

Social-scientific scenarios for discussing climate change adaptation governance at a regional level

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U N I K A S S E L
V E R S I T Ä T

GEFÖRDERT VOM



Bundesministerium
für Bildung
und Forschung

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Context

The subproject's targets

- Analysing synergies and conflicts between fields of action and between actor groups
- Advise for innovative governance formations in the model region Northern Hesse

Scenario work targets

- Alternative scenarios for illustrating potential decision processes (with regard to values, regulation forms)
- Description of hypothetical, reality based regional developments
- Communication instrument for identifying synergies, conflicts and actors for the development and implementation of regional adaptation strategies
- Stimulating debates about future developments with and between local stakeholders
- Detecting linkages between processes and decisions

Empirical Design

Step 1

Discussion with stakeholders about challenges and potential conflicts in adaptation processes
Three probing workshops (energy, forestry, agriculture) and interviews
Identification of stakeholders' perceptions and practical knowledge: June to December 2010



Step 2

Development of alternative scenarios for regional climate change adaptation
Review of the scenarios with other KLIMZUG-subprojects and state of the art: mid 2011



Step 3

Discussion with stakeholders about development paths and their impact on climate change adaptation
Three scenario workshops (energy, forestry, agriculture)
Assesment of sectoral scenarios by regional experts: autumn 2011



Step 4

Evaluation of results, comparison and analysis of specific and suprasectoral aspects
Discussion of the results with subprojects and external experts: spring 2012

Results of the Probing Workshops

- High uncertainty about concrete regional climate change impacts
 - But: no doubt that climate change is happening
- No distinction between climate protection and adaptation
- Fields of action differ strongly in their time requirements
 - Effects adaptation needs
- Lack of factual knowledge (adequate adaptation measures)
- Need for integrative strategies
 - Esp. climate protection, sustainability, regional value creation
- Close interplay among the fields of action (utilisation / goal conflicts)

Scenario Workshops

Format

- 9 – 12 regional stakeholders: business, administration, civil society, science
- Moderated discussion with visual and verbal presentation of the scenarios

