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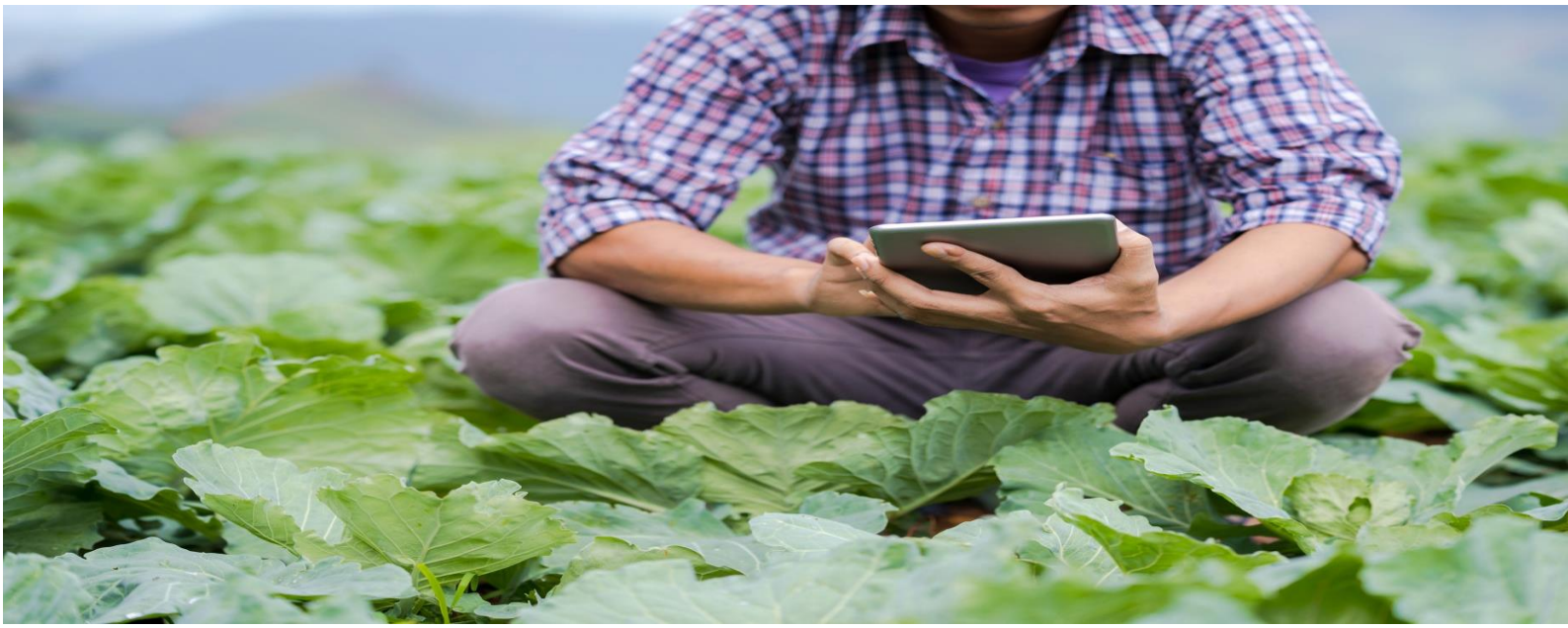

NEWSLETTER

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SUMMARY

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SMALLDERS 4th General Assembly

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The 4th General Assembly (GA) meeting of the SMALLDERS Project took place online on April 29, 2024, from 11:00 AM to 12:30 PM CET. This meeting brought together principal investigators and researchers from all partnering institutions, including the University of Calabria (Italy), the University of Parma (Italy), IMT Mines Alès (France), the University of Extremadura (Spain), and the University of Tunis El Manar (Tunisia).

15 participants attended this highly engaging meeting, including different project team members. Each team made presentations to explain their work progress. Then, a discussion was held to present future activities, future deliverables, testbed progress and action points. Project members discussed the various challenges associated with future activities and proposed potential solutions to address them, particularly by involving stakeholders from each testbed country, such as smallholders, key stakeholders, freight transport companies, and policymakers.

