

PRESS RELEASE: WATERAGRI –AN H2020 PROJECT EXPLORING THE NEW FRONTIERS IN WATER RETENTION AND NUTRIENT CAPTURE TO IMPROVE AGRICULTURAL PRODUCTION



alchemia-nova is proud to announce its participation in the upcoming WATERAGRI project, currently in grant negotiation stage. As key technology providers, alchemia-nova will be responsible for a number of deliverables, including the development of a productive bio-filtration unit to capture nutrients from agricultural runoff. The system will include a plant-based drainage filter and provide for the reuse of recovered nutrient. alchemia-nova will furthermore conduct design workshops to establish a bio-inspired aeration system for constructed wetlands and be involved in multiple demonstration activities.

The objectives of WATERAGRI

WATERAGRI is a new H2020 research & innovation project that aims to re-introduce and enhance sustainable solutions for water retention and nutrient recycling to enable agricultural production that can sustain growing populations and cope with present and future climate change challenges. As such, the project strives to generate a deeper, more detailed and integrated understanding of the hydrological processes and interactions shaping water resources in Europe. To achieve these ambitious aims, WATERAGRI will further develop traditional drainage and irrigation solutions and re-introduce nature-based solutions such as integrated constructed wetlands, bio-inspired drainage systems and sustainable flood retention basins to the agricultural landscape, resulting in better retention of both water and nutrients. Also, WATERAGRI plans to evaluate specific water and nutrient retention needs with the farming community, develop a set of affordable and easy-to-implement technologies, test them at the field level and deploy a sound business framework for their uptake at the farm and agricultural catchment levels.

The novel technologies that will be developed in WATERAGRI

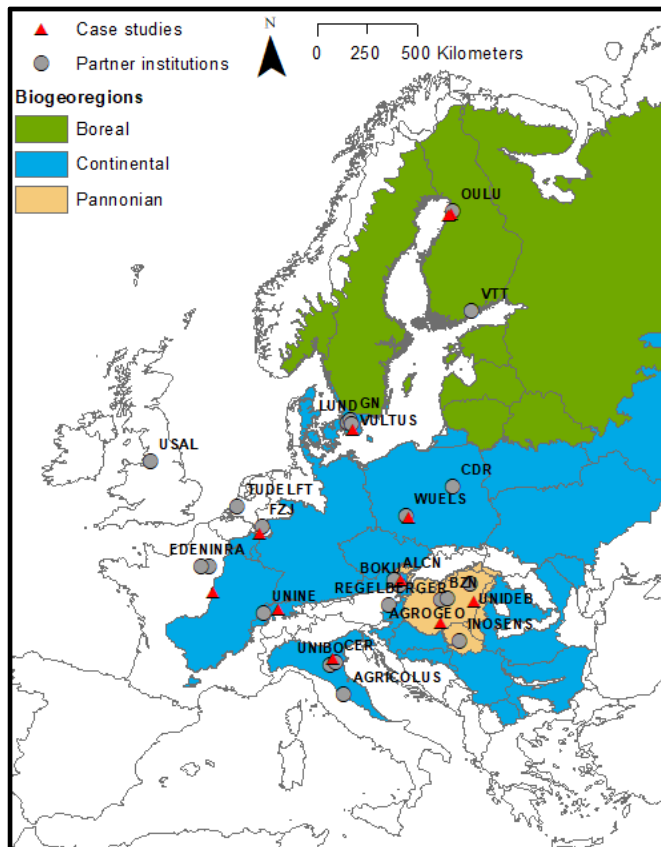
WATERAGRI will develop a decision-support framework for the farming community and a set of individual water retention and nutrient recovery solutions.

- The WATERAGRI decision-support framework includes 6 models that allow for different functionalities such as data assimilation, optimisation of irrigation scheduling and fertilisation, water-vapour sorption and zoning landscape matrix. In addition, to facilitate decision-making in real situations, the framework will be supplemented by a serious gaming component that will enable simulation and quantification of the impact of a farmer's decision on technical, economic and environmental aspects of the analysed challenge.
- Innovative and sustainable WATERAGRI water retention solutions will bring 8 technologies to European farmers, including farm-constructed wetlands, remote sensing pipeline, irrigation and agrometeorological monitoring and biochar for water retention.

- WATERAGRI nutrient recovery solutions will also offer a set of 5 advanced and nature-based technologies including farm constructed wetlands for nutrient recovery, drainage systems, bio-based membranes, biochar adsorbents and microfluidics.

The geographical scope of WATERAGRI

The project activities will include 10 well-developed case studies with focus on specific biogeographical regions of Europe: Boreal Zone (Finland and parts of Sweden), Continental Zone (Poland and parts of Sweden, France, Germany, Switzerland, Austria and Italy) and Pannonian Zone (mainly Hungary). Here, the economically sustainable WATERAGRI technologies will be tested and deployed for different land use and crop types from grass production and pasture to organic and conventional (fruit) farming. The test field sizes will vary from 1 ha up to 1000 ha.



The people behind WATERAGRI

The WATERAGRI consortium consists of a group of 23 partners from 12 European countries who teamed up under the lead of Lund University (Sweden). Among the partners, there are 4 water retention and 3 nutrient capture experts from prominent European water and soil research institutions, as well as international experts on stakeholder engagement and communication. The WATERAGRI project is expected to start in May 2020 and will last 4 years.

“Our consortium will be committed to significantly improving the agricultural water management status quo in the upcoming 4 years!”

Prof. Miklas Scholz, WATERAGRI Coordinator



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