

Farmers' Adaptation and Sustainability in Tunisia through Excellence in Research

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1st Spring school

for Farmer Advisory Services Agents of Change

16-20 March 2020 Tabarka, Tunisia



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The EU H2020 project **FASTER**, *Farmers'* Adaptation and Sustainability in Tunisia through **Excellence** in **Research**, aims to reinforce research and knowledge transfer capacity of the Tunisian National Research Institute of Rural Engineering, Water and Forests (INRGREF) related to innovative climate change adaptation measures in land and water management and its implementation through the use of Farm Advisory Systems (FAS). To achieve its mission, FASTER is developing a sustainable framework for research and is building international networking and partnership as well as FAS capacity building and practice.

The consortium gathers seven European and Tunisian partners. CREAF and Lund University are ensuring knowledge transfer to strengthen the scientific excellence of researchers and technicians of INRGREF and the associated IRESA (the Institution for Agricultural Research and Higher Education) centres. Europe for Business will then evaluate the experience from an economic perspective, and Vision Communication will ensure an appropriate public awareness and dissemination of results. Finally, AVFA (the Agriculture Extension and Training Agency) will serve as a liaison with policy makers and related stakeholders, making sure to integrate the FASTER results into national policies.

The spring school training program will reinforce the FAS concept application fostering its use as a tool for adaptation to climate change. The FASTER spring school aims to enhance the transfer of knowledge between researchers and experts to farm advisory agents and professional organizations in the agricultural sector. In particular, the spring school program will actively engage participants to adopt the user-centred and multi-stakeholder approach to integrate research results and professional knowledge on the specific topics related to adaptation to climate change in the fields of water, soil and agriculture. For the above reasons, **the spring school will have interactive formats for experts, farm advisory agents and other actors of the agriculture sector in North and North-West Tunisia to interact and share experiences, as well as contributing to the co-design of adaptation solutions and improving the production of relevant scientific information relevant in farmer advice.**



The spring school program will consist of 5-days activities for participants, including training, interactive workshops and field trips. Each day, an expert from Lund University will introduce the courses through a general overview in an interactive manner. Then, the courses will focus on the Tunisian perspective by giving practice-based knowledge through hands-on activities. The objective is to combine the knowledge of international experts with inputs provided by local and national institutions and experts.



The first spring school program will:

- Introduce the main challenges related to climate change in Tunisia;
- Provide tailored training on water and soil management;
- Focus on several measures to face climate change in the fields of water, soil and agriculture.
- Provide discussion between experts and FAS agents on adaptation possibilities in the Mediterranean for agriculture and crop production and possibilities to increase resilience in soil and water use;
- Share experience-based knowledge from various fields in hydrology, agronomy, climate, among others;
- Highlight experience from innovation prone farmers in the area by field visits;
- Adopt a highly interdisciplinary and integrated approach, allowing for interactions based on the exchange of experiences and discussions between national and international contributors;
- Consider a practical hands-on approach through interactive workshop formats and field visits.



The spring school aims to focus con climate change impacts on agriculture Northwest Tunisia, also considering the socioeconomic effects and the different adaptation measures that could be applied. To that end, the FASTER consortium is pleased to invite all the attendees to actively participate in the seminars and share their knowledge.

Proposed themes for the week:

Climate change, projections and challenges

The first day of the spring school aims to bring a general overview of climate change effects expected for Tunisia as a whole and the Northwest in particular for water access and agriculture. The day will focus on climate change, presenting and discussing potential consequences for Tunisia in terms of water management and agricultural production.

Hydrology, soils, and modelling in agriculture

The focus will be put on hydrological aspects and effects, use in agriculture, simulation techniques as well as different ways to improve and decrease data uncertainty. The morning will be devoted to interactive seminars. The afternoon will be dedicated to field visits to get hands-on about performing data collection and modelling in hydrology and agriculture. The participants will have the opportunity to visit regional offices that collect and handle data in hydrology or agriculture and experimental agricultural fields equipped with soil, water, and crop sensors, among others.

Water balances, hydrology and water use

Participants will have the possibility to discuss the effects of water balances and water use. Leading questions will be, for example, what are the possibilities for different types of marginal water use in the future? How are they projected to change in terms of quality, quantity, and availability in the coming decades? What are the risks and benefits of limited water use in the future? What are the international experiences, and how can we adapt to these new conditions?

Field visits

To achieve more practical experience, the participants will be engaged in a full day of field visits. Such visits will be focussing on topics such as the management of soils, salinity, crop production, irrigated perimeters using marginal water, salinity observations, precision agriculture, new irrigation techniques, water collection and storage systems.

Day 5

Soils and water management: Farmers' strategies

The last day of the spring school will revolve around practical management of soils, salinity, and crops. The discussions aim to identify and validate adaptation possibilities to face the upcoming climate change impacts discussed during the first day of classes. Several aspects will be presented and discussed, such as the changing of crops, the use of alternative marginal water-given salinity, precision agriculture, and their relation to adaptation and resilience measures.

The day concludes with the evaluation of the courses and interviews with some of the participants.