European Commission

AGRIRESEARCH FACTSHEET

PUBLIC GOODS FROM AGRICULTURE AND FORESTRY

Why do R&I on public goods from agriculture and forestry matter?

Agriculture and forestry are unique sectors delivering, alongside commercial products, societal public goods such as biodiversity, water regulation, landscape, erosion control, resilience to floods and climate change mitigation. The increasing value assigned by society to the environment, culture and heritage of rural areas can be a driver of their sustainable growth. This has materialised to a certain extent for public goods related to culture and heritage, e.g. tourism based on traditional landscapes or traditional food. However, the situation is less favourable for most environmental public goods. Farmers and foresters are managing most of the EU land and, depending on practices used, can indeed be sources of a wealth of environmental public goods to the benefit of rural areas and society. Research activities can help improve the understanding of the complex interactions between primary production systems and ecosystems services and should support the provision of these public goods and services, through the delivery of management solutions, decision-support and monitoring tools and the assessment of their market and non-market value.

Public Goods under Horizon 2020 Societal Challenge 2 (SC2)

25
Projects or expected grants

141 M€
EU contribution 2014-2020

466
Participations in selected projects

Key themes

Public Goods – Drinking Water – Biodiversity – Carbon sequestration – Land management – Agriculture – Forestry – Governance & Business models – Rural-urban

European Innovation Partnership (EIP-AGRI)

The EIP-AGRI has been designed as a key initiative for creating and sharing knowledge. Alongside the "multi-actor" projects under Horizon 2020, Operational Groups (OGs) enable to respond to local initiatives and site-specific conditions ensuring a bottom-up approach to innovation in agriculture.

eip-agri
AGRICULTURE & INNOVATION

Public goods under EIP-AGRI activities

Focus group examples: Sustainable High Nature Value (HNV) farming; Ecological Focus Areas; Permanent Grassland; Carbon storage in arable farming; Grazing for Carbon; Sustainable mobilisation of forest biomass; Forest practices & Climate Change	bit.ly/2tPxclj
Workshop examples: Tools for environmental farm performance; New value chains from multifunctional forests; Creating diverse forests with multiple benefits	bit.ly/2GJ4I2u
Operational group examples: *Biosphere Elbe Network*; *Connecting isolated terrestrial habitats*; *Enhance the autonomy of the farmers for assessing the biodiversity on their farm*; *Development of a livestock model for agro-pastoral biodiversity*; *Farm CO2Sink: C sequestration and GHG emissions reduction at farm level.*	bit.ly/2GorMUT bit.ly/2Gr2otL bit.ly/2pRYOm5 bit.ly/2J93DiK bit.ly/2Gq5gHh

Horizon 2020 SC2 collaborative projects – Public goods from agriculture and forestry

Public goods, from theory to practice

PEGASUS pegasus.ieep.eu Total cost: 3 M€ EC contribution: 2.97 M€ Coordinator: IEEP Mar. 2015 – Feb. 2018	PEGASUS will develop innovative, practical ways of making public goods and ecosystem services concepts accessible and operational: it will identify how, where and when cost-effective mechanisms and tools for policy, business and practice can most effectively be applied, increasing the sustainability of primary production in pursuit of the EU2020 vision of 'smart, sustainable and inclusive growth'.
PROVIDE www.provide-project.eu Total cost: 3 M€ EC contribution: 3 M€ Coordinator: U. of Bologna Sep. 2015 – Aug. 2018	PROVIDE will develop a conceptual basis, evidence, tools and improved incentive and policy options to support the «smart» provision of public goods by the EU agriculture and forestry ecosystems, in the light of trade-offs and conflicts brought about by prospective intensification scenarios. PROVIDE will consider a wide range of public goods in relation with a wide set of legislations.
CONSOLE MA bit.ly/31ERL1x Total cost: 5 M€ EC contribution: 5 M€ Coordinator: Alma Mater Studiorum – Universita di Bologna May 2019 – Apr. 2022	CONSOLE aims to boost innovation in the lasting delivery of environment and climate public goods by EU agriculture and forestry. To achieve this objective, CONSOLE will build a Community of Practice to co-create an empirically validated contractual framework. It will design and test effective and efficient contract models and support their implementation by multiple actors. MA = Multi-actor
Contracts2.0 MA bit.ly/2KUm1iU Total cost: 5 M€ EC contribution: 5 M€ Coordinator: Leibniz Centre for Agricultural Landscape Research May 2019 – Apr. 2023	Contracts2.0 aims to develop novel contract-based approaches to incentivise farmers for the increased provision of environmental public goods along with private goods using result-based, collective, land tenure and value chain approaches. Contracts2.0 will improve existing contracts and design new ones through a co-design process and by establishing 'contract and policy innovation labs' (CILs and PILs) in nine EU countries.
EFFECT MA bit.ly/2KWUkWO Total cost: 5 M€ EC contribution: 5 M€ Coordinator: Kobenhavns Universitet May 2019 – Apr. 2023	EFFECT will develop and pilot a package of new contractual frameworks, that will enable farmers to reconcile agricultural production with enhanced delivery of environmental and climate public goods and services. It will achieve this by combining agricultural and environmental science knowledge with theoretical and empirical insights from law, political science and economics.

