



# Stimulating the social and environmental benefits of agriculture and forestry: An EU-based comparative analysis



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## ABSTRACT

Stimulating an effective provision of public goods and ecosystem services from Europe's farmland and forests is a critical challenge for policy-makers. In this paper we focus on three aspects of this challenge. Firstly, we explore the different drivers that influence the provision of public goods and ecosystem services by farming and forestry. Secondly, we identify the key motivational, institutional and socio-economic factors that can encourage the provision of these benefits. And thirdly, we examine the role of governance arrangements, of new forms of cooperation and of institutional change in enhancing the provision of public goods and ecosystem services.

The paper is based on a comparative analysis of 34 sectoral, multi-sectoral and territorial real-life case studies spread across 10 EU countries which were carried out as part of the EU-funded PEGASUS project. The analysis pays attention to the functional inter- and intra-relationships between farming and/or forestry, and the quantity and quality of public goods and ecosystem services that these activities provide. This analysis allowed us to identify the key factors that enhance the provision of social and environmental benefits. These include involving a wide range of actors in initiatives and actions, the establishment of appropriate governance arrangements in multi-actor partnerships, the key roles of coordination, cooperation and trust, and the importance of finding common interests and creating synergies and win–win situations. In most of the case studies, we found a complex interaction between different drivers, actors, motivations and interests. In general, we found that the provision of public goods and ecosystem services from farmland and forests is stimulated by policy interventions, planning and regulations that encourage, and support, the engagement of the private sector, and of civil society, in joint actions.

## 1. Introduction

### 1.1. The provision of public goods and ecosystem services from the EU's farmland and forests

The way farmland and forests in the EU are managed today is influenced by a variety of approaches taken to incentivise the provision of public goods and ecosystem services (Maréchal et al., 2016; Costanza et al., 2017). In terms of policies, one of the most important existing policy measures probably are the agri-environmental schemes under Pillar 2 of the Common Agricultural Policy that provide a financial

incentive to farmers to adopt more sustainable practices or to maintain agro-ecosystems that would otherwise be threatened or lost without such payments. Other less known drivers, mechanisms and initiatives aimed at enhancing the provision of environmental and social benefits.<sup>1</sup> include civil society initiatives or private sector projects and engagements. The focus in this paper is on these other initiatives, projects and actions that are less dependent upon regulations and publicly funded policy measures<sup>2</sup>

A wide spectrum of drivers and mechanisms often interact—sometimes reinforcing each other in a positive way, but in other cases working against each other or providing conflicting signals to

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<sup>1</sup> In this paper, we refer to “environmental and social benefits” to improve readability. Environmental and social benefits comprise all agriculture and forestry-related environmental and social public goods and/or ecosystem services which benefit society (Dwyer et al., 2015). Benefits obviously also comprise direct and indirect economic benefits. They are not in the centre of the analysis as they tend to predominate in relevant decision-making and are, as a result, generally not in short supply.

<sup>2</sup> In this paper, we use public policy in a comprehensive sense, i.e. comprising the different levels of policy frameworks, their interpretation and implementation at national and regional/local levels, including both regulatory and incentive measures, and their interplay.

land managers (Dwyer et al., 2015; Mantino et al., 2016). Generally, individual land management decisions are influenced by a complex and dynamic set of interacting drivers including regulations and policies operating at different levels, different forms of governance and institutional settings, private sector actions and market measures and drivers (Knickel et al., 2016, 2017). Real-life cases therefore provide a rich source of experience that can inform our thinking about how such schemes and initiatives can be made even more effective, multiplied and scaled-up. This in turn will inform and contribute to policy development, leading to more targeted measures and a more effective achievement of social and environmental goals in a cost-efficient way. Particular attention is paid to stimulating civil society action and private sector engagement for the achievement of social and environmental goals.

### 1.2. Research questions

In this paper, we explore how initiatives and actions, and mechanisms can become more effective, and how they can be multiplied and scaled-up. The underlying assumption is that a better understanding of what motivates, enables, fosters or inhibits initiatives and actions, and what makes actions effective in enhancing the provision of social and environmental benefits, will enable the design of more locally adapted and more effective policy measures.

We therefore focus on three main questions:

- How are the relationships between farming and forestry and the provision of environmental and social benefits being influenced by different drivers in policy and markets?
- What are the key motivational, institutional and socio-economic factors that can foster the provision of environmental and social benefits?
- What is the role of self-governance, of new forms of cooperation and of institutional change in enhancing the provision of environmental and social benefits?

