

# Horizon 2020



EUROPEAN  
COMMISSION  
**Horizon 2020**

EUROPEAN UNION FUNDING  
FOR  
RESEARCH & INNOVATION



POLJOPRIVREDNI  
FAKULTET  
UNIVERZITET U  
NOVOM SADU

DEPARTMAN ZA RATARSTVO  
I POVRTARSTVO



UNIVERSITÄT FÜR  
BODENKULTUR  
WIEN

DEPARTMENT FÜR WASSER-  
ATMOSPHERE-  
UMWELT



UNIVERSITÀ  
DEGLI STUDI  
FIRENZE

DIPARTIMENTO DI SCIENZE  
DELLE PRODUZIONI  
AGROALIMENTARI  
E DELL'AMBIENTE

Serbian-Austrian-Italian (SAI)  
partnership  
Forcing Excellence  
in ecosystem research

## SERBIA FOR EXCELL

H2020 - TWINN - 2015

# SERBIA FOR EXCELL



Title: **Serbian-Austrian-Italian (SAI) partnership Forcing Excellence in ecosystem research**

Acronym: **SERBIA FOR EXCELL**

Grant number: **691998**

Coordinator: **PhD Branislava Lalić**

Coordinator institution: **Faculty of Agriculture,  
University of Novi Sad, Novi Sad, Serbia**

Call number: **H2020-TWINN-2015(CSA)**

Start date: **01.01.2016**

End date: **31.12.2018**

[www.serbiaforexcell.com](http://www.serbiaforexcell.com)



## About SERBIA FOR EXCELL

The aim of the SERBIA FOR EXCELL is the upgrade of knowledge, skills and social capacity of PFNS in the field of environmental sciences, with special focus on agrometeorology and related ecosystem sciences (such as plant physiology, crop management).

The main tool for reaching that aim is establishment of the AgMnet<sup>+</sup> research network at PFNS in collaboration with leading international research institutions BOKU and UNIFI. As a strategy to improve S&T capacities of PFNS, AgMnet<sup>+</sup> is introducing the concepts of small study groups of PFNS, BOKU and UNIFI students and joint study teaching material in English and native languages. BOKU and UNIFI partners are implementing goal-driven measurement, modelling training and project writing in the selected research fields for AgMnet<sup>+</sup> members. Intensive exchange of short term scientific visits, guest lectures and students visits among partner institutions are contributing to improve eligibility of AgMnet<sup>+</sup> members for participation on EU projects, increased number of papers in peer-review journals and increased citation.

Strategic partnership with BOKU and UNIFI, initiated by this project is significantly enhancing the research and innovations capacities of PFNS and upgrading the knowledge and skills of both of its students and researchers.



## Coordinator institution



FACULTY OF AGRICULTURE  
UNIVERSITY OF NOVI SAD  
Trg DOSITEJA OBRADOVIĆA 8  
21000 NOVI SAD  
SERBIA

**PFNS** is an accredited institution of higher education and scientific research whose mission is to stimulate high-quality educational processes, development of scientific disciplines and dissemination of gained knowledge in economy and society. Since its establishment in 1954, the Faculty of Agriculture has been dedicated to the accomplishment of its mission, based on successful results of its scientific research activities and their application in practice. Throughout the years, based on the observed needs of economic environment and current needs of society, the Faculty has developed study programs preparing students for the existing and pending technical-technological, and socio-economic systems. At the same time, it has developed its own competent human and technical resources. The PFNS carries out its mission in three interrelated groups of activity: higher education, scientific research, and knowledge application on the field of economy. Simultaneously, it constantly enhances its educational programs, quality of working processes, as well as human and material resources, aiming at the achievement of the highest standards. PFNS has a total of 246 researchers engaged in various projects. With its eight departments, four experimental stations and laboratories, the faculty is a reputable institution not only in Serbia.

**Department of Field and Vegetable Crops** is organized in two units: Chair of Field and Vegetable Crops and the Chair of Soil Science, Plant Nutrition and Genetics. Department staff, in addition to the basic teaching activities (BSc, MSc and PhD), are engaged in the scientific research in the field of: plant nutrition, soil science, soil microbiology, chemistry, biochemistry, production technology (of cultivation), improvement and rationalization of agricultural measures, adaptability and stability of genotypes, optimization of the farming system, etc.



