

This is a peer-reviewed, post-print (final draft post-refereeing) version of the following published document, This is the peer reviewed version of the following article: Brouwer, F., Mantino, F., Polman, N., Short, C., Sterly, S. and Rac, I. (2018), Private Sector Actions to Valorise Public Benefits from Agriculture and Forestry. EuroChoices, 17: 16-22. doi:10.1111/1746-692X.12186, which has been published in final form at https://onlinelibrary.wiley.com/doi/10.1111/1746-692X.12186. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Self-Archiving. and is licensed under All Rights Reserved license:

Brouwer, Floor, Mantino, Francesco, Polman, Nico, Short, Christopher J ORCID logoORCID: https://orcid.org/0000-0003-0429-1143, Sterly, Simone and Rac, Ilona (2018) Private Sector Actions to Valorise Public Benefits from Agriculture and Forestry. EuroChoices, 17 (3). pp. 16-22. doi:10.1111/1746-692X.12186

Official URL: https://onlinelibrary.wiley.com/doi/epdf/10.1111/1746-692X.12186

DOI: http://dx.doi.org/10.1111/1746-692X.12186 EPrint URI: https://eprints.glos.ac.uk/id/eprint/6484

Disclaimer

The University of Gloucestershire has obtained warranties from all depositors as to their title in the material deposited and as to their right to deposit such material.

The University of Gloucestershire makes no representation or warranties of commercial utility, title, or fitness for a particular purpose or any other warranty, express or implied in respect of any material deposited.

The University of Gloucestershire makes no representation that the use of the materials will not infringe any patent, copyright, trademark or other property or proprietary rights.

The University of Gloucestershire accepts no liability for any infringement of intellectual property rights in any material deposited but will remove such material from public view pending investigation in the event of an allegation of any such infringement.

PLEASE SCROLL DOWN FOR TEXT.

Private Sector Actions to Valorise Public Benefits from Agriculture and Forestry

Actions du secteur privé pour valoriser les avantages d'intérêt public de l'agriculture et des forêts

Maßnahmen des Privatsektors zur Aufwertung gesellschaftlicher Leistungen der Land- und Forstwirtschaft

Floor Brouwer, Francesco Mantino, Nico Polman, Chris Short, Simone Sterly and Ilona Rac

This article highlights and compares the different approaches towards enhancement of both private- and policy-induced valorisation of public benefits of agriculture and forestry. We include information from 11 case studies conducted across the EU, as part of the PEGASUS projectⁱ which reveal how private sector involvement can improve the provision of public benefits (See Table 1 for the list of case studies with private-sector involvement). The cases identify how and when (combined) public and private policy mechanisms and tools for policy, business and practice can be applied. The range of motivations for private sector involvement and actions is examined. We explore key questions on how best to improve the social and ecological resilience of farming and forestry systems in the EU by enhancing the sustained provision of public benefits via valorisation of such goods and services.

Table 1: PEGASUS case studies with private-sector involvement

Title of the case study	Type of action and key mechanisms
Organic farming label in the Murau mountain region (AT, Austria)	Retail chain working with mountain farmers and tourist organisations
	introduced a joint certification scheme and began marketing mountain
	organic milk at a price premium. The private certification scheme is
	aimed to market the presence of diverse species and habitats, as well as
	to maintain cultural heritage. Milk processing takes place close to the
	farms to further support the rural economy.

