



European Commission  
Agriculture and Rural Development



# Land Management and the Delivery of Public Goods

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**Europe's rural areas in action - Facing the challenges of tomorrow**

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# Private and Public Goods

## Public intervention in land management

# Private Goods

- Goods are called *private* if one person's consumption of them precludes their consumption by another person.
  - Private goods are typically traded in markets
  - Buyers and sellers meet through the price mechanism
  - The ownership or use of the good (or service) can be transferred
  - Thus private goods tend to be excludable ...
    - They have clearly identified owners
  - And they tend to be rival
    - Others cannot enjoy/use something consumed/used by someone

# Public Goods

- Goods are called *public* if one person's consumption of them does not preclude consumption by others.
  - Public goods are non-excludable and non-rival in consumption



Private



Public

# Joint Production

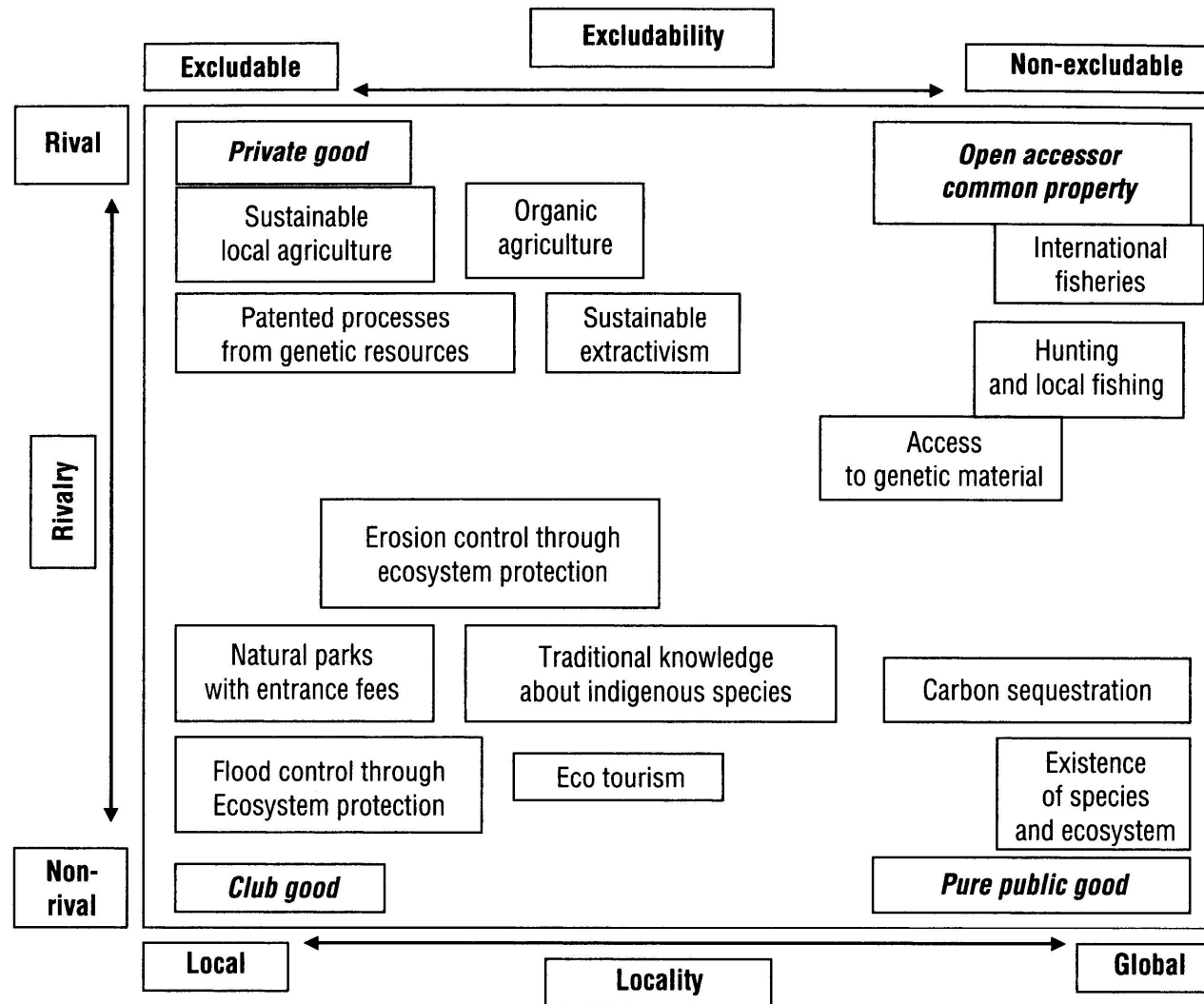
A 'good' or a 'service' that is a combined outcome of the production of another 'good' or the delivery of another 'service' is said to be 'jointly produced'.