## Partner institution



### Universität für Bodenkultur, Wien (BOKU)

**BOKU** was founded in 1872 and consists of 13 departments, 4 service centres and of experimental fields and forests around Vienna. The University of Natural Resources and Life Sciences, the Alma Mater Viridis, perceives itself as a teaching and research center for renewable resources, which are necessary for human life. It is BOKU's objective to help make a considerable contribution to the conservation and protection of resources for future generations.

**The Institute of Meteorology** at BOKU is carrying out research projects in the fields of environmental meteorology and climate change research, agrometeorology, atmospheric radiation, and small-scale boundary-layer climatology. Activities include numerical modelling as well as field measurements. The institute is coordinator of the Austrian national network on climate and climate change impact research.



### Università degli Studi di Firenze, Firenze (UNIFI)

**UNIFI** is an important and influential centre for research and higher training in Italy, with 126 Degree courses organised in 10 Schools. The University departments are responsible for the research activities, the teaching programmes and the knowledge transfer. In recent years UNIFI has increasingly consolidated its ventures in the field of knowledge transfer.

**Department of Agri-food Production and Environmental Sciences** (DISPAA) of the UNIFI was formed as a merger between two Departments: Plant, Soil and Environmental Science and Biotechnology in 2013. It now includes 75 professors and researchers, 30 technicians and 200 graduate students, senior and junior research fellows. DIPSPAA is constantly involved in training and in research activities. Research is carried out in the framework of international and national projects. The Section of Agronomy and Land Management focuses its research activities on agronomic practices, crop and soil management, environmental monitoring, eco-physiology, agro-ecology and sustainable agriculture.

# SERBIA FOR EXCELL topics

## PLANT PHYSIOLOGY



- Plant abiotic stress tolerance
- The use of methods in plant and crop physiology research (including measurements of gas exchange between plants and the atmosphere, water-use efficiency, and nutrient-use efficiency)

## CROP MANAGEMENT



- Crop management methods to reduce evapotranspiration
- Measurement (field experiment) and modelling

## AGROMETEOROLOGY




- Application of numerical weather prediction in assessing environmental conditions for appearance of harmful organisms
- Spatial distribution of precipitation
- Data analysis, phenomenology
- Algorithm development, modelling


*Environmental and ecosystem research, with focus on ecosystem modelling and agrometeorology, are becoming more important under the threat of future global climate change.*

# Objectives of SERBIA FOR EXCELL


The general objective of this project is to strengthen the research excellence and capacity of a representative Serbian institution specifically focused on ecosystem and environmental research (PFNS), in cooperation with well-established internationally recognised institutions in this field from western European countries (BOKU-Austria and UNIFI-Italy), with an ultimate aim to build mutually beneficial, and sustainable, networks between all the partners and beyond.



**Objective 1:** People - Establishment and growth of the open AgMnet<sup>+</sup> research group



**Objective 2:** Knowledge and Skills - Identification of topics and tools important to harmonise and upgrade AgMnet<sup>+</sup> members' knowledge and skills



**Objective 3:** Ideas -introduction of a "problem solver" approach



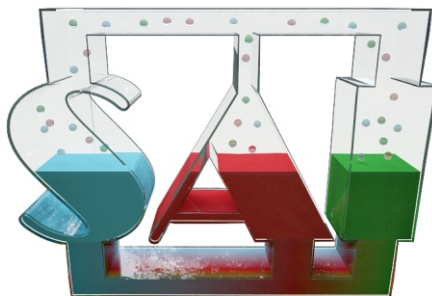
*AgMnet<sup>+</sup> is established and growing network of researchers, experts and students from PFNS and other institutions from different research fields who are sharing similar ideas regarding soil-plant-atmosphere interaction research and applications.*



