



D6.5 FATIMA Training Strategy and Material

WP6 – Market consolidation, dissemination, and training

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1 Executive Summary

The purpose of the current deliverable is to set the training strategy that will be followed and elaborate on the project's training activities that will be executed throughout the duration of the project and beyond.

Training is crucial to expand the use of tools and products of FATIMA. This document provides a description of the FATIMA training strategy and materials. The FATIMA consortium recognises that training activities are an essential and pervasive activity throughout the project's life.

This training strategy describes training of experts and end users on the project's results or products during project period and beyond the project.



2 Context

The overall objective of FATIMA project is to establish innovative and new farm tools and service capacities that help the intensive farm sector optimize its external input management (nutrients and water) and productivity, with the vision of bridging sustainable crop production with fair economic competitiveness. The project will be implemented through the achievement of the following specific objectives:

Multi-actor community platform and prosperous farming community. To strengthen and empower the user community by setting-up and maintaining a multi-actor participatory process in all pilot areas, which puts the users in the driver's seat of development and piloting.

Integrated EO- and WSN-assisted toolsets. To develop Earth observation (EO)-and wireless sensor network (WSN)-assisted pre-operational tools and services for effective and efficient precision farming and agri-environmental management.

On-farm nutrient management. To review the sustainability potential of state-of-the-art soil and crop management and cropping systems and to optimize and fine-tune nutrient management at subplot to plot scale and beyond.

On-farm water management. To optimize and fine-tune irrigation water management from subplot to irrigation scheme scale.

Pilot demonstration and validation. To validate and demonstrate the tools and services in a set of pilots (representative for a wide range of intensive crop production systems: cereals, potato, corn, rape, vegetables, vine, fruit) and prepare their sustainable operation.

Sustainable policy framework. To analyze relevant policies for synergies, conflicts and feedback loops and to develop a set of indicators that allow for characterizing an enabling environment and design innovative policy instruments for sustainable crop production.

The challenge for sustainable crop production is to achieve optimized yield (in quantity and quality) and farm income with a minimum of inputs (nutrients, water, energy, pesticides, herbicides, labor, money), while preserving and protecting the environment and social fabric. The focus is on nutrients and water, while maintaining an integrated perspective of all factors. The approach and concept of FATIMA project is based on five interconnected levels for optimizing external nutrient inputs and water management namely: a) On a technology level, b) On the ground / in the field, c) Working with people in a multi-actor participative environment, d) On an economic level, and e) On a policy level.

Finally the innovative FATIMA toolsets, practices, and frameworks will be implemented and demonstrated in seven pilot areas that represent a wide range of European intensive crop production systems: Spain (irrigated and rainfed wheat, corn, onion, and vine), Italy (tomato, fruit, wheat, corn, sugar beet, vine), Greece (Cotton, corn, wheat), Czech Republic (winter and spring barley and wheat, triticale, corn, oilseed rape), Austria (sugar beet, vegetables, potato, winter cereal), France (wheat, tomato, corn), Turkey (cotton, rainfed winter wheat and corn).

3 FATIMA Training Strategy

FATIMA training strategy is planned at two level as national and international. One of the main elements which are crucial for the successful implementation of FATIMA project and the sustainability of its main outcomes is training of different groups on FATIMA tools. FATIMA is focused on farmers as end users. Training begins to raise awareness of farmers about FATIMA project activities, goals and tools. This phase started with implementation of the project and continued during project with a core farmer group. The project activities in seven pilot areas have been carried out with farmers, local champions. In each pilot area a group of farmers was composed to implement the project activities. Awareness about project goals and



tools increased in these farmer groups by the regional teams. However, this is limited to the pilot areas where the project is implemented and monitored by regional teams. Dissemination and implementation of the results and tools of the project is closely related to trainings. During project lifetime trainings of the regional team members as training of trainers and local champions have been done. Regional teams and some core users were trained during project period in the regions but not country wide. To disseminate project tools and results trainings will be organized for NGO's, Farmers Unions, extension or advisory services and also researchers at national level to increase awareness and use of these tools and results. These trainings will it make possible to reach more number of farmers at regional and nationwide level. FATIMA is implemented in seven pilot areas and we believe the tools and results of the project are applicable to different countries. During project lifetime FATIMA was introduced to the experts from different countries who participated to training courses that are organized by UTAEM. It helped to raise awareness about the project. The training strategy therefore consists training courses at international levels for experts especially from African countries and Central Asia countries.

