

## Challenges related to bioenergy and supply chain organization:

Insights derived from a systemic analysis of related innovation processes in Germany, Latvia, Switzerland, Italy and France



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## IN-SIGHT project



- *Strengthening Innovation Processes for Growth & Development*
- EU-funded policy-oriented research: scientific support to policies – SSP
- focus:
  - (new forms of) agricultural marketing
  - environmental technologies: **bioenergy**
  - (new) rural services
- research partners from 7 countries across Europe

## overview

1. changes in **strategic orientations**
2. limitations in present innovation support systems: a **gap analysis**
3. **learning** from new approaches and experiences
4. need for **systemic approaches**

## 1. changes in strategic orientations

- from a production orientation towards **multifunctional & sustainable** pathways
- adapting, using new opportunities, ... **(re)localisation**
- governing changes ... governance
- **diversity** in social, economic & natural conditions; economic structures
- **distinctiveness** & context-specificity

## coexistence of different paradigms

production volumes, global markets, low-cost production	distinctiveness, quality, regional markets / circuits
economies of scale	economies of scope
specialisation	multifunctionality, active construction of synergies
resource intensive systems with high use of external inputs	sustainable systems, efficiency of natural resource use
productivity of labour and/or land	<b>value added ... SSCM</b>
linear models, chains	<b>networks, collective action, negotiation, social learning</b>

## 2. gap analysis

- limitations in
  - ... present innovation systems?
  - ... present support systems?

## gaps identified in 14 case studies

1. insufficient recognition of innovation taking place in informal sphere / „novelty production“
2. limited **understanding** of innovation processes
3. inadequate strategic orientations
4. inefficient **intervention tools** in support of innovations
5. inertia in **knowledge, information & support systems**

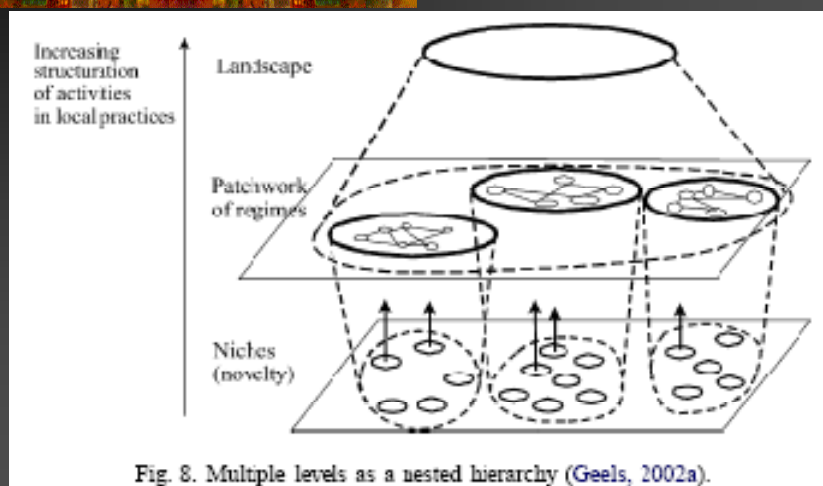
## linear vs. evolutionary approach

- important questions
  - who is involved in the definition of *'the problem'*?
  - nature of links between research, training, extension & practice
  - balance between public/private & central/decentralised structures
  - are diverse forms of innovation recognized?
  - is there trust in the socio-technical system?

### 3. learning from new experiences

- recognizing
  - grassroots-level changes
  - the multidimensionality of change

### recognizing grassroots-level changes



## multidimensionality of change

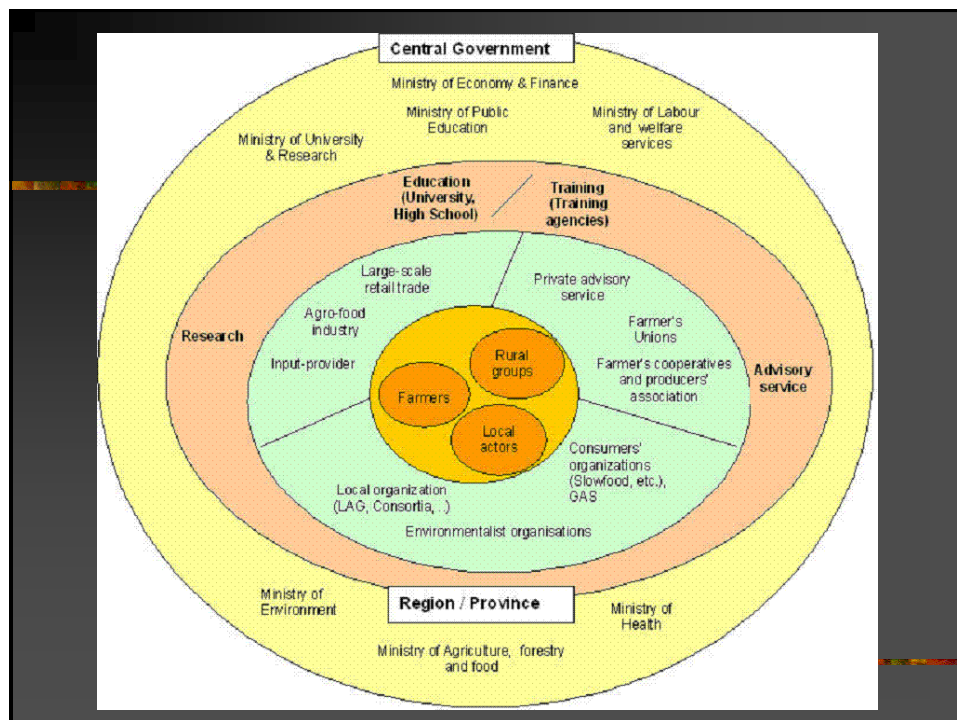
- wide range of **actors** involved
- innovation has to do with **learning**
- different sources & forms of knowledge
- often new competences & qualifications required
- processes of change frequently unfolding over a longer period of **time**

## 4. need for systemic approaches

- actors, networks, governance
- knowledge, learning, capacity building
- interplay between different types of innovation: technological, social, organizational, ...
- drivers of change are important
- framework conditions matter, support (incl. finance, e.g. risk capital), regulation
- need to support innovations more (pro)actively

## acknowledging complexity & dynamics

- ... different paradigms coexist in socio-technical systems
- ... human, social & educational components are essential to innovations; not only technological focus
- ... conflicts & negotiation phases are important for people to find consensus





Brennholz



mittel-Fein



fein



hochfein



Stumpen



Wald-Öfen



Wald



Wald



Gesellschaft zur Förderung, Gewinnung und Nutzung regenerativer Energien mbH



## a summary of the 5 key points

1. changes in **strategic orientations** needed & corresponding adjustments in support systems
2. technical & economic factors alone are insufficient to understand innovation processes, drivers & barriers
3. importance of motivations, **information** flows, **learning** & social interaction

.....

4. entrepreneur's knowledge, experience, motivations & values play a central role
5. ample scope for learning from **new approaches & experiences** / **practice** ...  
notion of 'novelty production'

## innovation?

- *"successful exploitation of creative ideas"*
  - products, processes, markets, supply chains, institutions, ...
  - technological, social, organisational, ...
- most often it is the outcome of collaborative networks

## for more information / research cooperation:

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- project website: [insightproject.net](http://insightproject.net)
- **final conference: 15 October 2008 / Brussels**