## Detailed work description

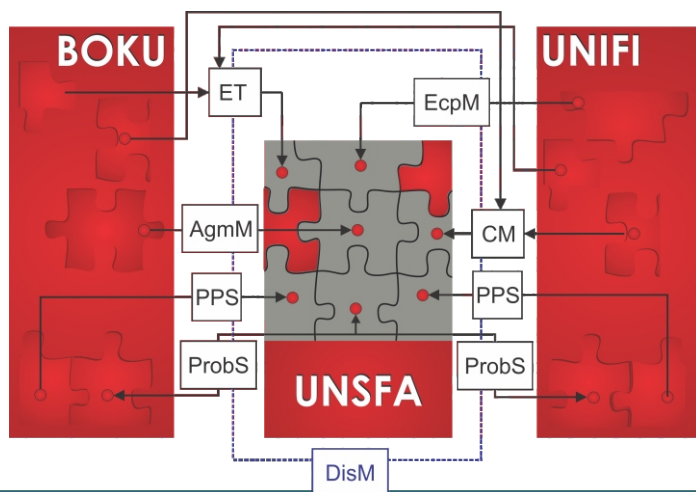


**before** SERBIA FOR EXCELL



**after** SERBIA FOR EXCELL

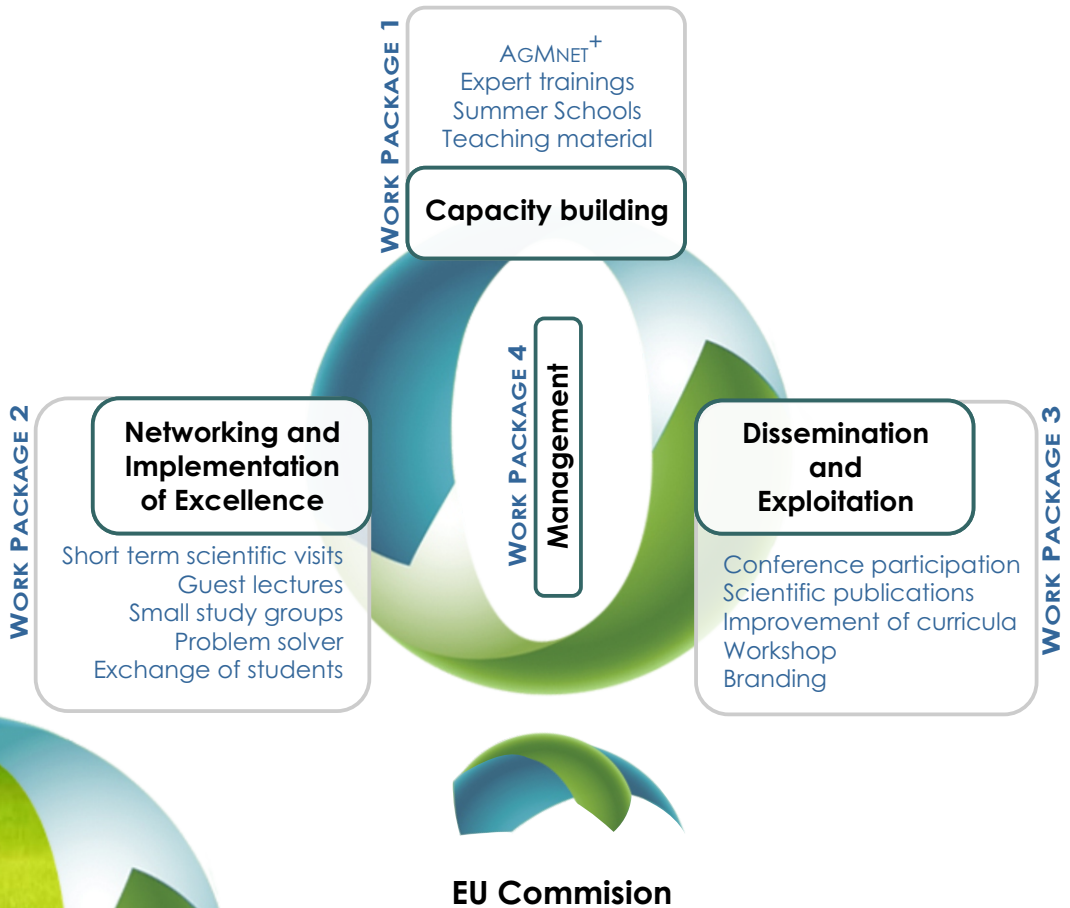
Harmonisation and upgrade of human resources, scientific, technological and social capacities from student to senior research level at PFNS is strategic goal of the project to be achieved with BOKU&UNIFI partners.



**CM** - Crop modelling  
**ET** - Expert training  
**EcpM** - Ecophysiology monitoring  
**AgmM** - Agrometeorological measurements  
**PPS** - Project preparation step-by-step  
**DisM** - Dissimination  
**ProbS** - Problem solver

*"A project plan is just wishful thinking if the goals are not achievable."*

## Detailed work description



*"Every successful story related to science and innovation is based on: people, ideas and motivation, knowledge and skills, theoretical, experimental and modelling capacities, and formal/legal background."*



FACULTY OF AGRICULTURE  
UNIVERSITY OF NOVI SAD  
Trg DOSITEJA OBRADOVIĆA 8  
21000 NOVI SAD  
SERBIA

[www.serbiaforexcell.com](http://www.serbiaforexcell.com)