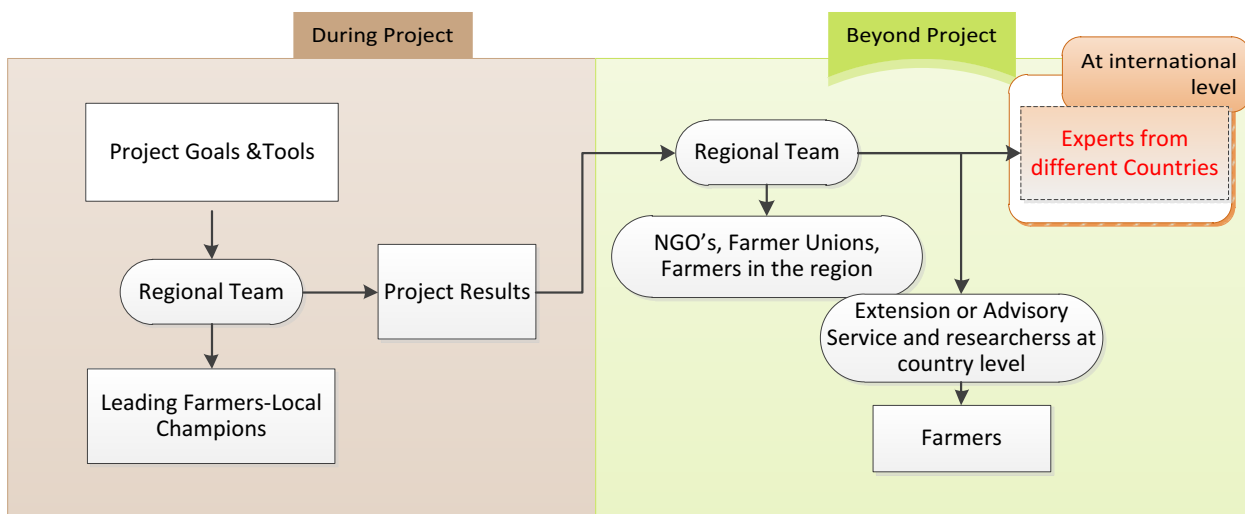


Figure 1: Schematic diagram of FATIMA Training strategy.

3.1 Training Methodology

Training methodology can be categorized in two groups: one is for experts and the other is for the end users. Training for experts can be implemented at two level, national and international. Effective training can be defined as that which engages the recipient in a process of increased awareness, understanding or commitment and action which mean is the capability of the use of FATIMA tools.

Initially, the project requires its potential audience to be **AWARE** of its aims and objectives. Then they will become interested enough to wish a more detailed **UNDERSTANDING**. Involvement in both of these two stages will provide the basis for training for **ACTION**.

It is crucial to ensure the sustainability of the training strategy so that the knowledge developed within the project continues to exist **beyond the life cycle of the project**. Training beyond the project lifetime will be part of the roadmap for sustainable implementation developed in WP's. Aiming to form a network in which the agricultural sector will become familiar with the new system and will cope with the challenge of more sustainable and higher productivity with the minimum impact on natural resources, FATIMA's knowledge and use of tools will be made accessible to stakeholders.

3.2 Objectives

The core objective of FATIMA Training strategy is to fulfill the need to train experts and end users on the tools of FATIMA project.

The main objectives of the trainings are:

- ❖ To raise the number of end users and provide use of the project tools and its results among the target groups.
- ❖ To expand the use of the results and the tools of FATIMA.
- ❖ To raise awareness of policy makers and public bodies.
- ❖ To facilitate synergies with similar or complementary initiatives.
- ❖ To ensure transferability and scalability of results by raising awareness about the FATIMA project results to other regions / stakeholders.
- ❖ To create a favorable reputation and competitive advantage of the project and its solution.
- ❖ To make the application advantages known to the agricultural community.
- ❖ To promote, implement and spread the use of the service.
- ❖ To transfer scientific results of the project to relevant communities.