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SMALLDERS 5th General Assembly

SMALLDERS Project held its 5th General Assembly (GA) meeting, on 18th September 2024 in a hybrid mode (face-to-face and online participation) in Tenerife, Spain at 4pm-5.30pm. The 5th - GA meeting involved principal investigators and researchers of all Partners (University of Calabria, Italy; University of Parma, Italy; IMT Mines Ales, France; University of Extremadura, Spain; University of Tunis El Manar, Tunisia).

19 participants attended this engaging meeting, which included various project team members and one advisory board member. Francesco and Vittorio kicked off the fifth General Assembly by providing an overview of the project and discussing their work packages. They also initiated a conversation about the deliverables expected by M30+6, covering topics such as stakeholder integration, the maximum number of stakeholders to be included in each testbed, and the types and numbers of sensors to be installed in the various testbeds across different countries, along with an analogy of these elements.

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Participation of SMALLDERS partners in the International Multidisciplinary Modeling & Simulation Multiconference (I3M), held on 18-20 September 2024 in Tenerife, Spain

On September 18-19, 2024, the partners of the SMALLDERS project participated in the I3M conference in Tenerife, Spain. The SMALLDERS team has organized three sessions during the event: one dedicated to FOODOPS and a final session highlighting PRIMA projects.

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FOODOPS special session

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The session began with a comprehensive presentation of the SMALLDERS project by Prof. Vittorio Solina from UNICAL, followed by contributions from the other project partners. The main objective was to summarize the key outcomes of the SMALLDERS project.

The Tunisian partner (University Tunis El Manar, LAPER) presented two papers:

The first on exploring novel sustainability metrics for the agri-food supply chain, and the second on the role of Life Cycle Assessment (LCA) in promoting olive oil sustainability.

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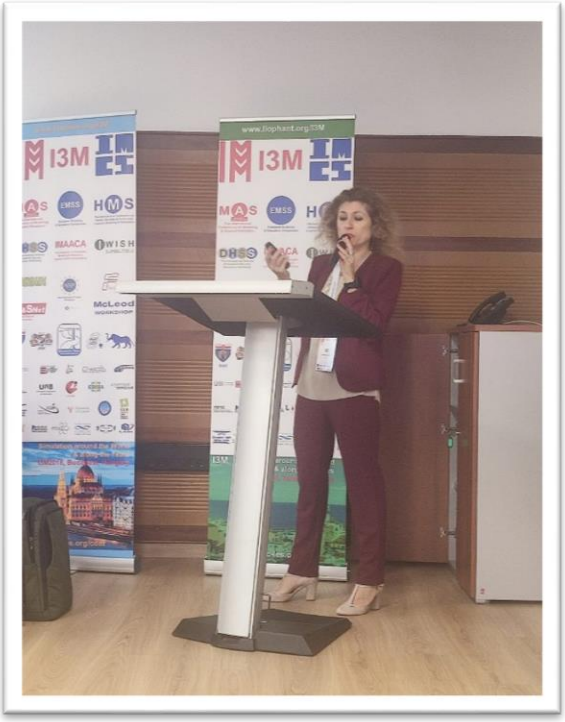
One of the Italian partners, the University of Parma (UNIPR), presented their research on the implementation of automatic identification and data capturing technologies in agri-food supply chains.



The French partner, IMT Mines Alès-LSR, presented on smallholder selection in short food supply chains, along with another paper discussing generative AI for business model generation (GAI4BM): transforming textual descriptions into business process models.

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MAS-DHSS-FOODOPS (presentation of paper)

Safa (LAPER) participated in the FOODOPS conference presenting a case study on assessing multi-capital sustainability in agri-food supply chains, using the Simple Multi-Attribute Rating Technique.

Special session with PRIMA projects

The session focused on presenting various European PRIMA projects, featuring four presentations: the GREENDRIEDFRUITS Project, the TECHONEY Project, the CERERE Project, and the SMALLDERS Project. Each project was discussed in detail, highlighting its unique objectives and overall framework.

