



Leibniz-Zentrum für
Agrarlandschaftsforschung
(ZALF) e.V.

Leibniz
Gemeinschaft

Leibniz Centre for Agricultural Landscape Res

Developing an Integrated Sustainable Land Management Scheme facing the Challenges of Global Change:

The ELaN project

Gunnar Lischeid



Challenges of Global Change

| Challenges | Climate Change | Land use Change | Demographic Change | Economic Change |
|---|----------------|-----------------|--------------------|-----------------|
| Need for added value in rural regions | | | x | x |
| Need for decentralised infrastructure | | | x | x |
| Increasing demand for bio-energy | | x | | x |
| Need for nutrient recycling | | x | | x |
| Increasing groundwater and lake water levels | x | x | | |
| Drainage of wetlands (biodiversity, carbon sequestration) | x | x | | x |
| Contamination of streams and rivers by sewage plants effluents (xenobiotics, micropollutants) | | | x | x |



The ELaN Project – Basic Approach

Using contaminated or rewetted sites for biomass production

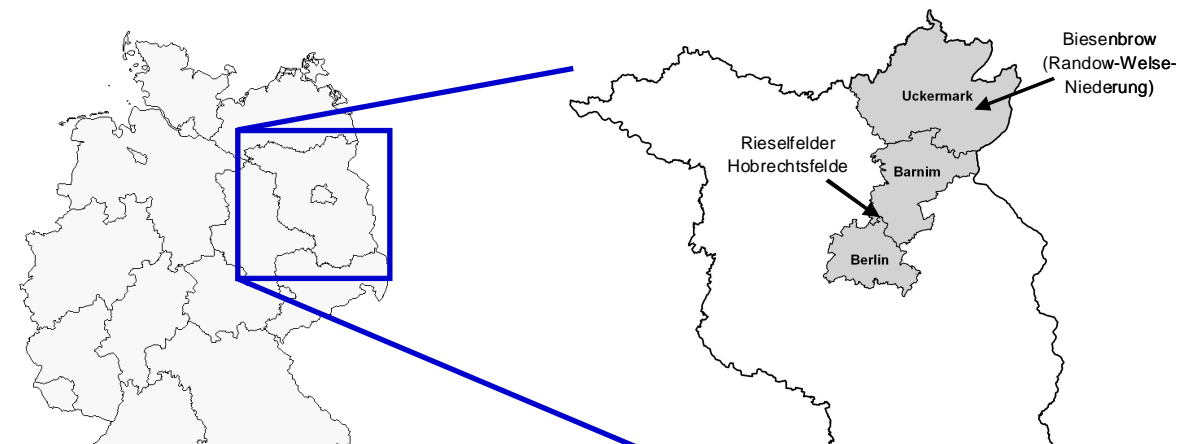
Using cleaned waste water for crop production

Phosphorus recycling from sewage sludge

Interdisciplinary integration of related knowledge from civil engineering, science, sociology and economics

Developing approaches for transdisciplinary integration of practical knowledge

Developing an integrated systemic scheme for the Berlin - Brandenburg region





The ELaN Project - Implementation

Partners:



Leibniz-Zentrum für Agrarlandschaftsforschung (ZALF)



Hochschule für Nachhaltige Entwicklung Eberswalde (HNEE)



Technische Universität Berlin (TUB)



Leibniz-Institut für Regionalentwicklung und Strukturplanung (IRS)



Humboldt Universität zu Berlin (HUB)



Berliner Wasserbetriebe (BWB)



Bundesanstalt für Gewässerkunde (BfG)



Leibniz-Institut für Agrartechnik Potsdam-Bornim (ATB)



ECT Ökotoxikologie GmbH (ECT)



Leibniz-Institut für Gewässerökologie und Binnenfischerei (IGB)