Traditional orchard meadows in Hesse/Baden- Wurttemberg (DE, Germany)	Engaged citizens cooperate with private sector (processing fruit for juice market) and environmental NGO to brand regional organic produce and introduce alternative supply chains. Price premium together with training on pruning ensures the maintenance of traditional orchard and thus landscape and cultural heritage.
Grass-fed beef (EE, Estonia)	Whole supply chain approach for grass-fed organic beef and environmental benefits related to this, e.g. management of grasslands, including biodiversity-rich semi-natural grasslands. It is led by cattle breeders and provides a market premium to participating farmers. A quality scheme food label has also been introduced.
Volvic water company, land management agreements and agri- forestry (FR, France)	Private company bottling mineral water developed a strategy with local authorities to introduce technical innovations and financial support to land users, to ensure high and valuable mineral content levels in the watershed and prevent water pollution.
Agriculture and forestry in Pays de Langres, France (FR, France)	Private-actor led initiative developed quality labels that promote value-added sheep cheese within the region and increased product quality (PDO) including preservation of landscape character, and also protecting biodiversity and wildlife.
Processed tomato supply chain in northern Italy (IT, Italy)	Local collective action involving tomato producers and private processing companies, to improve agricultural practices (reducing the use of fertilisers and pesticides, fostering crop rotation and water saving methods) and introduce new technologies to reduce costs, improve competitiveness and increase sustainability of production.
Niche and organic Bergamot products in Calabria (IT, Italy)	Primary producers and processing companies enhancing integration of the supply chain and launching collective promotion activities to increase consumption of bergamot products.
Outdoor grazing systems in dairy and cheese production (NL, The Netherlands)	Cheese-making cooperative introduces premium brand of cheese produced from outdoor grazing systems. Includes mechanism for checking compliance with grazing requirements. Outdoor grazing adds to the landscape character and cultural heritage, animal welfare and good condition of soils.
Skylark foundation: association for sustainable arable farming (NL, The Netherlands)	Arable farmers and supply chain companies introduce knowledge exchange programmes to prepare and implement individual farm sustainability plans. Plans include training and learning activities, and focus on improving soil quality, to reduce leakage of nutrients to groundwater and surface water.
Mountain wood and traditional breeds (SI, Slovenia)	Local collective actions to connect producers and consumers for mountain wood and valorise locally sourced meat from traditional livestock breeds, contributing to the preservation of habitats, biodiversity (including animal genetic resources) and landscape resulting from traditional sustainable practices, as well as to rural vitality.
WILD river catchment project (UK, United Kingdom)	Introduction of multi-partner initiative involving farmers, government agencies and local communities gave private sector the confidence to test different approaches to incentivise improving water quality.

Valorisation of public benefits through private sector actions

Although not straightforward to quantify, there is evidence to demonstrate that public benefits from agriculture and forestry are valued by society (see, for example, WBCSD, 2012) and as a

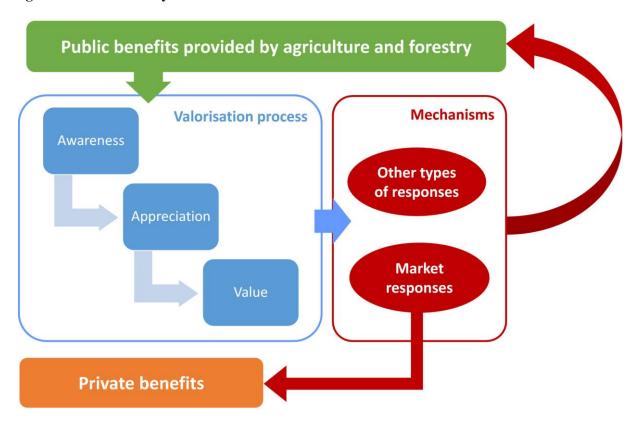
result that there is societal demand for these benefits (Cooper *et al.*, 2009). The PEGASUS case studies have revealed that there is a range of responses to the provision of public benefits from European agriculture and forestry. Some of these reveal the level of societal demand, while others indicate a willingness amongst agriculture and forestry professionals to develop the sector's connectedness to the provision of public benefits. Finally there is evidence from the case studies of the range of roles that the private sector can play in both valorising and providing public benefits. Consequently, we suggest that societal demand for public benefits from agriculture and forestry can be represented as a process containing three steps within a value stream:

- Awareness regarding the existence of public benefits. It refers to the extent to which both the public as a whole and local stakeholders (including farmers) are aware of the presence of the public benefits delivered on agricultural and forest land.
- Appreciation denotes that individuals in society perceive or recognise that they benefit from
 the existence of certain public benefits, stimulating engagement. Awareness is closely
 linked with active appreciation of and interest in the public benefits.
- *Valorisation* implies that benefits to society are created directly or indirectly, either in monetary terms when it is priced on a market, or intangible e.g. rural vitality (cultural and socio-economic richness of local communities enabled by various factors of local development). If public benefits are attributed a value which is transferred to producers, it should in principle become an incentive to maintain or improve their delivery. In many cases, however, public benefits do not have a monetary value and existing markets cannot provide optimal allocation to the providers. Policy, institutional or other collective actions may then be initiated.