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Elisa De Marco (UNIMI) introduced the "GREENDRIEDFRUITS" project, launched in July 2022 and set to last 36 months with an 8-month extension. The project aims to replace pesticide use in dried fruit pest control with thermal treatment protocols and a sensor-app system, promoting sustainability and food safety through demonstrations in Greece, Israel, and Turkey.

Tiziana De Magistris (CITA) presented the "TECHONEY" project, which aims to improve market positioning for small honey producers through a blockchain-based ecosystem. Involving partners from the Mediterranean, the project enhances beekeeping by promoting traceability, value mapping, and an e-commerce platform to ensure food safety and community engagement.

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Antonio Padovano (UNICAL) presented the "CERERE" project, which aims to enhance cereal supply chain resilience in the MENA region. Involving nine partners from six Mediterranean countries, the project focuses on mitigating disruptions through research and stakeholder engagement, targeting key cereals like wheat and barley with activities in Turkey, Egypt, Italy, and Portugal.

Vittorio Solina (UNICAL) presented the SMALLDERS project, which was launched on May 1, 2022, with the aim of enhancing the resilience and sustainability of small-scale Mediterranean farms. The presentation included a discussion on experience sharing and the challenges faced throughout the project.

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Participation of SMALLDERS partners in the International Conference on Industry 4.0 and Smart Manufacturing (ISM 2024), held on 20-22 November 2024 in Prague, Czech Republic

Prof. Vittorio Solina from the University of UNICAL provided an overview of the SMALLDERS project's progress in terms of testbeds and summarized the main results obtained on 22 November 2024 at the International Conference on Industry 4.0 and Smart Manufacturing (ISM 2024) during the R&D Project Dissemination Session.

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Progress of the Tunisian Testbed Implementation

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The table below outlines the expected Tunisian actors:

Expected actors	Involved actors (direct visits and virtual meetings)	Logo
Citizens	Professors and students of the University of Tunis El Manar	
Critical stakeholders	Saveurs du Cap Bon	
Freight transport companies	Big Boss	
Policymakers	CRDA Nabeul: Regional Commissioner for Agricultural Development in Nabeul which is an office of the Ministry of Agriculture, Water Resources, and Fisheries in Tunisia	

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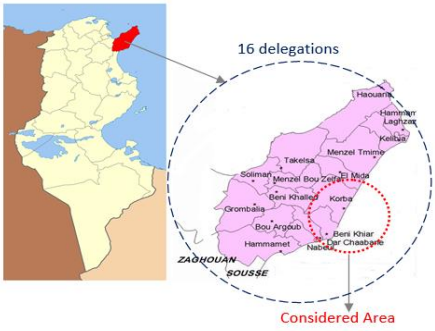
Details of the Tunisian Testbed: The Tunisian testbed region in Cap Bon contributes 15% to the national agricultural production.



Overview of the Tunisian Testbed Region: It's a farm located northeast of Tunisia, in Dawar Al Frenin (36°34'60'' N, 10°40'60'' E), in the governorate of Nabeul. It was chosen for its strategic location, optimal farming conditions, and accessible infrastructure. The total area is approximately 5 hectares, equipped with drinking water and irrigated by a well. The land is divided into several plots, each measuring 300 m², primarily dedicated to arboriculture, focusing on lemon, mandarin, and other fruit trees.

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Sensors' installation in Tunisia

On May 3, 2024, the Tunisian SMALLDERS team installed 9 sensors on a farm in Dar Chaben Fehri, Fernin. These included 2 valves, 2 flowmeters, 2 CO2 sensors, and 3 moisture sensors in different locations as shown in the following figure.