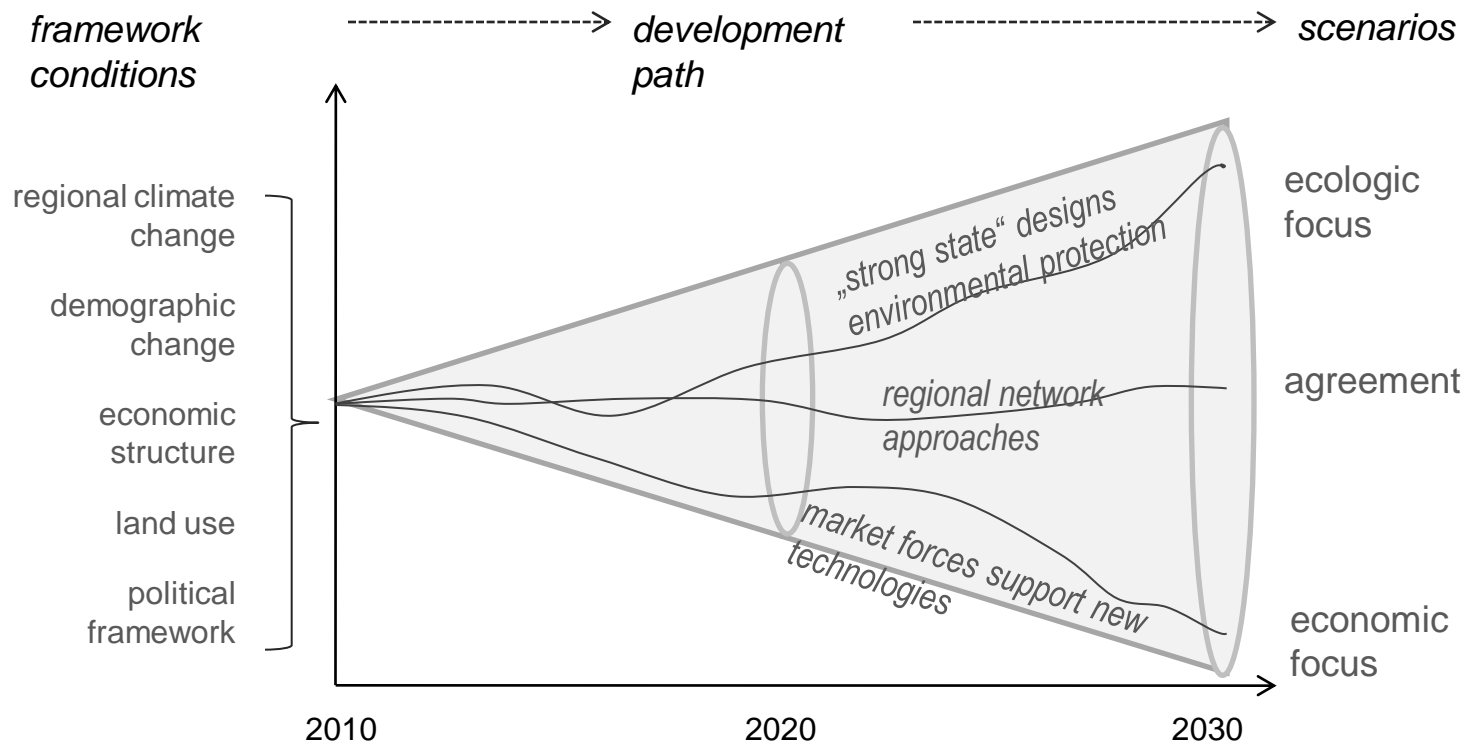
Procedure

- Scenario presentation and discussion
- Plausability of the three alternative scenarios?
- What do you think about these potential developments regarding the following objectives:
 - Regional value creation, socio-economic development, climate protection, social justice, nature protection
- Additional influencing factors?
- Deriving adequate measures for regional climate change adaptation