The valorisation process of public benefits is summarised in Figure 1.

We found that in many cases valorisation emerges from situations where the provision of public benefits is noticeably decreasing or under threat. For example, outdoor grazing in the Netherlands and related landscape values appear to show a downward trend.

Figure 1: Market responses in the valorisation process for public benefits delivered to society by agriculture and forestry



Source: Authors based on Maréchal et al. (2016).

Private sector actions for public benefits

The focus of this article is on those private sector actions that lead to the valorisation of public benefits arising from agriculture and forestry resulting in increased profit or market advantage. They include price premium approaches based on certification (organic, integrated or other), and labelling or branding schemes, very often based on some form of quality, social or environmental certification (Mantino *et al.*, 2016). Such public/private initiatives could also be developed within and implemented by a supply chain organisation. Commercial actors, however, also provide other approaches such as advice and information provision (e.g. to better adapt farming practices and improve their contribution to the provision of public benefits), or awareness-raising and appreciation-driven local action that do not classify as market approaches. Often, market approaches are combined with these other actions, suggesting a combined approach is attractive to private sector actors.

Certification and labelling are the most prominent private sector actions in the case study initiatives, and they are often a prerequisite in the integration of value and supply chains.

Participating producers benefit through price premiums or improved marketing mechanisms that ensure larger turnover or guarantee prices. The retail sector benefits through a regular supply of products with a guaranteed quality and the consumer is reassured on issues of traceability and production standards.

Organic certification and labelling ensure the provision of public benefits provided by organic farming, e.g. pollination, soil functionality or landscape character. Other certification schemes and standards are applied as a condition that the producer becomes part of supply chain initiatives (e.g. the tomato supply chain in Italy) and relate mainly to ensuring environmental production standards. Certification of origin, such as PDO (Protected Designation of Origin) and PGI (Protected Geographical Indication) were also used in several value chains (e.g. in the bergamot case in Italy; however, effects have been ambiguous – please refer to the Pegasus case study for further information).

Private standards have been established, e.g. the outdoor grazing initiative in the Netherlands, where dairy farmers receive a premium payment for processed milk if they graze their herd for at least 120 days a year for at least 6 hours a day. The agri-food chain is motivated to communicate the importance and value of open landscapes with grazing land and dairy cows through branding, and related to the scheme are the provision of the public benefits of animal welfare and landscape character. In the case of Austrian haymilk, a private standard links milk production to both organic and mountain farming. Quality products are connected with maintaining the presence of diverse species and habitats and a high level of Alpine landscapes. The scheme combines improving the income of mountain farmers and of other parties along the value chain with maintaining typical landscapes and high levels of biodiversity.

As already indicated, various certification and labelling approaches often go hand in hand with approaches aimed at **integrating** parts of or even entire **value chains**. Cooperation along the value chain to improve the valorisation and provision of public benefits has been applied as a mechanism in a number of studies. Partial integration was seen for example in the Dutch case, where processors and producers coordinate action to acquire a higher premium for their product, supported by suitable branding and marketing. In the Austrian case, milk from the participating organic mountain farms is processed by a local dairy and distributed by one of the largest Austrian retail chains, which also holds the intellectual property right of the brand.

In the Italian cases, provision of public benefits improved significantly as a result of better organisation of the agri-food supply chain. Under the pressing need to tackle the challenges of

environmental, economic and social sustainability, the processed tomato supply chain found a collective response marked by the introduction and widespread application of integrated production. This includes rules and technical advice regarding crop rotation, fertilisation, irrigation and use of inputs. The cooperative approach of local stakeholders was crucial: the Producers Organisations and Inter-branch Organisation (IO) promoted and implemented environmentally friendly practices along the entire supply chain. IO is a formal association between Producers Organisations and the agri-food industry, managing vertical relationships and setting rules and standards for monitoring.