Forest ecosystem services

ALTERFOR MA www.alterfor-project.eu Total cost: 4 M€ EC contribution: 4 M€ Coordinator: Sveriges Lantbruks U. (SLU) Apr. 2016 – Sep. 2020	ALTERFOR's goal is to facilitate the implementation of forest management models (FMM) by: Identifying and developing FMM robust in their capacity to deliver ecosystem services (ES) and overcome projected socio-ecological risks and uncertainties; Assessing the impact of different FMM combinations in terms of resultant ES baskets on the landscape level, and improving cross-national knowledge transfer regarding their benefits, costs, management, and utilization.
DIABOLO www.diabolo-project.eu Total cost: 5 M€ EC contribution: 4.7 M€ Coordinator: LUKE Luonnonvarakeskus Mar. 2015 – Feb. 2019	DIABOLO will strengthen the methodological framework towards more accurate, harmonised and timely forest information, to enable the analysis of sustainable biomass supply and facilitate near real-time forest disturbance monitoring. It will support EU policy processes, international reporting obligations, forest administration and planning entities and make innovative use of existing field-collected data and EC space-based applications and global monitoring systems.
InnoForESt MA bit.ly/2GWEtDm Total cost: 4.1 M€ EC contribution: 4 M€ Coordinator: HNE Eberswalde Nov. 2017 – Oct. 2020	InnoForESt's overall objective is to spark a transformation of the European forest sector by steering policies and businesses towards an economically viable provision of the wide range of forest ecosystem services. New actor alliances and comprehensive networks will be initiated in the forestry sector and beyond. Innovation platforms will support interactive information exchange about good practices and alternative income streams from forest ecosystem services.
SINCERE MA bit.ly/2JnfMkm Total cost: 4.3 M€ EC contribution: 4 M€ Coordinator: EFI Jan. 2018 – Dec. 2021	Responding to society's demands for services such as wood production, recreation, biodiversity provision and carbon storage, the project will look at innovative ways to value and implement such "forest ecosystem services". SINCERE will develop novel policies and new business models by connecting knowledge and expertise from practice, science and policy, across Europe and beyond.

Drinking water quality and agriculture

FAIRWAY MA www.fairway-project.eu Total cost: 5 M€ / EC: 5 M€ Coordinator: Wageningen R. Jun. 2017 – May 2021	The objective of FAIRWAY is to review policy, governance and farm water management approaches to protect drinking water resources in the EU and to identify and further develop innovative measures and governance approaches which will simultaneously increase the sustainability of agriculture.
WATERPROTECT MA water-protect.eu Total cost: 5 M€ EC contribution: 5 M€ Coordinator: VITO Jun. 2017 – May 2020	WATERPROTECT objective is to contribute to effective uptake and realisation of management practices and mitigation measures to protect drinking water resources. It will create an integrative multi-actor participatory framework including innovative instruments that enable actors to monitor, finance and effectively implement these practices and measures.
COASTAL MA h2020-coastal.eu Total cost: 5 M€ EC contribution: 5 M€ Coordinator: VITO May 2018 – Apr. 2022	COASTAL aims to improve rural-coastal synergy in strategic business and policy decisions and the collaboration between coastal and rural actors. It will develop, demonstrate and apply a set of tools and indicators by combining multi-actor approaches with system dynamics modelling. This will improve the understanding of interactions between land and sea activities and help develop evidence-based solutions jointly improving economic development and environmental protection, including inland water quality.

