

Focus

Focus - The European Innovation Partnership creates a research strategy on water and agriculture

The European Innovation Partnership for Productive and Sustainable Agriculture (EIP-AGRI) is a European Union instrument for promoting innovation in agriculture by bringing research and field practice closer together. Pascale Riccoboni, in charge of the national implementation of EIP-AGRI within the National Rural Network, assesses this initiative and, the research strategy it has created in water and agriculture in France, and Europe.

What is EIP-AGRI and how does it operate on a European scale?

The agricultural sector has many challenges to overcome, including feeding the planet in a context of strong demographic growth, coping with global changes and, in a particular climate change, limiting the environmental impacts of agriculture and reconciling quality and yield. Innovation and knowledge are key elements in accompanying the resulting economic, environmental, health and social transitions. It is against this background that the European Innovation Partnership for Productive and Sustainable Agriculture (EIP-AGRI), initiated as part of the 2014-2020 programming period, was implemented.

This European instrument is implemented through the European Union Research Policy and the second pillar of the Common Agricultural Policy (CAP). It supports projects and activities for networking and knowledge exchange for successful transitions in agriculture and forestry. EIP-AGRI projects share a common "multi-stakeholder approach": different actors, such as farmers or advisors, work together with scientists throughout the project to develop innovative solutions to problems encountered in the field. As they are developed for and with farmers, these solutions have a better chance of being relevant and utilised. Its other mission is to speed up the dissemination of innovations in Europe.

At the France-wide level, the regions finance collective projects called EIP Operational Groups (OGs), while the national rural network carries out a specific EIP initiative that spans the various levels and actors. The operational groups are transdisciplinary and all contribute to innovation in the regions in many areas: reduction of the use of agrochemicals, management of resources (water, air, soil), plant and animal health, knowledge and management tools, use of digital technology, etc. By mid-2020, more than 1,500 operational groups had been selected in Europe, including 246 launched in France. The Common Agricultural Policy, together with the European Agricultural Fund for Rural Development (EAFRD), provides financial support for these projects.

Transnational research and innovation projects supported by European research funds (Horizon 2020) involve partners from all over Europe. The number of partners in these consortiums ranges from 10 to a maximum of 110. Among these projects are thematic networks, which circulate existing knowledge and translate it into information and tools for actors on the ground; 124 thematic projects, including 29 thematic networks, were signed in 2019.

Water is an important factor in agriculture. What role does EIP-AGRI give to water management?

A growing number of EIP projects are tackling the issue of water very directly.

Some work is being done to further explore the various approaches to restoring water quality, protecting drinking water resources from pollution by pesticides and nitrates, identifying and developing innovative tools or measures or even policies adapted to a more effective protection of drinking water.

Other work is targeting the problem from the perspective of optimising the use of inputs (nutrients, agrochemicals, water) to ensure the competitiveness of farms; alongside these efforts, still, other work is looking at fertigation models that combine production objectives and commercial outlets.

In addition to these projects directly tackling the water issue, it is important to emphasise that a very significant number of EIP projects (nearly two-thirds of French OGs) are working on the transition of farms to environmentally friendly practices, or even triple performance¹. The system approaches developed for this transition are potentially more sustainable with regard to water. Lastly, most of the projects are part of a regional approach.

1. The triple performance reflects the three pillars of sustainable development (economic, environmental and social, etc.).

Some 40 Water and Agriculture operational groups have been formed in Europe. Two projects implemented by Germany (Zimmermann et al., 2020) and Portugal (Gonçalves et al., 2020) respectively, are the subject of a detailed presentation in this issue. In addition to these regional projects, there are about 10 transnational H2020 projects, such as the SolACE project², which is working on solutions to improve the efficiency of agrosystems and crops in terms of the use of water and nutrients (nitrogen, phosphorus) in a context of greater rainfall variability. Bringing together 15 partner countries, including France represented by INRAE, it examines a wide range of agricultural contexts and systems.

"Water and Agriculture" is also one of the 13 themes addressed by European expert groups gathered in Focus Groups organised by the European EIP network. A Focus Group brings together 20 experts of various backgrounds and skills to review the status of the industry, identify obstacles, opportunities and solutions on a research issue of importance to farmers. It produces a report intended to inspire other actors, including operational groups or research projects.

All funded projects are online on the national rural network website³ and the European EIP network website⁴.

Lastly, in addition to EIP-AGRI presented above, there are four other European Union EIPs, one of which is specific to water. As its name suggests, its objective is to facilitate the development of innovative solutions to address European and global water challenges. It also supports the creation of market opportunities for these innovations.

EIP AGRI has just completed its 2014-2020 programme: what is the conclusion of six years of work in the field? And what are the future prospects of this European instrument?

This mechanism, with its European and national scope and its dual political aspect of research and the Common Agricultural Policy, was set up six years ago from scratch. In this sense, it is unique. It has been rolled out for the benefit of the agricultural, agri-food and forestry sectors, as well as rural areas. Some projects specifically address issues of social and territorial innovation, new economic models, or the innovation and advisory services best suited to transitions. The European Innovation Project has made it possible to develop this synergy between

the world of agriculture, the world of education, development and research, the community, sometimes civil society, activity clusters and businesses and finally, this interaction between small and large projects. This implementation has mobilised a lot of energy and resources. Concerning EIP supported by EAFRD, although the volume and type of OGs vary according to countries and regions, the results are promising. Looking at EIP supported by the Horizon 2020 research policy, 180 projects have been selected valued at over €1 billion. The challenge now lies in the exploitation and adoption of knowledge and results.

For the period 2021-2027, the European Commission proposes to continue and strengthen EIP AGRI under its dual policy aspects of research (Horizon Europe) and the Common Agricultural Policy. Modernisation, innovation and knowledge are cross-cutting objectives of the future CAP. This policy plans to support cooperation projects, in particular EIP-AGRI OGs ("One EIP-AGRI" at the service of CAP as a whole), training and advice (with increased expectations for advice in terms of taking into account triple performance and support for innovative partnership projects for example), CAP networks (European or national), etc. The agricultural knowledge and innovation systems (AKIS) and their improvement are extensively developed in the next CAP. For the first time, they are dealt with in framework documents, for example the member States' "CAP national strategic plan".

The Commission also proposes to double research and innovation funding for agriculture, food, bioeconomics and natural resources in the next European research and innovation programme called "Horizon Europe". ■

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FURTHER READING...

📖 French rural network website, webpage on EIP:

✉ <https://www.reseaurural.fr/le-partenariat-europeen-pour-linnovation-agri>

📖 EIP thematic bulletins:

✉ <https://www.reseaurural.fr/le-partenariat-europeen-pour-linnovation-agri/actualites-et-evenements-du-pei>

📖 EIP European Summit on Agroecological Transitions:

✉ <https://www.reseaurural.fr/Sommet-agri-innovation-2019>

2. Solutions for Improving Agroecosystem and Crop Efficiency for Water and Nutrient Use.

3. <https://www.reseaurural.fr/le-partenariat-europeen-pour-linnovation-agri>

4. <https://ec.europa.eu/eip/agriculture/>