In Calabria, a consortium of a few organic bergamot producers with innovative orientations, has over the past 20 years tried to strengthen integration in the value chain. Consortia of producers are established to improve incomes, especially of small farmers and increase investments in new plantations. More sustainable farming practices are introduced, which also add to the appreciation of the product on international markets. In this extremely fragile ecological setting, bergamot cultivation is part of the image and identity of the area and represents a way to maintain the cultural landscape, biodiversity and rural vitality; it is also strongly appreciated by tourists. Since bergamot is a water-demanding crop, the adoption of water-saving irrigation methods improves the available amount of water in the region.

In Estonia, an association of beef cattle breeders has also adopted a whole chain approach (production-processing-marketing) to promote grass-fed beef and the environmental benefits related to this, e.g. management of biodiversity-rich semi-natural grasslands. A private limited company was founded whose main function became the distribution of grass-fed beef meat under an officially registered trademark. Under this scheme, farms must be certified organic and cattle must be grazed on grassland throughout the grazing period. Products under the trademark are sold in different retail channels and provided to restaurants/cafes and some schools. Very high attention is paid to increasing consumer awareness of benefits related to this type of production, since production and consumption of beef (and in particular grass-fed beef cattle breeds) has not been traditionally common in Estonia and is still relatively modest.

Trust and transparency are important features of the agri-food supply chain. This was especially obvious in the Slovenian case, where two potential product lines were found whose adequate market valorisation, supported by cooperation among value chain actors, could contribute to the goal. The first focuses on improved valorisation of meat derived from grazing animals of traditional breeds. Despite favourable market conditions (adequate demand and an already high price), it never came to fruition, *inter alia* due to low trust and willingness to cooperate among

the value chain actors. The second product line is attempting to valorise wood derived from sustainably managed mountain forests, harvested according to traditional practices. It is better accepted, since this initiative includes external actors with clearly defined roles.

Training and advice are an essential part of private sector actions to secure the long-term delivery of public goods. Farm visits are key in the Skylark case to create awareness and appreciation of sustainable farming practices. Similarly, the outdoor grazing case includes training for farmers to maintain and improve grazing.

In the Volvic case study in France, a bottled water company offers advice to farmers and land managers as part of a long-term strategy to secure the high-quality groundwater source. Thames Water, the regional private sector provider of drinking water in the UK, is also aware of the need for changes in farming practices in order to reduce the amount of chemicals in the headwaters of the River Thames. They support a number of initiatives that have improved farm practices by subsidising the use of less polluting substances to control pests, advice on land management to reduce surface run-off or offering incentives to farmers to provide consistently high water quality standards. In both cases, the private companies are also aware of the need to maintain rural vitality, and they do this by raising awareness of the risks of deterioration of water resources and the related infrastructure, and by offering financial support.

Advice and training provided by Producers Organisations and the regional advice system also support farmers in tomato production in Italy to improve their capacity for integrated production. Strict mandatory rules are laid down for agronomic procedures and technical means and serve as a model in all environmental matters relevant for tomato cultivations (crop rotation, plant growth regulators, active substances and fertilisers, fertilisation practices, irrigation). Training and advice is also offered in Estonia to prepare grass-fed beef in order to maintain a consistent supply of high-quality products. Cooperation with chefs ensures product quality, including organising meetings and exchange of information among butchers and food bloggers from different countries around the world.

A multi-actor and multi-level approach is proposed – the future CAP

The involvement of private actors can have a rapid and wide-ranging impact on the provision of public benefits. But this does not imply that policies have no role. PEGASUS case studies suggest that, if well targeted, policy actions can be complementary to the role played by the market. They can be supportive in some phases of the initiatives in different ways: incentivising

environmentally sustainable practices, and promoting investment in human and physical capital, and also social and organisational capital. This support delivered via the CAP is much more effective if other policies (environmental, social, regional development) act as complementary policies in the same territories.

The recent Communication on the CAP post-2020 underlines some arguments which are in line with the main findings of this article. First, the importance of a food chain approach aiming to improve the position of farmers in the value chain, in terms of distribution of the bargaining power and consequently of the value-added within the food chain. Second, the need to encourage 'the promotion of cooperative/collective approaches, involving farmers and stakeholders in a result-oriented delivery of environmental and climate public goods' (EC, 2017, p.20).

