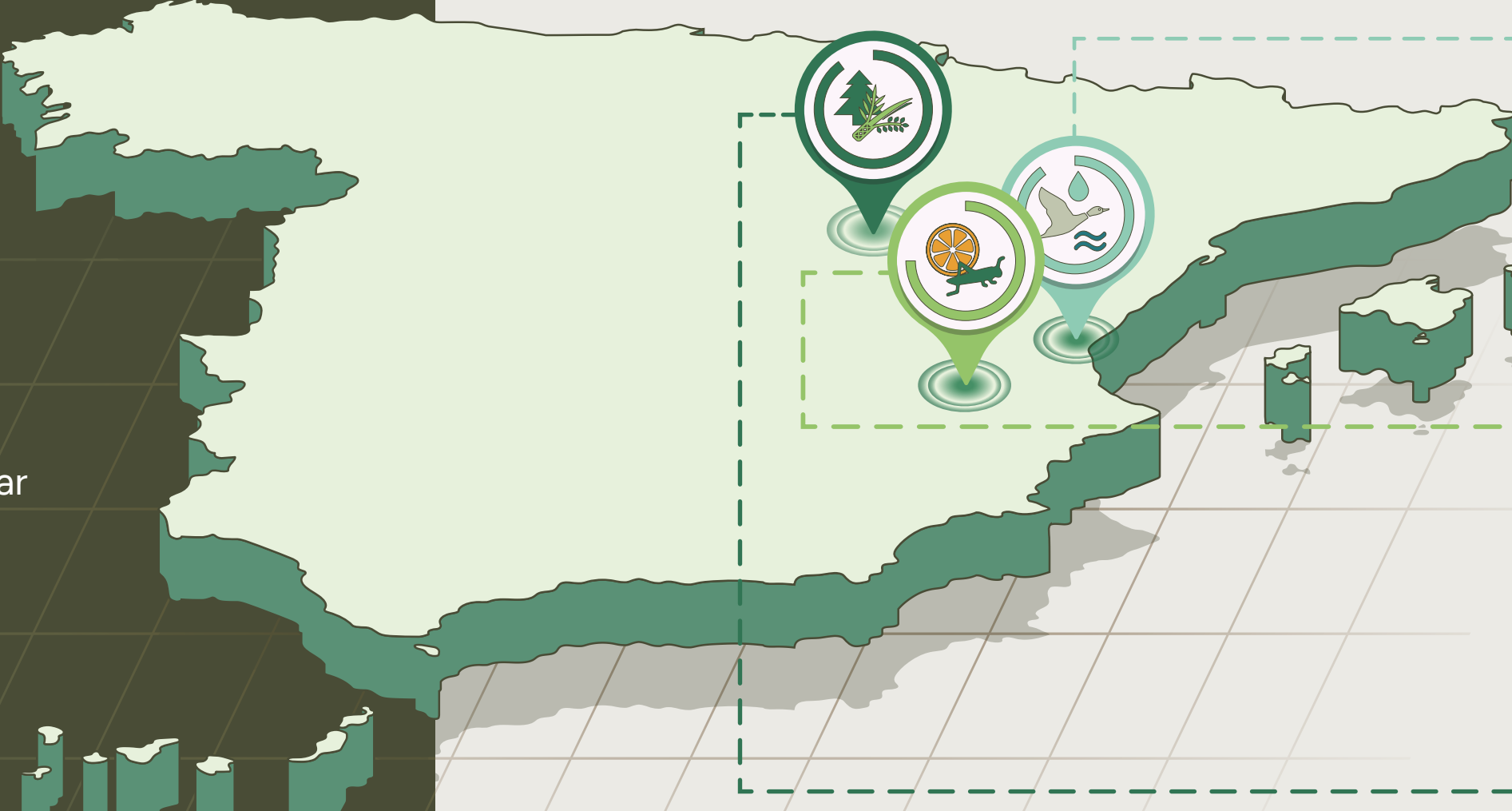


WATER, AGRICULTURE & FORESTRY MANAGEMENT

Know-how Environmental Management & Demonstration sites availability

KNOW-HOW AND ENGINEERING SKILLS APPLICABLE TO THE PRIMARY SECTOR

- Environmental, economic and social impacts evaluations, applying Eco-design and LCA methodologies to bio-based products and processes.
- Guidance and monitoring of demonstration activities, establishing synergies with ICT solutions, e.g. AI, IoT, Digital Twins & Earth observation.
- Study and enhancement of local and circular bioeconomy value chains, fostering waste valorisation and industrial symbiosis.
- Design of market and business strategies for bio-based approaches.
- Societal acceptance, communication and engagement of local stakeholders



DEMO SITE 1

Wetland nearby "Marjal dels Moros", sharing ecosystem with Natura 2000 area.



DEMO SITE 2

Mediterranean fruit tree plantation, 12 ha clementine fruit trees under production.



DEMO SITE 3

Forestry, Agriculture and Livestock testing areal. 200 ha of forest area, 25 ha areas of cereal crops cultivation and bovine livestock



WATER MANAGEMENT | A DEDICATED DEMONSTRATION SITE

DEMO SITE 1



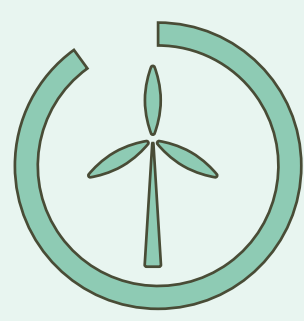
The demonstration site is annexed to and shares the ecosystem of the "Marjal dels Moros," a protected area under the NATURA 2000 network. It has been designated as a Special Protection Area (SPA), or ZEPA in Spanish, for the conservation of wild birds, hosting over 150 species within an area of less than 500 hectares, including *Chlidonias hybridus*, *Egretta garzetta*, and *Marmaronetta angustirostris*. Other species, such as *Emys orbicularis*, are also present.

