



EU CAP Network Factsheet

Innovation, Knowledge exchange | EIP-AGRI

Nature-based solutions for water management under climate change


How nature-based solutions could have an impact on water management and water availability at farm level and contribute to sustainable farming under climate change?

Water is increasingly a major challenge for the agricultural sector. Agriculture is the main user of fresh water both in Europe and around the world. The sector also contributes significantly to water pollution. At the same time, we are experiencing higher temperatures and rainfall variability. On top of that, a growing global population means a growing demand for food, therefore farmers are having to rethink how they produce their crops. Water and agricultural policies can support farmers, particularly in areas which are specifically impacted by water challenges. Innovation projects can foster competitive, sustainable farming by developing solutions to address issues relating to, for example, water scarcity and the degradation of the quality of water.


This Focus Group was about the deployment of nature-based solutions (NBS) at farm level and how they can provide solutions to water challenges. The aim was to promote a better understanding of NBS and to facilitate knowledge and innovation exchange between farmers, farm advisors, researchers and other relevant actors at local, regional and national levels. The experts identified existing NBS in different farming systems and in different climate zones, highlighting the socio-economic and environmental benefits of each of these measures.

The Focus Group defined NBS for agricultural water management as “solutions that, inspire and support by nature, improve the availability of water and its quality, the efficiency of its use and/or the protection of the farm against flooding or excess water.” These solutions must:

- be cost-effective, simultaneously provide environmental, social and economic benefits, help build resilience, and contribute to good water governance;
- bring more diverse natural features and processes into farms and landscapes, through locally adapted, resource-efficient and systemic interventions;
- benefit biodiversity and support the delivery of a range of ecosystem services.



“It is very important that agricultural production and NBS support each other and can be combined with daily farm life in a cost-effective manner. We need win-win solutions.”



- Airi Kulmala (Finland) expert from the EIP-AGRI Focus Group on Nature-based solutions for water management under climate change.

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Ideas for Operational Groups

- NBS for agricultural water management in less favoured areas
- Market recognition of NBS for agricultural water management
- Assessing the benefits of NBS at farm and small agricultural catchment levels
- Mechanisms of reward for NBS ecosystem services

Research needs

- Spatially distributed modelling of the eco-hydrological processes
- Living-Labs (i.e., full-scale demo sites)
- Standardisation and evaluation criteria and indicators
- New models of water governance adapted to the NBS

More ideas for Operational Groups and research needs available in the final report

More Information

- [Final report of the Focus Group](#)
- [Focus Group webpage](#)

Previous Focus Groups in this field:

- [EIP-AGRI Workshop 'Connecting innovative projects: Water & Agriculture'](#)
- [EIP-AGRI Focus Group "Water & agriculture: adaptive strategies at farm level"](#)
- [EIP-AGRI Brochure Water and Agriculture](#)

EIP-AGRI publications:

- [Operational groups related to NBS for water management](#)
- [Horizon multi-actor projects working on water \(see Water, nutrients and waste\)](#)

Inspirational ideas:

- [Farmers leading implementation of sustainable water management solutions, Ireland](#)
- [Mixed farming in the Aveyron river basin, France](#)
- [Dealing with water scarcity, Italy, Spain](#)
- [Preserving soil organic matter and protecting water sources, Portugal](#)
- [Sensor technology optimises expensive and scarce water in Spanish greenhouses, Spain](#)
- [Mission possible' to preserve wetlands, Spain](#)
- [Smart irrigation in La Mancha, Spain](#)

Feedback and questions:

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