3.3 Expected results

The expected results of the FATIMA training strategy are:

- ❖ The awareness raising about the project activities, informing the target audiences and the general public about the existence of the FATIMA project.
- ❖ The explanation to the target groups which benefits the project provides and how the results can be exploited.
- ❖ The expansion of FATIMA activities not only in participating countries, but also in other countries with similar interests.
- ❖ The sustainable use of FATIMA tools and products.

4 Target groups

The FATIMA project has a diverse range of target groups and audiences that it intends to contact, attempt to influence or serve. However, the training strategy is focused on some of these groups who can use the tools and products after training. This section of the strategy will address the appropriate groups to be trained.

The current target groups for the FATIMA project include:

- 🌱 Farmers and farmers' associations all over Europe and beyond,
- 🌱 Irrigation water providers, river basin managers,
- 🌱 Water or agricultural management authorities at regional or national level,
- 🌱 Irrigation management systems solution companies,
- 🌱 Environmental/ agriculture consultancy and software companies,
- 🌱 Agribusinesses, fertiliser and plant nutrient management industry,
- 🌱 Chambers/ associations/ clusters of the abovementioned companies,
- 🌱 Agricultural research institutes/ networks/ associations,
- 🌱 Agricultural educational institutes/ networks/ associations.



5 Training Materials

The following sections describe the training materials tools that will be used within the context of the FATIMA training strategy. These tools can be further specified after consultation with local partners and in relevance to the specified priorities on local level.

The training material includes:

- ❖ The results of the pilot areas in the project,
- ❖ webGIS Manual (SPIDERwebGIS® or Irrisat),
- ❖ Leaflets,
- ❖ The project brochure,
- ❖ The info factsheet,
- ❖ Videos,
- ❖ E-learning material in all pilot area languages.

6 Training Actions

The training activities will be designed based on the characteristics of the groups. For each group the training program will be different.

- ❖ Training of NGO's, Farmer Unions,
- ❖ Training of Extension or Advisory Services,
- ❖ Training of Experts(Researchers)at country level,
- ❖ Training of Experts(Researchers)at international level.

7 Project partners' role in training

The FATIMA consortium consists of partners with significant links with stakeholders that have potential interest to the project. All project partners are in a strong position to develop an effective training strategy. The responsibilities of each project partner for the training, they are summarized in the following table:

Table 1: FATIMA project partner's individual roles in training

Partner	Role in training
UTAEM	To coordinate international training programs To organize training at local and national level for all targeted groups
UCLM	Evaluate effectiveness of training, Make corrections and suggestions where needed, Decide upon participation in trainings
University partners	Presentations of the new technologies and the achievements of FATIMA in order to promote the awareness of the students. Includer webGIS in undergraduate curricula.
All partners	To organize training at local and national level for all targeted groups

8 Training Impact Indicators

Impact with regard to training can help partners to understand the reach and sustainability of the project's results. Both quantitative and qualitative will be used to monitor the impact of training activities. Some of the proposed indicators are included in the table below:



Table 2: FATIMA Training impact indicators

Indicator	Target
Number of farmers or representatives participating at the trainings	50
Number of experts (working for extension or advisory services) participating at the trainings	100
Number of experts (researchers) participating at the trainings	100
Number of international experts (researchers) participating at the trainings	50 participants from 10 countries

9 Summary of actual training activities and material

3 Central 2-day training workshops in Albacete (lead by UCLM)

July 2016 (participants from CZ, TR, GR)

Dec 2016 (participants from CZ, TR, GR)

Apr 2017 (participants from CZ, TR, GR)

Several local training events in each pilot area (led by local partners)

during Regional Meetings

in small groups or individual farmers

How-to training tutorials SPIDERwebGIS® on YouTube

English (for basic users)

Spanish (4 parts for basic & advanced users)

Tutorial documents SPIDERwebGIS® for administrators & users

English, Spanish, Czech

10 Conclusions

Through the implementation of this Training Strategy, FATIMA will maximize its impact to the agricultural world and policy makers across and beyond Europe. Its impact depends on the successful configuration of the trainings on the tools of the project.

Trainings at different levels in a wide range of environments have been held throughout the project.

