



Agriculture and the conservation of wildlife biodiversity – comparative analysis of policies in the USA and the EU

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**Andrew Manale, EPA, presented to USDA
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Introduction

- **Collaboration with Johann Heinrich von Thuenen Institute, one of four German federal research institutes under the auspices of the German Federal Ministry of Food, Agriculture and Consumer Protection.**
- **Cooperated with**
 - **Pete Heard, NRCS's Agricultural Wildlife Conservation Center**
 - **Skip Hyberg, Farm Service Agency**
 - **Tom Franklin, Wildlife Society and the Teddy Roosevelt Conservation Partnership**
 - **Ron Helinski, independent wildlife consultant**
 - **Charlie Rewa, NRCS**
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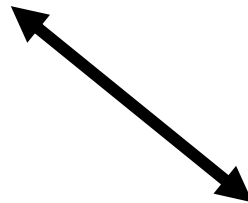
Introduction



Biodiversity (on ag land): definitions and uses in policy

- Range of definitions

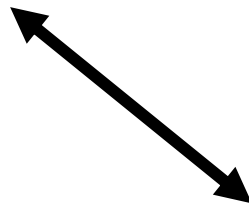
Diversity or totality of species relative to a pre-agricultural, pristine state of nature



Diversity of species at some point in a changed human environment

- Range of how the term is used in policy

Separate indicator or objective—species protection



Integrating indicator reflecting ecological linkages (degree of biological integrity)

Farmland and biodiversity

- **High importance of farmland for habitats and species**
 - Nearly half of land area used for agriculture in EU
 - US some 54% of the lower 48
 - EU: about 50% of species rely on agricultural habitats (extensively used grasslands or pasture as wildlife “hotspots”)
 - US: Over 2/3 of the nation’s wildlife habitat is distributed over private land in primarily agricultural use

Farmland and biodiversity

- **Threats to biodiversity:**
 - **Conversion of land to agricultural use (US)**
 - **Intensification of land management (US and EU)**
 - **As well abandonment of farming linked to extensive land management (EU, primarily)**

Farmland and biodiversity

- **Different paths toward protecting wildlife biodiversity**
 - US
 - Protecting lands from conversion
 - Restoring habitat
 - De-intensifying production systems
 - EU
 - Maintaining less intensive agricultural systems
 - Restoring habitat
 - De-intensifying production systems

EU: Baseline for nature conservation

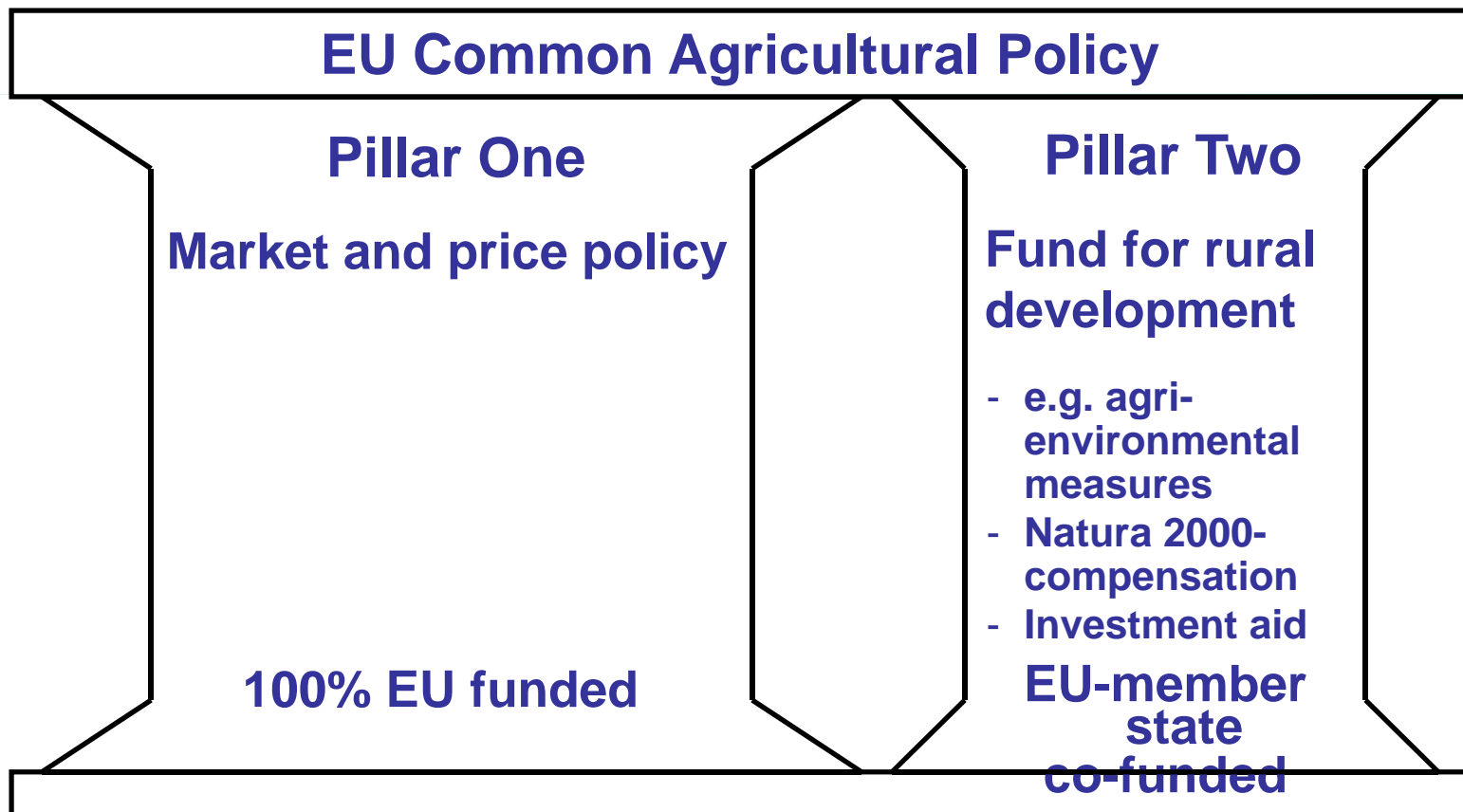
- **CBD signed by EU and all single Member States; additional objective of „halting the loss of biodiversity“ till 2010**
- EU and national biodiversity strategies and action plans
 - **To be translated into concrete mandatory and voluntary measures**
- **Integration of environmental policies into the CAP**
- **Two central Directives for nature conservation at EU level:**
 - Directive on the protection of wild birds (79/409/EEC)
 - Directive on the conservation of natural habitats and wild fauna and flora (92/43/EC)
- **Basis for Natura 2000 network**

