



A STEP CHANGE TOWARDS A MORE SUSTAINABLE APPROACH



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A step change towards a more sustainable approach

PEGASUS is a Horizon 2020 project led by the Institute for European Environmental Policy that is helping to achieve the EU2020 vision of 'smart, sustainable and inclusive growth' regarding the use of agricultural and forestry land

Although society depends on a vast range of public goods and ecosystem services provided by agriculture and forestry, these are often undervalued in traditional markets. Existing environmental issues related to how rural land is managed affect biodiversity, water quality, water availability, soil quality and functionality, and greenhouse gas emissions. Unfortunately, these challenges persist despite efforts over the past three decades to integrate environmental concerns within EU policy.

The Public Ecosystem Goods And Services from land management – Unlocking the Synergies (PEGASUS) project is a pan-European project, funded by the EU's Horizon 2020 research and innovation programme, that is seeking to transform approaches to rural land management. The aim is to elucidate how policy and practice should change to address environmental issues more successfully in the future in order to meet societal demands. The goal is to propose ways of making public goods and ecosystem services concepts operational to stimulate their provision by the farming and forestry sectors.

The project is being coordinated by the Institute for European Environmental Policy (IEEP). The PEGASUS project manager is Anne Maréchal, an experienced policy analyst, who is working alongside colleagues Kaley Hart, the head of IEEP's agriculture and land management programme, and David Baldock, a senior fellow. However, the PEGASUS consortium is international in scope, comprising a total of 14 research partners from 10 EU countries. The project partners represent a diverse mix of academia, research institutes and nature

conservation partnerships, and so together possess a vast range of complementary research strengths, capacities and resources.

ACTIVE STAKEHOLDER ENGAGEMENT

The PEGASUS team is striving to raise awareness about the importance and feasibility of integrating environmental and social factors alongside economic considerations within management decisions to achieve the long-term sustainable use and management of agricultural and forest land. The project develops new EU maps exploring the relationship between agriculture and forestry management systems and the provision of environmental and social benefits. The researchers are also developing a toolkit helping to farmers, foresters and other stakeholders wishing to develop collective initiatives to enhance the provision of environmental and social benefits by agriculture and forestry. PEGASUS also draws policy lessons and recommendations aiming to bring about behavioural shifts that support and guide more sustainable land related decisions in agriculture and forestry.

To achieve this, the PEGASUS researchers are using the Social-Ecological Systems Framework as an analytical framework to explore systemic interdependencies between natural, social and economic processes. They are also engaging in participatory action research with public and private actors and stakeholders in different contexts through a suite of 30-35 case studies which have been carried out in collaboration with a variety of initiatives across Austria, the Czech Republic, Estonia, France,

Germany, Italy, Netherlands, Portugal, Slovenia and the UK. As well as covering a number of different territories, sectors and management systems, these case studies involve active stakeholder engagement and participation. 'We aim to influence a wide range of actors from the agricultural and forestry sectors, across the EU,' Maréchal explains. 'Through undertaking the research and the extensive use of local case studies, we have engaged with many rural stakeholders in different locations across 10 EU countries, including, for example: government officials at national, regional, local level; environmental NGOs; farming and rural community representative; farmers; foresters; other land managers; and private companies such as water companies and multinational food companies.'

INVESTIGATING SUCCESS FACTORS

The PEGASUS team have been working with stakeholders over an extensive period of time, ensuring effective communication and meaningful dialogue. The researchers found that the reasons that multiple actors come together to work collectively towards a common purpose is motivated by numerous factors, such as economic opportunities or environmental problems, but that good levels of trust, communication and cooperation between actors are vital. 'These are important "success factors" for enabling a collective action to emerge and for it to be sustained and successful,' Hart emphasises. 'Having strong local leaders is another critical factor.'

Maréchal further comments on the success of some of the initiatives examined in the case studies: 'Some initiatives are interesting because they are based on

a greater engagement between actors along a supply chain than is normally the case,' she explains. 'Our findings and recommendations reflect on the value of enhanced engagement between land managers and other types of stakeholders, either across a territory or along a supply chain.'

POLICY IMPLICATIONS

When it comes to influencing policy, Baldock states: 'We hope the PEGASUS recommendations will advance the debate and inform policymakers' views about the future of land use policies. We particularly target policymakers involved in the design of the future common agricultural policy (CAP), as well as other policies such as national forestry policies and rural development policies.'

that economic, environmental and social outcomes should not be considered in isolation and, instead, should be delivered jointly as part of a genuinely sustainable approach to land management.

For policy, this would mean providing more flexibility to the mix of policy tools available and increasingly seeing a greater mix of private funding working alongside public payments. Importantly, PEGASUS has shown the key role of determining needs and priorities at the local level and then having appropriate governance and institutional settings in place to suit the local situation. Investing in knowledge exchange, advice and facilitation is critical, as policies need to work with the motivations and interests of people best placed to take action.

