

Why does investment in enhancing human capital and boosting innovation systems matter?

Farmers, foresters and rural communities need knowledge, innovations and skills for addressing the sustainability challenges of today and tomorrow. It is essential to deploy wider and at faster pace the new knowledge and innovations developed under EU R&I programmes (and beyond) that (end-) users require on the ground to deliver on the objectives and targets set in the European Green Deal and the Common Agricultural Policy. Therefore, under Horizon Europe (and former Horizon 2020) increased resources are dedicated and diverse tools are implemented to enhance human capital and boost innovation systems. Against this background, Agricultural Knowledge and Innovation Systems (AKIS)¹, which are at the heart of the 2023-2027 CAP's cross-cutting objective, are key to bridge the gap between science and practice and to develop the right skillset. Strengthening AKIS through EU R&I programmes will speed up innovation and the take-up of research results required for the transformative changes. This includes boosting multi-actor approach, promoting interactive innovation and co-ownership of results by users, setting up structural networking within national/regional/local AKIS, as well as fostering synergies with other EU funds, especially the CAP, which provides increased support to many new or improved tools for building up the national AKIS, for instance the successful EIP-AGRI.

Enhancing human capital and boosting innovation systems under Horizon 2020 and Horizon Europe



CORDIS search keywords

multi-actor approach, thematic networks, advisory networks, operational groups, AKIS, EIP-AGRI, interactive innovation



Nb of projects

52 Horizon 2020
34 Horizon Europe



EU contribution

€ 135 million
€ 158 million

Figures comprise Horizon 2020 Societal Challenges 2 and Horizon Europe Cluster 6 projects, including Work Programme 2023-2024 expected projects / Selection of a few projects logos



¹ AKIS refers to the whole knowledge creation and exchange system, i.e., organisation and knowledge flows between persons, organisations and institutions who use and produce knowledge for agriculture and interrelated fields



Success stories on enhancing human capital and boosting innovation systems

Multi-actor approach makes the R&I process and its outcomes more reliable, demand-driven, shared and relevant to society through genuine and sufficient involvement of a targeted array of scientific and practice actors, which bring in complementary knowledge to serve the objectives of the research topic. The **LIAISON** project developed best practices for multi-actor projects, thematic networks, EIP-AGRI operational groups and other interactive innovation approaches that speed up the innovation on the ground.

Thematic networks are multi-actor projects which collect existing knowledge and best practices and turn it into easily understandable formats for end-users such as farmers, foresters, advisors, consumers and others. Example include **DISARM** thematic network developed a collection of resources in the form of a series of summary sheets, practice abstracts, guides and videos, available on the project's website. In addition, the project created a community of practice (CoP), hosted on Facebook, which is a place to share experiences and exchange knowledge on issues around prudent use of antibiotics in animal production and to identify and test innovative practices. More successful examples of thematic networks are listed [here](#).

On-farm demonstration and peer-to-peer learning are effective tools to widely deploy innovative solutions among farmers. **PLAID** and **AgriDEMO-F2F** projects developed a **georeferenced inventory of demonstration farms in Europe** that can inspire the sustainability transition.

New tools for enhancing human capital and boosting innovation systems

EU-wide knowledge reservoir: The **EU-FarmBook** project will develop a platform to bring together all of the tangible outputs of EU-funded research and innovation projects and beyond in one user-friendly knowledge reservoir to help get practical knowledge into the hands of the farmers, foresters and advisors across Europe who need it most.

Advisory networks are a new tool introduced under Horizon Europe. Advisors play a key role in steering and influencing farmers' decisions. Advisors should be able to translate the research results into concrete opportunities for the end users, and adapt those to specific local circumstances. The advisory networks facilitate the exchanges between farm advisors across the EU, increasing the speed of knowledge creation and sharing, capacity building, demonstration of innovative solutions. The **CORENET** and **EU4Advice** are examples of the first advisory networks funded under Horizon Europe that will provide innovative solutions for farmers to improve sustainability of the short food supply chains.

Horizon 2020 and Horizon Europe collaborative projects on enhancing human capital and boosting innovation systems

Follow the **CORDIS** link for more information on the start-end date, EU contribution, coordinator and results.
Non-exhaustive list sorted by ascending start date.