Natura 2000 network

- **EU:**
 - **Legislation lists relevant habitats and species**
 - **May initiate infringement procedures** in case of insufficient implementation
 - **Provides cofinancing** for compensatory payments or voluntary incentives for land management
- **Member states:**
 - **Obligated to designate areas and maintain or restore a „favorable conservation status“**
 - **Design detailed measures for each site**
 - **Report back to EU**

The Common Agricultural Policy of the EU (CAP)

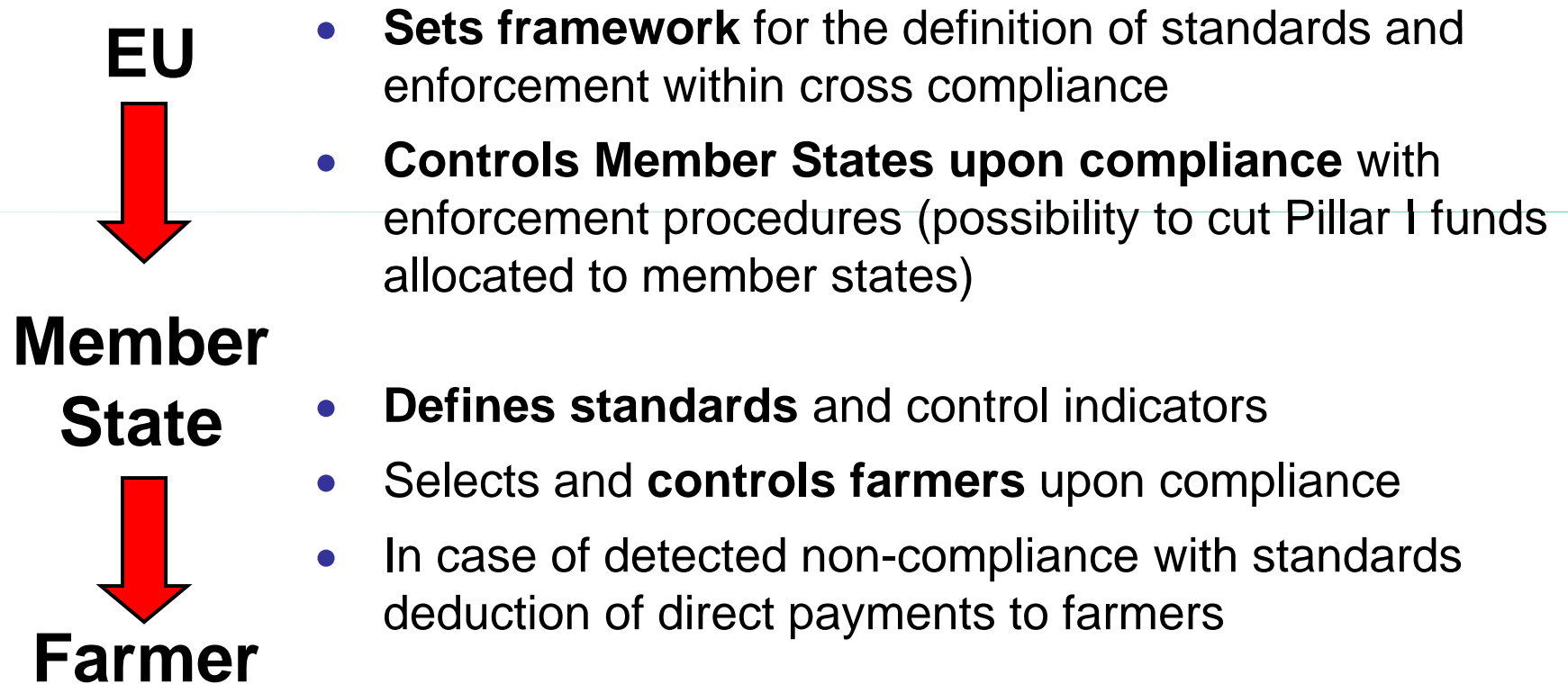
> 40% of EU budget; reaching most of agricultural land;