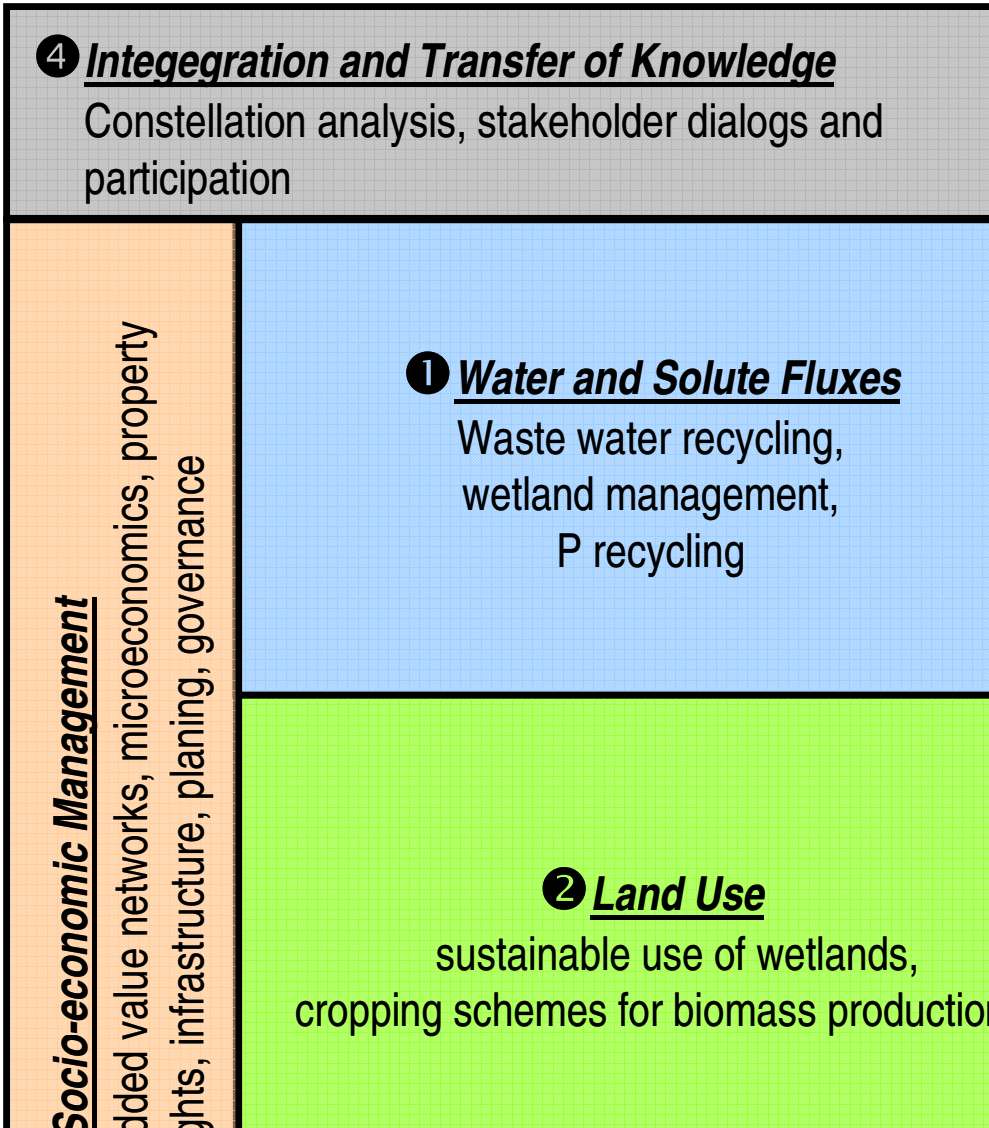


Freie Universität Berlin



Forschungsinstitut Bioaktive Polymersysteme e.V. (Biopos)

Structure:



Research Needs

Considering interactions between different aspects of global change

Systemic approaches to solving complex problems → benefitting from synergies

Rethinking and adapting infrastructure („*learning organisations*“)

Alternative ways of governance

Going beyond panaceas (*Ostrom 2007*)