Joint products of land management that have formerly been integrated into the rural economy may require special measures to subsist today.

# Functional and social perspectives of public goods



# Broad range in the character of public goods



Source: OECD (2003).

# Farm land: variety of features and functions



# Public goods from agricultural land management: Variety in nature and scale

	<u>Local</u>	<u>Regional</u>
<u>Nature</u>	<p><b><u>Landscape features:</u></b></p> <ul style="list-style-type: none"> <li>- Hedgerows, woodlots</li> <li>- Edge effects: habitats for specific species</li> <li>- Agricultural land use mosaic (fields, orchards)</li> </ul>	<p><b><u>Landscape functions:</u></b></p> <ul style="list-style-type: none"> <li>- Migration corridors</li> <li>- Habitat connectivity</li> </ul>
<u>Scale</u>	<p><b>Soil micro-biodiversity</b> (depends on soil substrate as well as agricultural practice)</p>	<p><b>Water basin management</b> (land cover management has an influence on water retention and water filtering)</p>

# Wide scope in benefits from rural public goods

- Scale of benefits
  - Water basin management: regional population
  - Landscape maintenance: general opportunity value
  - Biodiversity protection: global and individual gain
- Nature of benefits
  - Water quantity & quality: local development
  - Attractive countryside: tourism operators
  - Fauna & flora diversity: 'amateurs' & specialists

# Implications for Land Management

- Agriculture provides Private and Public Goods
- Private Goods: market mechanisms apply
- Public Goods: social demand sets priorities
  - Social issues frame the demand for public goods
    - Quality of Biodiversity
    - Enjoyment of Landscape
  - Institutional mechanisms intervene on their supply
    - Habitats Directive
    - Agri-environmental measures

