilemmas, responsibilities and cooperation

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- COMPLEXITY
- Drought, aridity, water scarcity desertification
- Culture of public/private cooperation
- Water laws embedded in culture
- Rigid legal and institutional system
- Disproportionate political (not policy) power
### Reasons to be optimistic? (my own view)

<table>
<thead>
<tr>
<th></th>
<th>Optimistic</th>
<th>Pessimistic</th>
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</thead>
<tbody>
<tr>
<td>Technology</td>
<td>x</td>
<td></td>
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<tr>
<td>Cooperation</td>
<td>x</td>
<td></td>
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<tr>
<td>Competitiveness, efficiency</td>
<td>x</td>
<td>x</td>
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<tr>
<td>Trade and prices</td>
<td>x</td>
<td>x</td>
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<tr>
<td>EU policy (CAP, WFD)</td>
<td>x</td>
<td>x</td>
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<td>Local adaptation policy</td>
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<td>x</td>
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<td>Effects on equity</td>
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<td>x</td>
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<tr>
<td>Limited science-based policy</td>
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<td>x</td>
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</tbody>
</table>

### INDICATORS (permanent monitoring, forecast)
Meteorological, hydrological, environmental, socio-economic

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Pre-Alert</th>
<th>Alert</th>
<th>Emergency</th>
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</thead>
<tbody>
<tr>
<td><strong>Pre-Alert</strong></td>
<td>Initial stage of danger</td>
<td>Drought will have impacts</td>
<td>Impacts have occurred and supply is not guaranteed</td>
</tr>
<tr>
<td><strong>Actions</strong> (taken in response to drought) should be triggered by indicators</td>
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<td><strong>Pre-Alert</strong></td>
<td>Voluntary, focus on raising awareness</td>
<td>Mandatory, non structural, directed to limit water use</td>
<td>Restrictive, structural or new abstractions</td>
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**ALERT**
Drought will have impacts

**PRE-ALERT**
Initial stage of danger

**EMERGENCY**
Impacts have occurred and supply is not guaranteed

**PRE-ALERT**
Voluntary, focus on raising awareness

**ALERT**
Mandatory, non structural, directed to limit water use

**EMERGENCY**
Restrictive, structural or new abstractions
Exploring the role of stakeholders
Examples in Europe and Africa
Tools: Mapping institutions, behavioural economics

Knowledge, information

Motivation

Barriers

Adapt options

thank you
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