Governance solutions achieving a more favourable distribution of value-added for farmers can have positive implications for the provision of public benefits. Interactions between public and private-sector initiatives should be viewed as being mutually beneficial. Positive outcomes appear to be connected with a multi-actor approach where private and public actors are able to contribute synergistically. This is visible in local socio-economic systems and where certain pre-requisites are already present in the territory (for example trust among parties, reputation in a value chain, networks, presence of innovators, services and infrastructures for business activities). A similar phenomenon can be found in well-organised market supply chains where producers, processors and sometimes retailers are involved in shared governance (e.g. interbranch organisations, vertical integration modes, horizontal cooperation between producers, etc.).

Relevant actors are not only operators in the processing and marketing segments of the food chain, but also knowledge institutions, NGOs, and non-agricultural firms closely connected to the food value chain (e.g. rural tourism). The outcomes from PEGASUS show that cooperation between land managers and other commercial actors, civil society and public actors is beneficial to the provision of public benefits. This implies that the cooperative/collaborative approach should be open to the participation of a larger set of actors and that the CAP should promote it through adequate incentives and rules. This makes the process of designing a new CAP beyond 2020 a task that requires a multi-actor and multi-level approach. In this regard, the linkages

between the CAP and other policies are relevant as well. For more on the policy implications of PEGASUS, we refer the reader to the *Point de Vue* in this issue.

In conclusion, there seems to be a shift at European level in terms of public opinion and changing societal norms, which are important drivers in the discussions on the CAP beyond 2020. Thus, given the fact that we are on the brink of policy reform, it is an opportune time for policymakers to explore new approaches that can help to create space for strengthening this process.

PEGASUS (Public Ecosystem Goods and Services from land management – Unlocking the Synergies) aims to develop innovative approaches and new ways of thinking about the way farmland and forests are managed in order to stimulate a long-lasting improvement in the provision of public goods and ecosystem services from agricultural and forest land in the EU. See also website with project reports: http://pegasus.ieep.eu/

Acknowledgement

The work described in this paper has been conducted within the project PEGASUS. This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 633814. This article and the content included in it do not necessarily represent the opinion of the European Union, and the European Union is not responsible for any use that might be made of its content.

Further Reading

- Cooper, T., Hart, K. and Baldock, D. (2009). *The Provision of Public Goods Through Agriculture in the European Union* (Institute for European Environmental Policy: London).
- EC (2017). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: The Future of Food and Farming (European Commission: Brussels).
- Groth, M. (2011). Cost effective biodiversity conservation: Procurement auctions and payment-by-results. *EuroChoices*, **10**(2):, 32--37.
- Mantino, F., Vanni, F. and Forcina, B. (2016). Socio-political, Economic and Institutional Drivers. A Cross-Country Comparative Analysis. Synthesis Report.

- PEGASUS: Public Ecosystem Goods and Services from land management Unlocking the Synergies Deliverable 3.3. (London: Institute for European Environmental Policy).
- Maréchal, A., Baldock, D., Hart, K., Dwyer, J., Short, C., Pérez-Soba, M., Paracchini, M.L., Barredo, J., Brouwer, F. and Polman, N. (2016). *Synthesis Report The PEGASUS Conceptual Framework*. PEGASUS: Public Ecosystem Goods and Services from land management Unlocking the Synergies Deliverable 1.2. (London: Institute for European Environmental Policy).
- WBCSD (2012). Biodiversity and ecosystem services scaling up business solutions Company case studies that help achieve global biodiversity targets. An online resource, available at: http://wbcsdpublications.org/project/biodiversity-and-ecosystem-services-scaling-up-business-solutions-company-case-studies-that-help-achieve-global-biodiversity-targets/ (Accessed 12 January 2018).