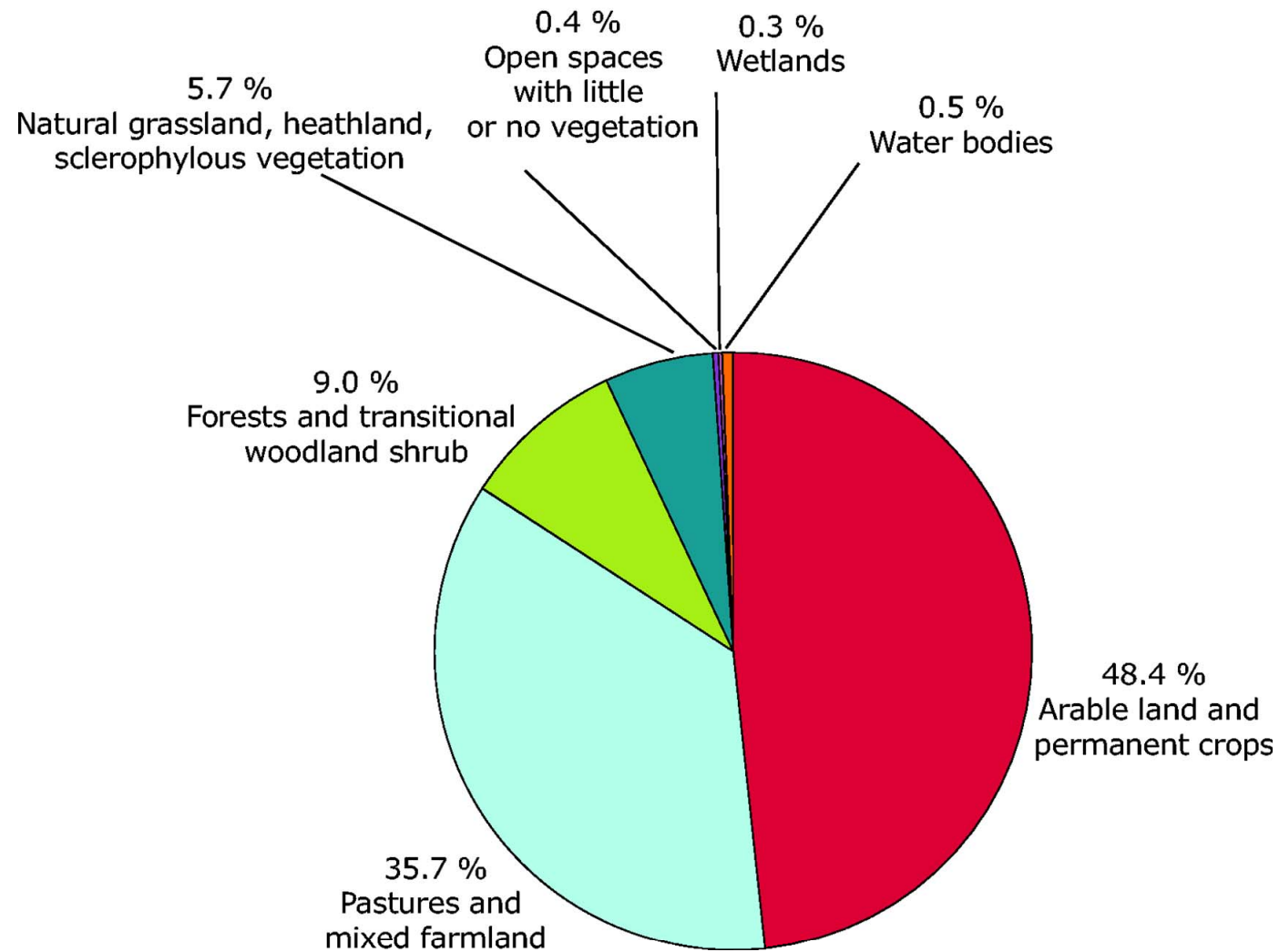
# Private and Public Goods

## Public intervention in land management

# Agriculture in a mosaic of local land uses



# Land cover and agricultural land management



# Public goods in relation to land management

- Location
  - Compatibility of present and potential land use
- Relative importance
  - Scarcity
- Provision
  - Result of good practice or additional effort
- Viability
  - Dependence on land use practice
- Vulnerability
  - Fragility or robustness
- Welfare
  - Societal continuity

# Analysing the delivery of public goods

## 1. What is being delivered?

- Is it bundled? (soil erosion control, soil quality enhancement)
- Is agent substitution possible? (hedgerow management)

## 2. Difference between forms of management

- Positive
  - late hay mowing
- Passive
  - conservation easement

## 3. Ownership

- Long term asset / short term production capacity
- Economic interest of supplier in management options

# Policy rationale related to land management

- Environmental issue of interest
  - Preservation of water resources (quality and quantity)
  - Preservation of biodiversity and habitats
    - Natura 2000 network: 33% is agricultural land
- Spatial dynamics
  - River basins
  - Preservation of high nature value features and areas
- Specific farm-level objectives
  - Crop-specific management requirements
  - Environmentally sound production systems
    - e.g. organic farming

## Integrated policy response to maintain public goods

- Land management, principally in agriculture and forestry sectors: principal threat to public goods such as biodiversity
  - “There are many threats to Europe’s biological diversity, which vary in intensity and relevance across regions, ecosystems and species. These threats include changing land use, land fragmentation and degradation, freshwater shortages, watercourse modifications, invasive alien species, over-harvesting, pollution, stratospheric ozone depletion, and climate change. Many of these threats are inter-connected.” (EEA, 2004: State of Biological Diversity in the European Union, p.13)

# Specific attention for soil and water quality

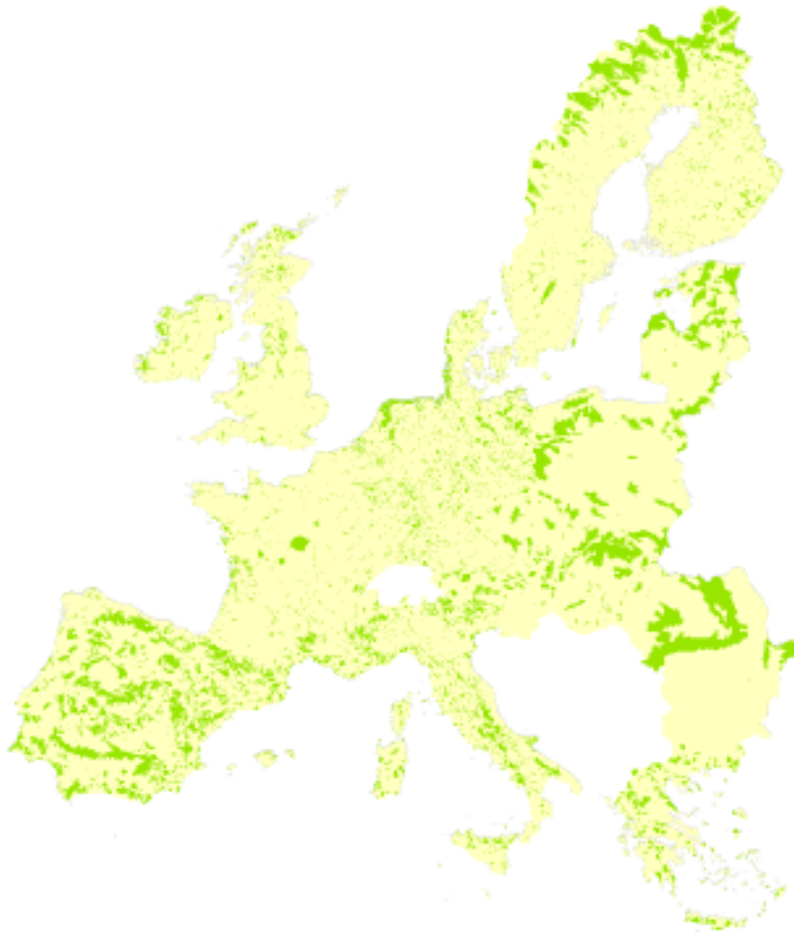
- Support for Organic Agriculture
  - Regulation 2091/91 for arable produce, amended in 1999 to include livestock production
  - European Action Plan for Organic Food and Farming
- River basin management
  - Identifying and managing vulnerable areas (NVZ) in MS
  - Manure storage and spreading to maintain nutrient balance
  - Good Agricultural Practice
    - Restrict cultivation of steep slopes
    - ‘Buffering’ of watercourse and drainage ditches by the presence of non-fertilised grass strips