The aim is to identify the main factors and conditions and the interplay between different factors and conditions which can enable or stimulate the formation and development of collective or other innovative action by farmers and foresters in relation to the provision of environmental and social benefits. The related analysis and discussion includes references to the diversity of actors involved, the important question of common interests, the examination of the functioning of multi-level and multi-actor governance frameworks, the responses to different drivers or initiatives in policy, planning, regulation and markets, the interactions with the private sector, the question of creating synergies and fostering win-win situations,<sup>3</sup> and the importance of coordination, cooperation and trust.

The general approach taken in this paper is to move beyond the fragmented pieces of information and predominantly descriptive and qualitative data contained in the case study reports. This is done by defining five explanatory variables and four outcome variables that are then further analysed in respect of the possible interrelationships between them (see Section 2.2). The evidence gained from the 34 case studies on interrelationships is presented in the form of three overview tables, five scatter plots with extracts from the case study reports providing examples where necessary. The scatter plots provide a visual representation of the characteristics of the 34 cases and support the identification of patterns and interrelations. They are not intended to provide for an analysis in quantitative or statistical terms.

<sup>3</sup> With win-win situations we refer to first, situations where environmental or social benefits are jointly delivered; and second, situations where diverse actors with differing and sometimes conflicting interests benefit from the joint action or initiative.

## 2. Empirical basis and analytical framework

### 2.1. Data basis and methodology

A central component of the EU-funded PEGASUS project is a set of carefully selected sectoral, multi-sectoral and territorial case studies. The case studies were carried out in four steps. The rapid appraisals carried out in Steps 1 and 2 aimed at a broader coverage and were carried out in 34 case studies in 10 EU countries. Steps 3 and 4 focussed on more in-depth analyses of a subset of 12 case studies.

All case study reports and further documents are available for download from the project website: <http://pegasus.ieep.eu/> and specifically <http://pegasus.ieep.eu/case-studies/introduction>.

The selection of case studies has focused on initiatives and mechanisms that aim to enhance the provision of environmental and social benefits. Spatial scales range from very local initiatives to countrywide actions. Annex 1 contains an overview table with all 34 case studies.

In the case studies, a transdisciplinary multi-method approach was used. The methodology builds on the concept of social-ecological systems. This approach was chosen because it is holistic and allows an analysis of multiple interrelations and interactions between drivers, actors, management practices and the outcomes delivered. Teams used an adaptation of the social-ecological system approach developed by Ostrom (2005), Folke (2006), Ostrom and Cox (2010) and McGinnis and Ostrom (2014). Attention was paid to understanding the interrelations between different system components (e.g. actors, governance regimes, resources, drivers and action situations).

Throughout the research, an effective interaction with practitioner partners and stakeholders was considered very important. The analyses should be seen as exploratory. Steps 1–2 of the case study analysis encompassed the identification of the key environmental and social benefits, a first appraisal of their appreciation, the different drivers and motivations as well as the conditions for their enhanced provision. The aim of Steps 3–4 was to deepen the analysis in those case studies and thematic fields that seemed particularly interesting. We aspired at further improving our understanding of the mechanisms (and related strategies and/or policies), (collective) actions and governance arrangements that are used to enhance the provision of public goods and ecosystem services. The 12 in-depth case studies included local associations or partnerships, private sector-driven initiatives, mixed public-private arrangements and more traditional agri-environmental schemes.

Common analytical questions and reporting guidelines were provided to ensure a common structure was followed in the approach of the implementation of the case studies and to facilitate comparative analyses. The guidelines encouraged authors of case study reports to, wherever possible, provide empirical evidence to support their narrative and to substantiate all judgements with explicit references to methods and sources of data. The most important sources of information were local, regional or national data sets, and other relevant secondary sources (e.g. scientific studies, policy documents, media and other reporting, etc.) complemented by interviews with key individuals as well as triangulation with local environmental and socio-economic data. Expert and stakeholder interviews, workshops and/or focus groups were used to ascertain findings. Research partners were given sufficient degrees of freedom for an adjustment of the basic methodological framework to the actual situation in each case study, so that actions are acceptable and appropriate to local conditions. Each case study report includes a dedicated section listing all references and data sources.

### 2.2. Analytical framework

The nine variables included in the analysis comprise five explanatory variables (a.-e.) and four outcome variables (f.-i.):

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