PEGASUS
‘Public Ecosystem Goods And Services from land management: Unlocking the Synergies’

Introduction to the project

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Vienna, Austria
PEGASUS – who we are
The context

Widespread evidence of deterioration in environmental state over time for biodiversity, water and soils, although some improvements in some areas.

More is required to meet the climate objectives - agricultural emissions increased since 2012.

The scale of this challenge is likely to be exacerbated by climate change.
Continued environmental deterioration: biodiversity, water, soil, etc.
Why PEGASUS?

- There is a clear responsibility on agriculture and forestry, like other sectors, to respond to the environmental challenge
  - Agriculture and forestry both have an impact on and are impacted by environmental degradation
  - Small scale changes are not enough - a step change is required

- Current policy frameworks and policy implementation are not delivering a sustainable provision of public goods and ecosystem services from EU agriculture and forestry

- The extent to which management systems achieve their potential depends on the combined action of farmers, foresters and others, influenced by a variety of market, policy, institutional, behavioural and cultural factors at various scales.
PEGASUS – an overview

• **Overarching objective:** to assess and stimulate more effective and sustained provision of public goods and ecosystem services (“environmental and social benefits”) from EU farmland and forests, to improve the social and ecological resilience of farming and forestry systems.

• **Approach:**
  – Enhance the synergies between the delivery of environmental and social alongside economic outcomes
  – Social-Ecological System framework
  – Explore the potential of collective approaches

• **Key elements:**
  – Multidisciplinary
  – Participatory
  – Action research – *34 case studies in ten European countries*
  – Mapping
PEGASUS - Area of investigation

• 19 environmentally and socially beneficial outcomes (ESBOs)
  E.g.:
  – The sustainable management of natural resources (to ensure long term capacity to produce food)
  – Water quality and supply
  – High air quality
  – Climate mitigation & adaptation (e.g. fire & flood protection)
  – Healthy, functioning soils (functionality & protection)
  – Biodiversity
  – Maintaining and enhancing landscape character
  – Health, public enjoyment & educational opportunities
  – Farm animal welfare
  – Rural vitality
This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 633814

PEGASUS – our methodology

Maps, Toolkit and Lessons for policy and practice
To find out more....
Thank you for listening!

For more information, contact us!

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## PEGASUS glossary

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<tr>
<th>PEGASUS terminology</th>
<th>Description</th>
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| Collective action (collective initiatives)   | Marshall (1998): “the action taken by a group (either directly or on its behalf through an organization) in pursuit of members’ perceived shared interests”  
In PEGASUS, used to refer to multi-actor, joined up action.  
These may take different forms, e.g.:  
- Bottom up, community-led initiatives;  
- Coordinated actions between practitioners and e.g. local authorities;  
- Private sector-led, multi-actor initiatives |
| ESBOs                                        | Environmentally and Socially Beneficial Outcomes – a working definition used in PEGASUS to bridge the PG and ESS concepts                     |
| Participatory, action oriented methodology   | Method that relies on the genuine engagement of practitioners and local actors over a substantial period of time                               |
| Mapping                                      | Exploring linkages between management systems and the provision of PG/ESS                                                                  |
| Private actors                               | Private companies that may play a key role in an initiative, rather than “private” beneficiaries                                              |
Continued environmental deterioration: biodiversity, water, soil, etc.

Figure 1: Common birds in Europe — population index

Map 3.2 Percentage of good ecological status or potential of classified rivers and lakes

Figure 2: Grassland butterfly indicator for Europe

Map 1: Percentage decline (per NUTS 3 area) of arable land area due to land take by economic site and infrastructure development between 2000 and 2006

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Water quality has improved but the nutrient load of water bodies remains a problem.

Europe is far from meeting water policy objectives.

Map 3.2 Percentage of good ecological status or potential of classified rivers and lakes

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Air quality – some improvements

- Despite cuts in air emissions, ecosystems still suffer from eutrophication and acidification
Soil

Map 1: Percentage decline (per NUTS 3 area) of arable land area due to land take by economic site and infrastructure development between 2000 and 2006.
Examples of PG & ESS challenges

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<th>Desired outcome</th>
<th>Definition</th>
<th>Public goods</th>
<th>Ecosystem Services</th>
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<tr>
<td>Soil protection</td>
<td>Achieving (or maintaining) minimisation of soil degradation</td>
<td>Reducing soil degradation</td>
<td>Soil formation, composition and fixing processes</td>
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<td>Water Availability</td>
<td>Achieving (or maintaining) a regular supply of water (i.e. avoidance of water scarcity)</td>
<td>Water Availability</td>
<td>Hydrological cycle and water flow maintenance</td>
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<tr>
<td>Flood protection</td>
<td>Achieving (or maintaining) minimisation of impacts of potential floods</td>
<td>Resilience to flooding</td>
<td>Liquid flows: Flood protection</td>
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<tr>
<td>Rural Vitality</td>
<td>Achieving (or maintaining) active and socially resilient rural communities</td>
<td>Vibrant rural communities</td>
<td>Public and private health and wellbeing</td>
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