Cross Compliance – Framework

- **Links full receipt of direct support payments to minimum farming standards**
 - **Floor for soil conservation and water quality protection**
 - **Standards for maintenance of existing landscape elements and protection of permanent pasture**
- Possibility to set area-wide minimum standards for land management, but hardly for area-specific nature conservation**

Cross compliance - Who controls whom?



Direct payments as „carrots“, disallowances as „stick“

→ More harmonized enforcement of EU legislation

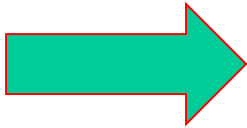
Agri-environmental measures (AEM)

- **Part of the CAP's rural development policy**
- **Voluntary measures with annual payments covering land manager's additional cost and income foregone**
- **Mostly integrated in agricultural production systems**
- **Limitations:**
 - Voluntary participation
(little take up on intensively used land → less competitive in high-price scenario or with high incentives for intensive energy crop production)
 - Budgetary constraints, partly high administrative cost
→ limited offering

Key characteristics of EU - approach

- **Strategies and legislative framework at EU-level**
 - EU controls allocation of EU-funds
 - EU induces member states to raise standards or allocate EU-funds to measures linked to common objectives
- **Member states:**
 - Implement and enforce at national, regional and local level (adaptation of measures to regional/local conditions)
 - Monitoring of measures and reporting to EU

Assumption



Paying for less intensive agricultural systems through voluntary enrollments produces

**wildlife benefits
greater biological diversity**

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Objectives and strategies at US national level

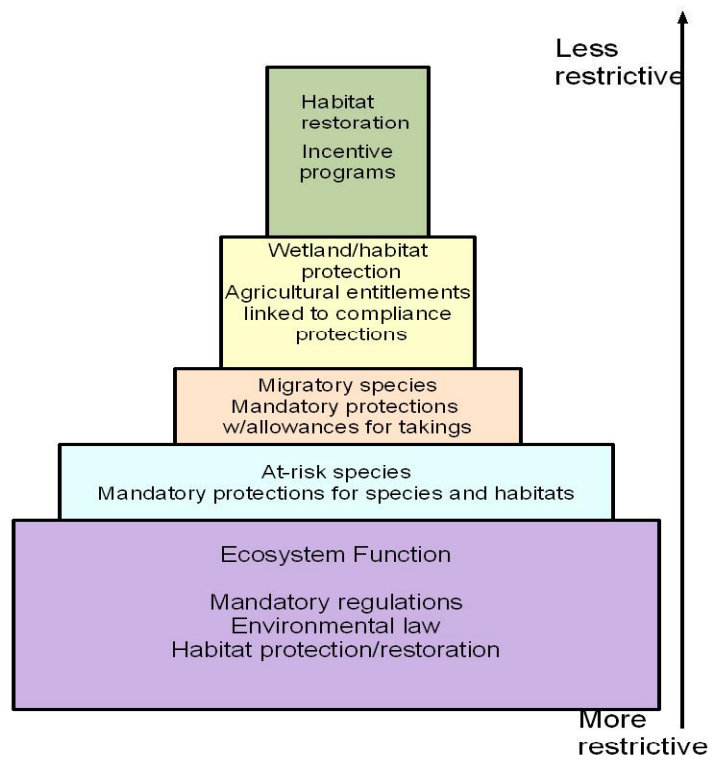
- **No seamless, comprehensive policy related to the conservation of biodiversity**
- **Biodiversity conservation an indirect consequence of wildlife protection**