Pollinators

PoshBee [MA] poshbee.eu Total cost: 10 M€ EU contribution: 9 M€ Coordinator: Royal Holloway & Bedford New College June 2018 – May 2023	PoshBee is addressing the issue of stressors – agrochemicals, pathogens, and nutrition – to ensure the sustainable health of bees and their pollination services in Europe. Integrating the knowledge and experience of local beekeeping and farming organisations and academic researchers (including the EU RefLab for bee health), it will provide a comprehensive pan-European assessment of the exposure hazard of chemicals, pathogens and nutritional stress for solitary, bumble, and honey bees across two major cropping systems.

Land management, high-nature value farming and rural-urban synergies

ROBUST [MA] rural-urban.eu Total cost: 6 M€ EC contribution: 6 M€ Coordinator: Wageningen U. Jun. 2017 – May 2021	Ecosystems provide a wide variety of goods and services such as purification of air and water, climate change mitigation and adaptation. Urbanisation impact upon land use and therefore on the availability, accessibility and quality of ecosystem goods and services. This makes it important to identify the functional relationships between rural and urban areas and their effect on the provision of these services.
LANDMARK [MA] landmark2020.eu Total cost: 5.3M€ EC contribution: 5 M€ Coordinator: Wageningen U. May 2015 – Oct. 2019	LANDMARK deals with the sustainable management of land and soil in Europe. It builds on the concept that soils are a finite resource that provides a range of ecosystem services known as "soil functions". Functions relating to agriculture include: primary productivity, water regulation & purification, carbon-sequestration & regulation, habitat for biodiversity and nutrient provision & cycling.
HNV-Link [MA] www.hnvlink.eu Total cost: 2.2M€ EC contribution: 2.2M€ Coordinator: CIHEAM May 2016 – Mar. 2019	High nature value (HNV) farmland defines areas where agriculture support and is associated with exceptionally high biodiversity but also with cultural heritage, quality products and rural employment. HNV-Link network will develop and share innovations that support HNV farming systems across Europe through a multi-actor approach.
LANDSUPPORT www.landsupport.eu Total cost: 7 M€ EC contribution: 7 M€ Coordinator: Universita degli studi di Napoli Federico II May 2018 – Oct. 2021	LANDSUPPORT aims to develop a web-based, open-access GeoSpatial Decision Support System to support sustainable agriculture and forestry, evaluate trade-offs between land uses and contribute to the development and implementation of land use policies in Europe. To this end, it will integrate existing databases with newly developed high performance modelling engines simulating agriculture & forestry, land degradation and environmental factors. It will develop and test the new tools at EU, national, regional and local levels.
SUPER-G [MA] super-g.eu/ Total cost: 10 M€ EC contribution: 10 M€ Coordinator: University of Newcastle Upon Tyne June 2018 – May 2023	SUPER-G aims to co-develop sustainable permanent grasslands systems and policies with farmers and policy makers that will be effective in optimising productivity, whilst supporting biodiversity and delivering a number of other ecosystem services. The benchmarking and testing involves a network of farms and experimental platforms in 14 countries covering the Mediterranean, Atlantic, Continental, Alpine, Pannonian and Boreal regions.
LIFT lift-h2020.eu/ Total cost: 5 M€ EC contribution: 5 M€ Coordinator: INRA May 2018 – April 2022	LIFT explores the potential benefits of the adoption of ecological farming in the EU and seeks to increase the understanding of how socio-economic and policy factors impact the adoption, performance and sustainability of ecological farming at various scales, from the level of the single farm to that of a territory. LIFT will also develop new private arrangements and policy instruments that could improve the adoption and subsequent performance and sustainability of the rural nexus.
UNISECO uniseco-project.eu/ Total cost: 5 M€ EC contribution: 5 M€ Coordinator: Johann Heinrich Thuenen Institut May 2018 – April 2021	UNISECO seeks to enhance the understanding of socio-economic and policy drivers and barriers for further development and implementation of agro-ecological practices in EU farming systems. Using multi-actor platforms UNISECO will co-construct improved and practice-validated strategies and incentives for the implementation of agro-ecological practices and provide a methodological toolkit to assess the environmental, economic and social impacts of innovative strategies and incentives at farm and territorial levels.