Floor Brouwer, Wageningen Economic Research, The Netherlands. *Email: floor.brouwer@wur.nl*Francesco Mantino, Council for Agricultural Research and Agricultural Economy Analysis, Italy. *Email: francesco.mantino@crea.gov.it*

Nico Polman, Wageningen Economic Research, The Netherlands. *Email: nico.polman@wur.nl*Chris Short, Countryside and Community Research Institute, University of Gloucestershire, UK. *Email: cshort@glos.ac.uk*

Simone Sterly, Institute for Rural Development Research, Germany. *Email: sterly@ifls.de*Ilona Rac, University of Ljubljana, Slovenia. *Email: ilona.rac@bf.uni-lj.si*

Summary

There is wide consensus that the agricultural and forestry sectors play an important role in the provision of public benefits. Major changes are envisaged by some in the future developments of the Common Agricultural Policy (CAP) regarding the provision of these benefits. However, while policy can be a powerful driver for change, it is often not sufficient to trigger action by itself; new approaches are required to increase the engagement and commitment of actors in this field. The project PEGASUS aimed to understand new ways of thinking about the way farmland and forests are managed to stimulate long-lasting improvement in the provision of public benefits in the EU. Since the private sector is already actively involved in securing the provision of public benefits e.g. through premium price mechanisms,

the article seeks to outline private sector actions for the more effective provision of public benefits arising from EU farmland and forests. The article suggests a number of approaches to be considered when developing policy that seeks to encourage the involvement of the private sector.

Il est largement reconnu que les secteurs agricole et forestier jouent un rôle important dans la fourniture d'avantages d'intérêt public. Certains envisagent des changements importants pour l'avenir de la politique agricole commune (PAC) concernant la fourniture de ces avantages. Cependant, si la politique peut être un puissant moteur, elle n'est souvent pas suffisante pour déclencher par elle-même un changement concret; de nouvelles approches sont nécessaires pour accroître la participation et l'engagement des acteurs dans ce domaine. Le projet PEGASUS visait à comprendre les nouvelles façons de penser sur la manière de gérer les terres agricoles et les forêts pour stimuler une amélioration durable de la fourniture d'avantages d'intérêt public dans l'Union européenne. Compte tenu de la participation déjà active du secteur privé à la fourniture de ces avantages, par exemple grâce à des mécanismes de prime de prix, l'article cherche à définir les actions du secteur privé pour une fourniture plus efficace des avantages d'intérêt public découlant des terres agricoles et des forêts de l'Union européenne. L'article suggère un certain nombre d'approches à prendre en compte lors de l'élaboration d'une politique visant à encourager la participation du secteur privé.

Es besteht eine weitgehende Übereinstimmung darüber, dass die Land- und Forstwirtschaft eine wichtige Rolle in der Bereitstellung gesellschaftlicher Leistungen spielt. Einige der zukünftigen Entwicklungen der Gemeinsamen Agrarpolitik (GAP) sehen wesentliche Änderungen in Bezug auf die Bereitstellung dieser Leistungen vor. Obwohl die Politik ein starker Treiber für Veränderungen sein kann, reicht sie häufig nicht aus, um allein Aktionen anzustoßen; es werden neue Ansätze benötigt, um das Engagement von Akteuren in diesem Bereich zu fördern. Das PEGASUS-Projekt hatte das Ziel, neue Denkansätze über die Art und Weise wie Acker- und Forstflächen bewirtschaftet werden, zu verstehen, um so langfristige Verbesserungen in der Bereitstellung von gesellschaftlichen Leistungen in der EU zu fördern. Da der Privatsektor bereits in die Sicherung der Bereitstellung gesellschaftlicher Leistungen involviert ist, z. B. durch bestimmte Preismechanismen, werden in dem Artikel Maßnahmen des Privatsektors für die effektivere Bereitstellung gesellschaftlicher Leistungen aus Acker- und Forstflächen der EU aufgezeigt. Es wird eine Reihe von Ansätzen vorgeschlagen, die bei der Entwicklung von Politiken zur Förderung der Einbeziehung des Privatsektors berücksichtigt werden sollten.

Pullquote

"The involvement of private actors can have a rapid and wide-ranging impact on the provision of public benefits."

"La participation d'acteurs privés peut avoir un impact rapide et étendu sur la fourniture d'avantages d'intérêt public".

"Die Einbeziehung privater Akteure kann sich schnell und weitreichend auf die Bereitstellung öffentlicher Leistungen auswirken."

Photos



WILD: An integrated approach for delivering multiple objectives at the local level (copyright Chris Short)



Private payments schemes for outdoor grazing can promote multiple public benefits (copyright CONO Kaasmakers)



Aligning private and public interests to improve the management of water and soil resources (copyright Francesco Mantino)