HIGH NATURE VALUE FARMING: FROM INDICATION TO CONSERVATION

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Outline

• Putting the concept into a conservation ecology perspective

• Setting the scene: Indication and conservation of HNV farmlands

• Steps taken at the national level: Modelling the spatial distribution of species-rich farmland

• Next steps and concluding remarks
Farmland biodiversity and agricultural practices

- Conservation of species-rich habitats and landscapes is to a large part linked to the continuation of low-intensity farming systems
- Supporting and maintaining HNV farming has been a priority for EU rural development policy since 2005

modified after Hoogeveen et al. (2001)
Putting the concept into a conservation ecology perspective

Strohbach et al. (2015) Ecological Indicators
Setting the scene: HNV farming and EU common agricultural policy

- Agri-environment schemes (AES) key policy tool to halt or reverse negative farmland biodiversity trends
- Mixed effects on farmland biodiversity
  

- Current AES mainly failed to safeguard HNV farming systems
  

- AES need to be tailored at regional scales depending on the landscape’s structure and productivity, the size and composition of the available species pool and the underlying socio-ecological system

- To facilitate spatial targeting of AES, information on the spatial distribution of farmland biodiversity and its major drivers is a prerequisite
Aichi Biodiversity Targets

**Strategic Goal A** (Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society)

**Target 3:** "...incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed ..., and positive incentives for the conservation and sustainable use of biodiversity are developed and applied,..."

→ Better targeting and integration of agri-environmental schemes and other policy instruments towards desired biodiversity outcomes is needed

Secretariat of the Convention on Biological Diversity (2014) Global Biodiversity Outlook 4
Low-intensity agriculture increases farmland bird abundances in France

Location of HNV farmland in France

The Farmland Bird Indicator for high nature value (HNV, black solid line) and non-HNV farmland (black dashed line)

- Appropriate management of HNV areas is crucial for halting biodiversity loss
- Future measures aimed at maintaining HNV farmland and associated farming systems should shift from a species-specific to an ecosystem approach

Modelling the spatial distribution of species-rich farmland at national scale

Data on species-rich farmland (plant indicator species)

Agri-environmental variables (n=40)
- Topography
- Agriculture
- Landscape
- Soil
- Climate

Location of the 915 1-km² sampling areas in Germany (BfN 2009)
Identifying priority regions for conservation actions

Klimek et al. (2014) Biological Conservation
Conclusions and policy implications

- The predicted share of species-rich farmland is highest in upland and structurally complex grassland-dominated regions where extensive livestock is practised.
- The map can be used to facilitate the spatial targeting of conservation actions.
- Priority should be given to sustaining low-input grassland farming by keeping farmers in business and preventing farmland abandonment.
Implications for delineating HNV farmlands

- The generated map of the spatial distribution of species-rich farmland makes a valuable contribution to identifying areas with a high probability of being HNV farmland.
- The top-down mapping approach does not define HNV farming systems.
  - Course spatial resolution of GIS-data (municipality level, LAU 2).
- Data on other taxa (e.g. farmland birds) should be included.
- To improve the indication of potential HNV farmlands, high resolution farm-level data (i.e. IACS data) and bird distribution data need to be considered (bottom-up approach).
Concluding remarks

• Good progress is being made towards assessing the extent of HNV farmland (fulfilling reporting obligations)

• To provide targeted financial support for HNV farming systems eligibility criteria are needed that reflect their characteristics

• What are the societal benefits (in terms of ecosystem service provision) best delivered by HNV farming?

• What are the social and economic threats to HNV farming and what measures can be used to overcome them?

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