

Agroecological innovation: visions from SCAR's 3rd Foresight

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Background



Standing Committee for Agricultural Research has commissioned Third Foresight Exercise:



FEG 3: July 2010 – January 2011

- 8 experts: Freibauer (DE, chair), Mathijs (BE, rapporteur), Brunori (I), Damianova (BU), Faroult (F/EC), Girona i Gomis (ES), O´Brien (IE), Treyer (F)
- Meta-review of existing studies
- Stakeholder involvement via workshop
- **Aim: building blocks for longer-term perspective to prepare a smooth transition towards a world with resource constraints and environmental limits**

Approach



Starting point:

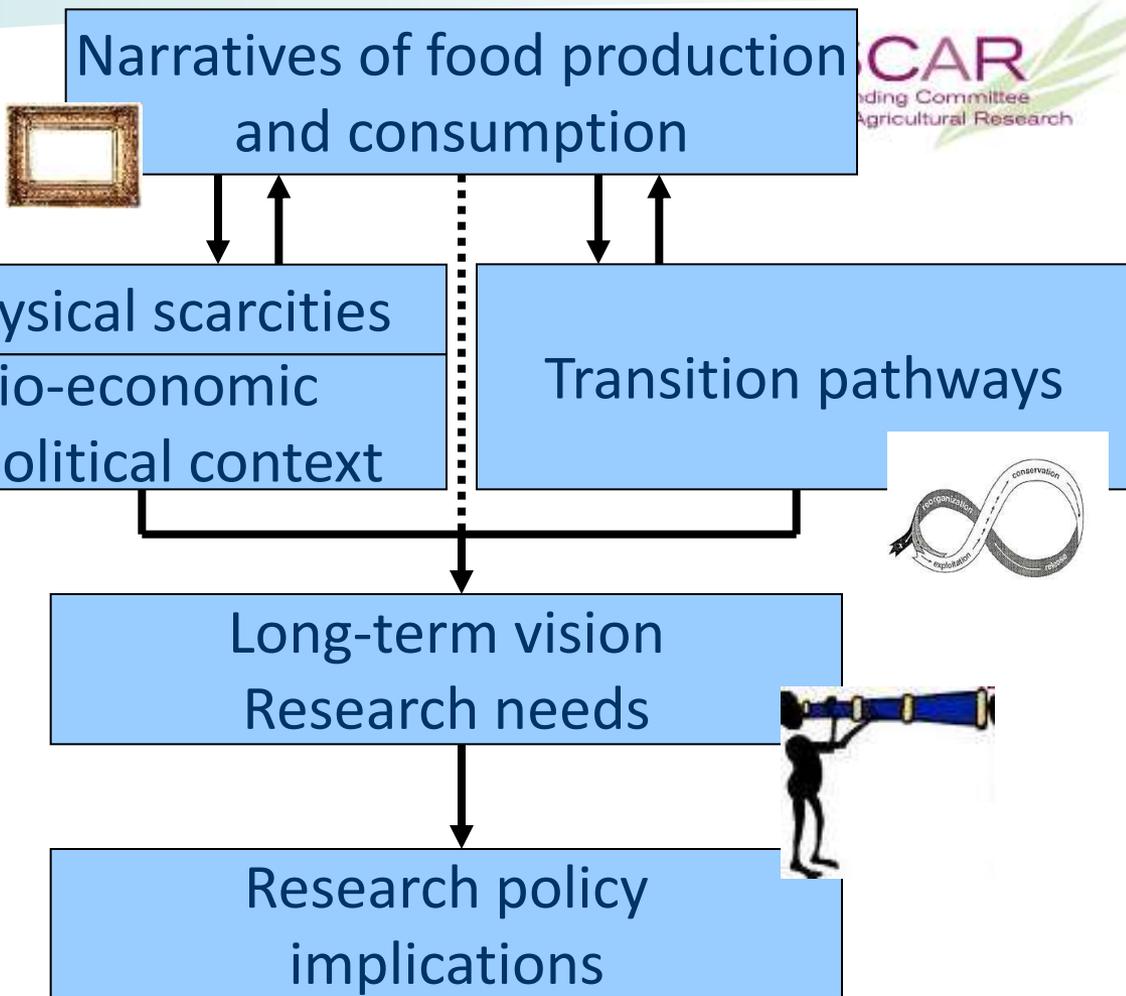
Extreme ends, assumptions, simplifications in relation to scarcities and transitions

New insights since FEG2



Conclusions from insights

Conclusions from vision and research needs



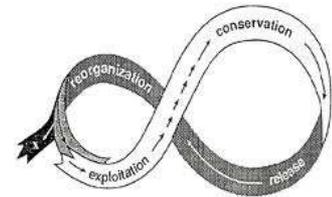
→ **directions for solutions & how research can direct us towards them**

Key messages: Transitions and gaps to overcome



Governance and institutions – enabling conditions

- **‘Incentive gap’**: Policies for enabling frame conditions
- **‘Responsibility gap’**: Private sector - food as service, corporate social responsibility, multi-stakeholder platforms for informed consumer choices...

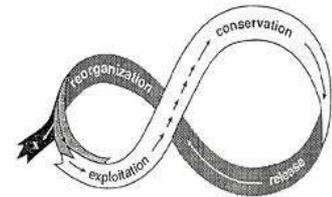


Key messages: Transitions and gaps to overcome



Consumer driven pathways

- **Behaviour gap**: Unfreeze the lock-in in consumer habits: consciousness, health links, social logic
- Food industry, the retail sector and the media play a key role in changing consumer habits

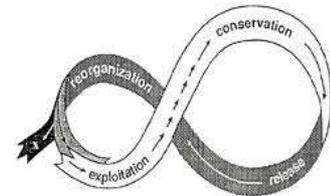


Key messages: Transitions and gaps to overcome



Technological innovation including agro-ecology

- Farmers: Close the **'yield gap'** by sustainable intensification
- Agro-food sector: Speed up the uptake of research and innovation by farmers and suppliers (**'innovation gap'**)
- Diversity, regionally adapted solutions, agrobiodiversity: Make the food system resilient to change and surprise (**'resilience gap'**)
- Acceptance and uptake of new ideas via participation and experimentation (**'socio-technology gap'**):



The 'Innovation Gap': two elements



- **Sustainable intensification (defined by SCAR FEG3)**
 - Producing more food from the same area of land while reducing the environmental impacts
 - Reduce negative externalities with the use of existing technologies.
- **Agroecology**
 - “the application of ecological science to the study, design and management of sustainable agroecosystems” (Altieri, 1995).
 - “by understanding the ecological relationships and processes, agroecosystems can be manipulated to improve” (Altieri, 1995).
 - “an umbrella concept for different agricultural practices and innovations such as biological control, cultivar mixtures, agroforestry systems, habitat management techniques, or natural systems agriculture aiming at perennial food-grain-producing systems” (Vanloqueren and Baret, 2009).

A lighthouse: Agroecological research and innovation in Germany



- **Ministry of Agriculture:**
 - Federal programme on organic farming
 - Federal funding for climate change research
- **Ministry of Science / linked to actions by Ministry of Environment**
 - Programmes on sustainable land management
 - New programme for ecosystem services and biodiversity hotspots linked to funding for implementing innovative concepts for biodiversity conservation
- **Ministry of Environment**
 - Innovation to maintain and improve management of biodiversity hotspots, including land use