# EAFRD: Framework for rural public goods

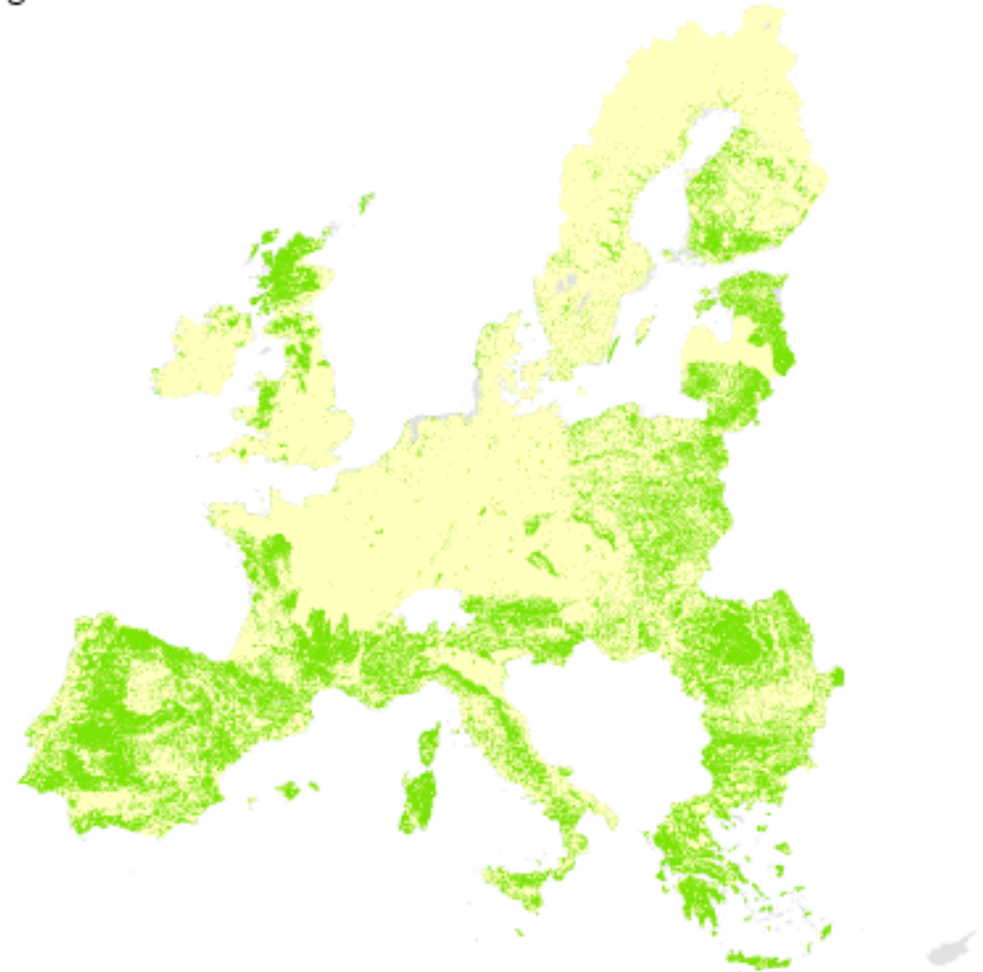
- Less Favoured Areas (LFA) areas
  - 55% of the EU territory: maintaining viable farming
  - 10% of EAFRD payments
- Agri-Environment measures
  - Principally allocated for extensive arable and grassland farming
  - 18% of EAFRD payments
- Forestry (including agro forestry) support
  - Enhancing land-use diversity (ecological & economic)
  - 5% of EAFRD payments

# Natura 2000 and HNV farming areas in the EU

Natura 2000



High nature value farmland



# Extensive land management



Thank you!