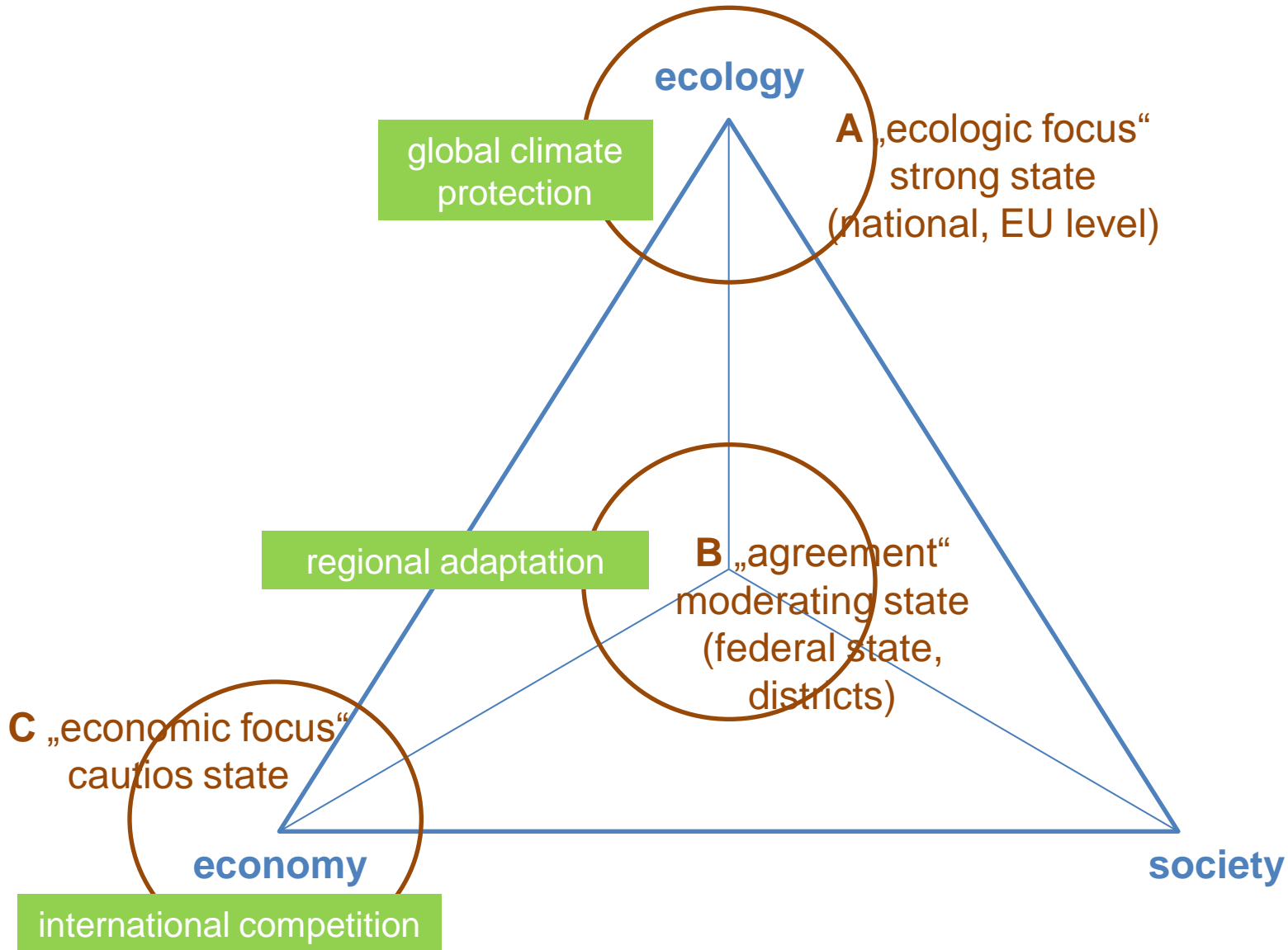
Basic Conditions and Trends

Basic conditions for the alternative scenarios

1. Climatological scenarios (increasing drought, storms, hail, diseases, pest)
2. Regional economic trends (decreasing employment figures, expansion of renewable energy)
3. Demographic change (partially extreme depopulation)
4. Political framework (objective agreements, promotion of renewable energy)



Scenario Concepts of Sustainability



Ingredients of the Scenarios: Agriculture 2030

	Scenario A: „Ecologic Focus“	Scenario B: „Agreement“	Scenario C: „Economic Focus“
Development ideal	Biodiversity and nature conservation as guidelines for regional development	Balance between ecological, social and economic objectives (each measure)	Economic growth as the basis for social justice and nature conservation
Role of the state	Strong state: regulations, top-down approach	Moderating state: coordination of interests, conflict reduction through participative governance	Cautious state: Technological innovations through competition between economic operators
Development trend (agriculture)	Fostering biodiversity: land protection, reducing emissions	Regional strength: adequate production methods for regional cultural and natural landscapes	Strengthening the strong: opportunity for development to large agribusinesses (international competition)
Adaptation strategy	Preventive measures	No-regret measures	Reactive measures

Visualising Alternative Development Scenarios Agriculture 2030

Scenario A: Ecologic focus



Spatial fragmentation of protected and productive land

Scenario B: Agreement



Multifunctional productive land

Scenario C: Economic focus



Spatial concentration of the cultivation of energy plants

Spatial structure	Management of areas	Flora / Fauna	Vulnerability
population center	farmed intensively	biodiversity	damages: storm, hail
supraregional rivers	farmed extensively	monoculture	animal pest, diseases
administrative border of the model region Northern-Hesse	nature conservation	ecological farming	waterstress
		biomass plant	
		water reservoir	

Main Results

Content

- Ambivalent argumentation
 - Concerning the stakeholders' capacity to take an active role in the adaptation process and the non existing need for more participation
 - Economic rationality and the impact of governmental frameworks (e.g. environmental laws)
- Rationalisation of decision processes and opinions (inconsistent statements)
- Planning certainty of subsidies is more important than uncertainties regarding regional climate change (adaptive capacity depends on investment potentials)
 - which means the investment potential determines climate change adaptation strategies and the implementation of measures
- Demographic change was regarded as a weak variable (repression, political reasons)
- **Climate change is currently not a main driver for regional stakeholders, more important are economic and legal factors**

Method

- Complexity of scenarios and the stakeholder's practical knowledge are difficult to combine
- Use of terms
 - Variety of understanding of terms (alternative, sustainability)

Remarks

- Scenarios – an adequate tool for stakeholder participation?
 - Stakeholders reported negative experiences in former scenario workshops (participation in proceedings)
 - Stakeholders worried that the scenarios could be held as „truth“
- Analysing stakeholders' statements:
 - How to deal with inconsistencies, rationalisations, tactical / political statements (e.g. demographic change) etc.
- Dealing with side effects:
 - Group dynamics, misunderstandings of terms, hierachical order...
 - Interdisciplinary competition (social / natural science)
- Evaluation of intervention impacts

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