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Photos of sensor installation in Tunisia

Progress of the Italian Testbed Implementation

The table below outlines the expected Italian actors:

Expected actors	Involved actors (direct visits and virtual meeting)	Logo
Citizens	• UNIPR students • Smallholders' stakeholders	
Critical stakeholders	• Ecornaturasì	
Freight transport companies	• Ecornaturasì	
Policymakers	• Ms. Patrizia Alberti: General Directorate for Agriculture, Hunting and Fisheries, Business Competitiveness and Innovation Development Sector (Emilia-Romagna Region, Italy) • Mr. Giovanni Bonoretti: Head of Area and Sector Agriculture - Hunting and Fishing Ambits of Parma and Piacenza	

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Overview of the Italian Testbed Region: The Italian testbed, managed by Agricultural Cooperative Cà Magre, is located in Isola della Scala, Verona, Italy. It covers about 60 ha and specializes in vegetable cultivation. Identified by the University of Parma (UNIPR) for the SMALLDERS project, Cà Magre was founded in 1988 and has evolved in organic agriculture.

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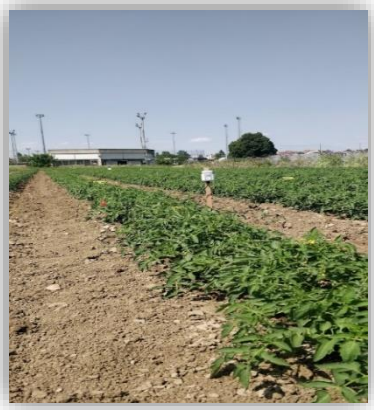
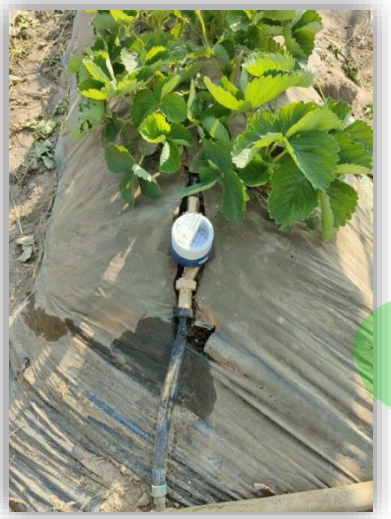
Photos of sensor installation in Italy











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Progress of the Spanish Testbed Implementation

The table below outlines the expected Spanish actors:

Expected actors	Involved actors (direct visits and virtual meeting)	Logo
Citizens	• Focus Group participants (Spain)	
Critical stakeholders	• Explum	explum
Freight transport companies	• JOPIGAJO S.L.U	TRANSPORTES GALO JOPIGAJO S.L.U. C/ Los Gladiolos, 2 06185 VALDELACALZADA (BADAJOZ) Telfs.: 924 44 71 84 - 609 67 50 57 E-mail: jopigajo@gmail.com
Policymakers	• Mr. Gabriel Montero. Head of Department. Directorate General of Cooperatives. Regional Government of Extremadura	JUNTA DE EXTREMADURA

Explum

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Overview of the Spanish Testbed Regions

The Spanish Testbed is located on a farm in the municipality of Valdelacalzada (Badajoz, 38°52'56.4"N 6°42'46.4"W). The farm spans a total area of approximately 5 hectares, where a diverse range of crops, including strawberries, potatoes, tomatoes, and other agricultural products, are cultivated using sustainable, natural, and ecological farming practices. Specifically, the sensors are installed on the part of the land used for tomato cultivation (0.5 hectares).

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Photos from the Sensor Installation in Spain

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Progress of the French Testbed Implementation

The table below outlines the expected French actors:

Expected actors	Involved actors (direct visits and virtual meeting)	Logo
Citizens	• Professors and Students of IMT Mines-Alès and stakeholders	
Critical stakeholders	• Le Mas des Agriculteurs	Le MAS des agriculteurs
Freight transport companies	• escale	escale
Policymakers	• Sophie Auriac: Policymaker and responsible for the Territorial Food Project at Nimes Métropole	

Le Mas des Agriculteurs

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Overview of the French Testbed Region

The French testbed, located at Le Potager d'Aubrespin in Saint-Gervasy, France, covers an area of approximately 1.5 hectares. This market gardening company specializes in the cultivation of kiwi and other seasonal produce, using natural and ecological farming practices without pesticides or chemical inputs. Their focus on local distribution and short supply chains supports responsible and sustainable consumption.