Interesting activities under other Horizon 2020 sections

Horizon 2020's Societal Challenge on **Climate Action & Environment** supports activities on cultural heritage, some of which target the rural areas:

- The **CLIC** project brings forward the agenda on heritage-led local sustainable development by developing flexible, transparent, integrated and inclusive tools to manage the change of cultural landscape, tools which are required to leverage the potential of cultural heritage for Europe (Dec. 2017 to Nov. 2020 – EC contribution: 5 M€ - bit.ly/2uTn7Fj).
- A new project will be funded under the 2017 call on "Cultural heritage as a driver for sustainable growth, Heritage-led rural regeneration (SC5-21-2017, EC contribution: 10 M€).

In the pipeline – 4 projects to start under H2020 SC2 2019 calls (37 M€)

Building resilient mountain value chains delivering private and public goods [MA]	(1 project, 6 M€)
Capitalising on native biodiversity in farmland landscape [MA]	(2 projects, 16 M€)
Integration of plant protection in a global health approach [MA]	(1 project, 15 M€)

Funding opportunities - Open H2020 SC2 calls for 2020 (2 M€)

FNR-02-2020 - Developing long-term monitoring and evaluation frameworks for the Common Agricultural Policy	(1 project, 2 M€)

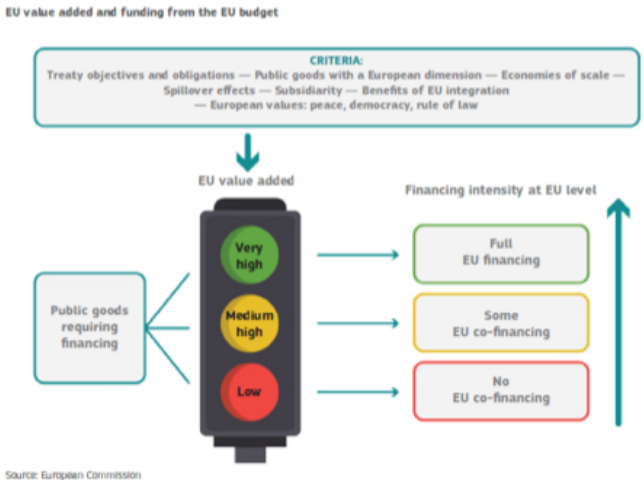
How does research on public goods support EU Policies?

The **Reflection Paper on the future of EU finances** (2017) called for a shift towards new, sustainable growth that combines economic, social and environmental considerations in a holistic and integrated way and focuses more strongly on the provision of public goods.

Download the Reflection paper

Research and innovation activities supporting policy design for improved public good delivery will support this objective. They were also programmed in close alignment with the rural policy objectives pursued by the current **Common agricultural policy**, with the **Cork 2.0 declaration "A better life in rural areas"** and with the objectives foreseen for the future as laid out in the **European Commission's Communication on the future of food and farming** (Nov. 2017) and the proposals for future CAP tabled in June 2018.

These activities are also closely connected to the EU initiative on **Mapping and Assessment of Ecosystems and their Services** (MAES), which supports the implementation of the EU biodiversity strategy adopted in 2011.



More information:
DG Environment: bit.ly/1i8mjOr
MAES website: biodiversity.europa.eu/maes

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