Objectives and strategies at US national level

- **A collage of piecemeal enacted laws on wildlife, wildlife habitat, and species protection**
 - **Different agencies interpreting different laws affecting wildlife (game and non-game) and species management and protection**
 - **Evolving system reflecting the state of the science of wildlife and biodiversity management**
 - **Differing political viewpoints on the role of federal, state, and private entities in the management of a public resource on private land**

Objectives and strategies at US national level

- **Protection of a wildlife as a public good for public benefit—Public Trust Doctrine**
 - **Protections accrue regardless of public or private lands**
 - **States have authority for resident wildlife**
 - **Federal authority for migratory species (compliance with international agreements)**
- **Mandatory protections for endangered species and habitats—floor on species loss**
- **Mandatory protections for wetlands and, at least some, critical environmental factors**



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Federal Agricultural Programs (Farm Bill)

- **Wildlife habitat protection and restoration a coequal objective of agricultural conservation policy**
- **Agricultural incentive programs**
 - **Federally administered through landowner contracts**
 - **Permanent and temporary retirement from intensive agricultural use**
 - **Cost-share assistance to implement practices on working lands**
 - **Cost-share for habitat restoration**
 - **Reward program for stewardship**

Farm Bill

- **Cross-compliance programs for protecting wetland habitat and soil erosion (which affects aquatic environments)**
 - **Partnering programs with states and non-profit organizations (NGOs)**
 - **Federal match**
 - **Jointly determined objectives**
 - **State advisory committees**
 - **Cooperative multi-level goal-setting**
- No consistent method for assuring compliance at federal level**

Verification

- **Multiagency/multilevel scientific collaboration**
 - Wildlife assessments
 - CEAP
- **Initial efforts at assessment and evaluation consistent with evolving science**
 - Ecosystem framework
 - Development of indicators for biodiversity and system resilience
 - Multiagency federal funding for monitoring efforts and assessment efforts

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New Developments

- **Habitat trading**
- **“Safe harbor”**
- **Ecosystem valuation**
- **Environmental markets**

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Comparison of EU and US

- **Baseline for nature protection through legislation at EU-level and national level in the US → funding of protection measures**

Comparison

- **Nature conservation increasingly integrated into agric. policy:**
 - 1) **Cross compliance**
 - EU: area-wide standards for land management, framework set at EU-level, but high variety of standards
 - US: restricting loss of wetlands and soil erosion; determined by federal level
 - 2) **Voluntary incentives as most prominent feature**
 - Targeted nature conservation; co-operative approach
 - US: initially higher focus on long-term retirement of land
 - EU: „multifunctional“ land use
 - Limitations (budget, voluntariness, limited or inconsistent monitoring and assessment, heavily weighted towards game species)
 - Success depends heavily upon cooperation with wildlife or environmental agencies and stakeholders

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Comparison

- **Growing focus on monitoring and evaluation to verify results**

Conclusions

- **Agricultural policies are determined at high level, cover large areas and have a huge budget**
 - **key policy for land management** because of leverage over many farmers in farm programs
 - enables “top-down” approach (refocusing of member state (EU) and state (US) towards wildlife conservation) and minimum level of performance

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Conclusions

- **However ...**
 - **Most funds applied with little targeting to nature conservation (in EU) or most at-risk (non-game) habitats and species (US)**
 - **depends upon voluntary enrollment and may not enroll the most useful or valuable lands for wildlife or the purpose of biodiversity**

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Conclusions

- **However ...**
 - **Effectiveness of measures difficult to establish**

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- **However ...**
 - **Limited integration of biodiversity protection with other environmental goals**

Conclusions

Moreover,

- **Loss of leverage in light of high prices and increasing land use competition**
 - mandatory measures versus voluntary incentives
 - distribution of funds and conditions for their allocation
 - permanent retirement of agricultural land use versus nature conservation on “working lands”)

Challenges

Justification for public funding (accountability)-- clearer public benefit

- Increasing importance of protecting the underlying ecological conditions—water quantity, water quality, invasives
- Coupling at least some agri-environmental measures to particular production or land use system (e.g. grazing)
 - compatibility with WTO-rules in the long term?
 - Necessity of clear environmental objectives and targeted intervention
 - Preference of least trade-distorting measures (e.g. better distribution of existing livestock)
 - Monitoring and evaluation to assess effectiveness of measures

Mutual learning and cooperation

- **Development of monitoring and evaluation tools**
→ Mutual collaboration and exchange of data and knowledge
- **Indexes for measuring biodiversity on agricultural lands—how do we know we are making progress?**
- **Growing focus on multifunctional land use; ample experiences in EU**
→ Exchange of scientific experiences and best practice (which measures and practices are effective, how to account for multiple objectives, suitable vertical levels for implementation)

Thank you