| Website | Project | CORDIS |
|-------------------------------------|--|---------------------------|
| i2connect | Connecting advisers to boost interactive innovation in agriculture and forestry | 863039 |
| BRANCHES | Boosting rural bioeconomy networks following multi-actor approaches | 101000375 |
| SmaRT | Small ruminant technology – precision livestock farming and digital technology for small ruminants | 101000471 |
| COCOREADO | Connecting consumers and producers to rebalance farmers' position through ambassadors trainings | 101000573 |
| NETPOULSAFE | Networking European poultry actors for enhancing the compliance of biosecurity measures for a sustainable production | 101000728 |
| R4D | Resilience for dairy | 101000770 |
| agroBRIDGES | Building bridges between consumers and producers by supporting short food supply chains through a systemic, holistic, multi-actor approach based toolbox | 101000788 |
| FARMWELL | Improving farmers' wellbeing through social innovation | 101000797 |
| COACH | Collaborative agri-food chains: driving innovation in territorial food systems and improving outcomes for producers and consumers | 101000918 |
| Grazing4AgroEcology | European network to promote grazing and to support grazing-based farms on their economic and ecologic performances as well as on animal welfare | 101059626 |
| B-THENET | Best practices and innovations for a sustainable beekeeping | 101059812 |
| EU4Advice | Multi-actor collaboration dynamics and capacity building network inside and between AKIS to foster the upscaling of SFSCs across Europe | 101059911 |
| EU-FarmBook | Supporting knowledge exchange between all AKIS actors in the European Union | 101060382 |
| CLIMED-FRUIT | Adaptation to climate change and mitigation for perennial crops in Mediterranean area | 101060474 |
| modernAKIS | Modernisation of agriculture through more efficient and effective Agricultural Knowledge and Innovation Systems | 101060527 |
| Oper8 | European thematic network for unlocking the full potential of operational groups on alternative weed control | 101060591 |
| COREnet | Connecting advisors toward a European network for consumer-producer chains | 101060905 |
| BROILERNET | Practice and science broiler production innovation network | 101060979 |
| ATTRACTISS | Activate and trigger actors to deepen the function of innovation support services | 101061060 |
| GOFORRESTS | European innovation partnership network promoting operational groups dedicated to forestry and agroforestry | 101086216 |
| NUTRI-KNOW | Broadening the impact of EIP-AGRI operational groups in the field of nutrient management: knowledge exploitation and easy-to-understand material for farmers and practitioners | 101086524 |
| NUTRICHECK-NET | The NUTRI-CHECK NETWORK to maximise site-specific precision in managing the nutrition of European arable crops | 101086525 |
| PREMIERE | Preparing multi-actor projects in a co-creative way | 101086531 |
| EUNetHorse | European network for knowledge exchange and peer-to-peer learning between actors and stakeholders of the Horse sector to improve the resilience of equine farms | 101086551 |
| AF4EU | Agroforestry business model innovation network | 101086563 |
| ResAlliance | Landscape resilience knowledge alliance for agriculture and forestry in the Mediterranean basin | 101086600 |



Relevant sources of information on enhancing human capital and boosting innovation systems

In the pipeline and future funding opportunities

- **HORIZON-CL6-2023-GOVERNANCE-01-18**: Broaden EIP Operational Group outcomes across borders by means of thematic networks to compile and share knowledge ready for practice
- **HORIZON-CL6-2023-GOVERNANCE-01-19**: Thematic networks to compile and share knowledge ready for practice
- **HORIZON-CL6-2023-GOVERNANCE-01-20**: Developing an EU advisory network on organic agriculture
- **HORIZON-CL6-2023-GOVERNANCE-01-21**: Developing EU advisory networks on the use of pesticides
- **HORIZON-CL6-2023-GOVERNANCE-01-22**: Developing EU advisory networks on the optimal fertiliser use
- **HORIZON-CL6-2024-GOVERNANCE-01-8**: Broaden EIP Operational Group outcomes across borders by means of thematic networks to compile and share knowledge ready for practice
- **HORIZON-CL6-2024-GOVERNANCE-01-9**: Thematic networks to compile and share knowledge ready for practice
- **HORIZON-CL6-2024-GOVERNANCE-01-10**: Organic farming thematic networks to compile and share knowledge ready for practice
- **HORIZON-CL6-2024-GOVERNANCE-01-11**: Biodiversity thematic networks to compile and share knowledge ready for practice
- **HORIZON-CL6-2024-GOVERNANCE-01-12**: Developing EU advisory networks on forestry
- **HORIZON-CL6-2024-GOVERNANCE-01-13**: Developing EU advisory networks on sustainable livestock systems

Enhancing human capital and boosting innovation systems under the CAP

The CAP (2023-2027) sets the cross-cutting objective of modernising agriculture and rural areas by fostering and sharing of knowledge, innovation and digitalisation in agriculture and rural areas and by encouraging their uptake by farmers, through improved access to research, innovation, knowledge exchange and training. To contribute to the accomplishment of the cross-cutting objective, MS in their CAP strategic plans need to scale up support for AKIS and strengthen knowledge flows using a strategic approach to interlink people and funding sources. These extra resources should be used to develop and maintain tailored advisory services and effective training, interlinking all AKIS actors (such as farmers, farm workers, agricultural educators, researchers, non-academic experts, public and independent private advisors, supply chain actors, and other actors in the agricultural and forestry sector) on a regular basis, for sustainable and profitable farms. The CAP in particular supports **EIP-AGRI Operational Group (OGs)**, i.e., local innovation projects within a country or a region, and so-called **Innovation Support Services** to connect potential project partners and help them develop an initial idea into a fully-fledged innovation project. The success of the EIP-AGRI OGs concept supported by the new CAP is illustrated by the fact that for this upcoming period of 5 years (2023-2027), MS plan around 6500 OGs throughout Europe, which doubles the number of OGs supported in the last 7 years period. The CAP also provides funding for **networking** (e.g., focus groups and workshops) at EU and national levels that foster knowledge exchange and innovation.

ISBN 978-92-68-01925-2

