



Design for multifunctional agriculture

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Which functions do we see for rural areas?

Many simultaneously; multifunctionality:

- Generating agricultural income
- Production of food
- Recreation
- Space for wild plants and animals
- Readable landscapes
- Steward of cultural heritage

Research question:

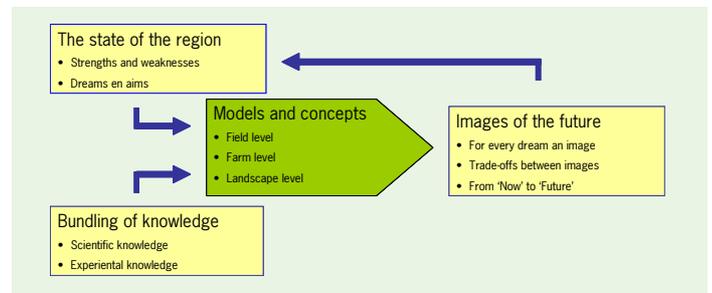
To which degree can agriculture play a multifunctional role and which trade-offs between objectives are required?

Approach in the research project

Multifunctionality requires synergy among economically viable farm management, prevalence and survival of species, and a readable landscape. Insight in opportunities and constraints of various alternative land use options at field, farm and regional scales inform the public debate on regional development.

Methods in the research project

- Design:** integrate disciplinary knowledge in alternative options
- Prototyping:** evaluate rough designs with regional stakeholders
- Iterative:** repeat steps with increasing detail
- Interactive:** do research together with stakeholders in the regions



Case study areas

- Noordelijke Friese Wouden (NL) (dairy farming)
- Kennislandgoed Flevoland (NL) (arable farming)
- Vendée (F) (dairy farming)
- Eure et Loire (F) (arable farming)

Landscape identity

Does the landscape reflect the bio-physical environment and the inhabitants?



Recognizable cultural landscape

Farming styles

Objectives of farmers and their on-farm implementation



Profitable farming



Species richness

Agronomic design

Novel arable and livestock farming systems

Institutional innovation

Dynamics of institutions in response to rural developments

Landscape ecology

Presence of species in relation to the landscape configuration

Food webs

Feeding relations between species in an agro-ecosystem