We want to raise awareness about the possibility and the importance of giving more weight to environmental and social considerations in land management decisions, and the necessity of doing so for the long-term resilience of agriculture and forest systems and businesses

The researchers are especially interested in changing the narrative surrounding the perceived negative aspects of agricultural and forestry businesses on the environment. 'Many people perceive the economic aspects of agricultural and forestry businesses as inherently conflicting with environmental and social considerations. And often, land management decisions reflect this view,' Maréchal explains. 'With PEGASUS, we want to raise awareness about the possibility and the importance of giving more weight to environmental as well as social considerations in land management decisions and more generally in policy and in business practices. We also want to emphasise the necessity of doing so for the long-term resilience and sustainability of agriculture and forest systems.' It is the team's belief

INTENDED IMPACT

Through the development of new maps exploring the relationship of land management and the delivery of environmental and social benefits in Europe, of a toolkit for facilitating the development of collective initiatives in rural areas and, finally, of a series of policy recommendations, PEGASUS looks set to give policy makers and practitioners ideas about more holistic and possibly more effective approaches to land management. In so doing, the researchers hope to contribute actively to guiding an increase in the delivery of environmental and social outcomes from the EU agriculture and forestry sectors, thereby ensuring a more sustainable future.

Project Insights

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PARTNERS

University of Gloucestershire (UK) • DLO Foundation (Netherlands) • Institute for Rural Development Research (Germany) • Public Research Agency on Agriculture and Agricultural Economics (Italy) • Institute of Agricultural Economics and Information (Czech Republic) • Institute for Environment and Sustainability (Italy) • National Institute for Agricultural Research (France) • Federal Institute for Less-Favoured and Mountainous Areas (Austria) • University of Évora (Portugal) • University of Ljubljana (Slovenia) • Centre for Ecological Engineering (Estonia) • BirdLife Europe (Belgium) • Euromontana (Belgium)

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PROJECT MANAGER BIO

Anne Maréchal works at the Institute for European Environmental Policy (IEEP) where she manages the Horizon 2020 PEGASUS project. She is interested in the role policies can play in steering more sustainable management of agricultural and forest land and has been particularly involved in developing the policy lessons and recommendations emerging from the project.



Impact Objectives

- Develop innovative approaches and new ways of thinking about the way farmland and forests are managed in Europe
- Stimulate a long-lasting improvement in the provision of public goods and ecosystem services from agricultural and forest land

Delivering more environmental and social benefits from farming and forestry

Anne Maréchal, Kaley Hart and David Baldock and the PEGASUS team are working to develop ideas for a more holistic approach to managing farmland and forests, with a view to maximising environmental and social benefits across the European Union



Clockwise from top left: Anne Maréchal, Kaley Hart and David Baldock

development of the case studies and in reviewing the findings of the work, we believe our evidence for developing concrete tools and recommendations, for policy and for practice, is based firmly in the realities and cultural differences experienced in operating in different parts of the European Union (EU).

What do the terms 'ecosystem services' and 'public goods' mean?

AM: The concept of ecosystem services comes from ecological science. The concept highlights the interdependency and feedback loops between countless ecosystem processes, elements and outputs which result in 'services' being delivered to society. In relation to agriculture and forestry, the ecosystem services concept encompasses both the production of food, feed, fibre and timber, as well as environmental and cultural services such as clean water, pollination and attractive rural landscapes.

The public goods concept was developed from economic theory to refer to goods (or services) that are not provided to a sufficient extent via the market, i.e. the normal interplay of supply and demand, such as biodiversity or cultural landscapes. They are defined as having two main characteristics: 'not rival' (if the good is consumed by one person, it does not reduce the benefit available to others) and 'not excludable' (if the good is available to one person, others cannot be excluded from enjoying its benefits).

Why are these concepts integral to your work?

DB: In PEGASUS, we focus on those goods and services whose supply is imperfectly rewarded by markets. We have used the term 'environmental and social benefits' as a means to bridge the two concepts to refer to those environmental and social outcomes which society would like to see being delivered through – in our case – appropriate agricultural and forestry land management. These environmental and social benefits may have more or less clear public goods and/or ecosystem service characteristics, but there is public demand for them.

How do you intend to transfer the knowledge gained through PEGASUS to the relevant stakeholders?

KH: In two ways. Firstly, we are developing a toolkit for practitioners which is intended to make the lessons we have learned from our case studies accessible to local leaders or facilitators wishing to start or further develop collective initiatives to enhance the provision of environmental and/or social benefits. It provides tips and guidance based on the challenges and obstacles commonly faced by people initiating a collective action and what our findings tell us in terms of how to overcome them. Secondly, our lessons for policy and practice will include recommendations about how to make policies more effective, the extent to which maps can be used as a tool to inform policies, and ways to encourage greater engagement on the ground. This, in turn, should facilitate the emergence and development of local initiatives by rural stakeholders.

What are the key goals of the Public Ecosystem Goods And Services from land management – Unlocking the Synergies (PEGASUS) project?

AM: The main objectives are to find new ways and approaches to thinking about how agriculture and forestry can deliver a sustained provision of environmental and social benefits in the long term – alongside the production of food, timber, fuel, etc. – and subsequently contribute these insights to the policy process as well as for practice.

Can you tell us about the approach of PEGASUS?

KH: The PEGASUS project has taken a participatory approach to research. We believe this enabled the team to get nearer to the core of what makes initiatives aimed at enhancing environmental and social benefits successful and what some of the barriers to action are. By involving stakeholders throughout the process, both in the co-