The predominant vegetation consists of *Phragmites communis* and *Typha domingensis*, while unique species like *Limonium dufourii*, *Thalictrum maritimum Dufour*, and *Odontites kaliformis* can also be found. A unique aquifer supplies water for irrigation to nearby agricultural fields, making it an ideal pilot site for testing innovative water management and irrigation technologies. Additionally, the site is conveniently located just 25 km from Valencia Airport and 2 km from the award-winning Puçol beach.



WATER MANAGEMENT | OUR EXPERTISE AND ASSETS

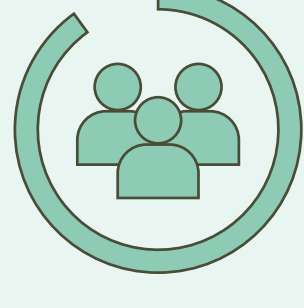
Addressing a TRIPLE IMPACT SUSTAINABILITY assessment of water management and remediation solutions



ENVIRONMENTAL



ECONOMIC



SOCIAL

- Ensuring Compliance with EU Water Framework Directive, and fostering the accomplishment of the Zero Pollution Action Plan for air, water and soil.
- Establishing a Sustainable ater Management framework with specific indicators.
- Accomplishing Environmental Impact Assessment.
- Evaluating the Water Footprint, and the Environmental, Economic and social impact of novel technologies addressing water scarcity, droughts, reducing agricultural and industrial emissions, enhancing water reuse and remediation, improving sustainable urban wastewater management.
- Guaranteeing the use of best available techniques.
- Improving the efficient use of natural resources, including water.
- Fostering the Economic and Social development of local communities.
- Improving trust reelationship among all the stakeholders.



AGRICULTURE | A DEDICATED DEMONSTRATION SITE

DEMO SITE 2



The demonstration site is located near DEMO SITE 1 and the NATURA 2000 protected area "Marjal dels Moros." It covers 12 hectares of controlled fruit tree cultivation currently in production. This site is ideal for data collection and agricultural testing, focusing on aspects such as soil quality, irrigation management, pest control, and the implementation of new farming and harvesting technologies. These include machinery, fertilizers, sensors, and digital solutions that adapt to climate change. The cultivated species include *Citrus reticulata*, *Clemenules*, and *Citrus sinensis*.



Global Dimension, integration of end users and Socio Economical Assessment of the technologies deployed



- End user stakeholders engagement, and integration of relevant actors from the EU forestry, private actors (investors, owners) and rural areas communities in order to provide inputs to the platform and to generate recommendations and roadmaps to prevent the effects of climate change in the local rural/agro-forest planning
- Policy observatory – creating a synergy of the project with S3P and S3/4 EU regions. Integrating the concept of rural planning, forestry planning and urban-forestry interface
- European dimension - Clustering and integration within ECCP group – Other EU projects – EU networks
 - Connection with EU projects and Institutes – Climate change study on forestry
 - Call: HORIZON-CLS-2023-D1-01-01— Further climate knowledge through advanced science and technologies for analysing Earth observation and Earth system model data
- Study of relevance of climate change on forestry – for investors, for CO2 sink and tickets planning, for rural communities
 - CO2 fingerprint and CO2 credit computation:
 - Possible access to historical data for models validation (join ad-hoc partners) – validation of models through data acquisition during the project time frame – installing specific sensors – (temperature, CO2 soil, humidity, aquifers levels)



FORESTRY, AGRICULTURE AND LIVESTOCK | A DEDICATED DEMONSTRATION SITE

DEMO SITE 3

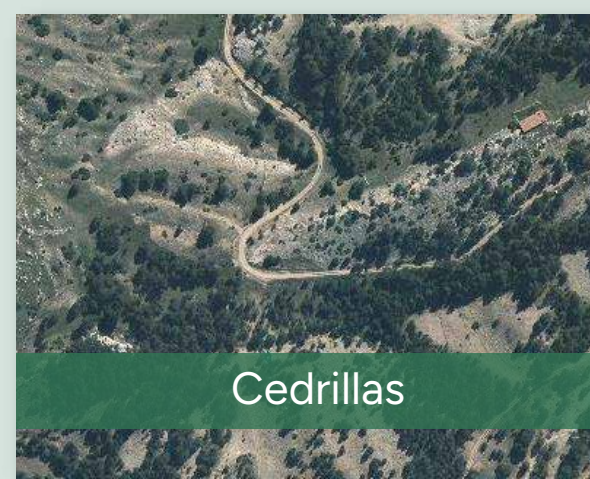


The demonstration site is situated in the Maestrazgo Mountains at an average altitude of approximately 1,500 meters. It spans 200 hectares of Mediterranean forest, with the potential to expand significantly to over 15,000 hectares through collaboration with other major private forest owners and key governmental authorities, including the Aragón government, the municipalities of Teruel, and SARGA (the Aragón Society for Environmental Management). The area features a rich, wet subsoil and a diverse range of forest species, such as *Pinus nigra*, *Pinus halepensis*, *Pinus pinea*, *Ulmus*, and *Populus nigra*. It is also home to various mycological species, including *Lactarius deliciosus*, *Tricholoma terreum*, and *Arasmius oreades*, as well as scrubland plants like *Juniperus communis*, *Prunus spinosa*, and *Rosa micrantha*. Additionally, it hosts tuber-producing species, such as *Tuber melanosporum*.

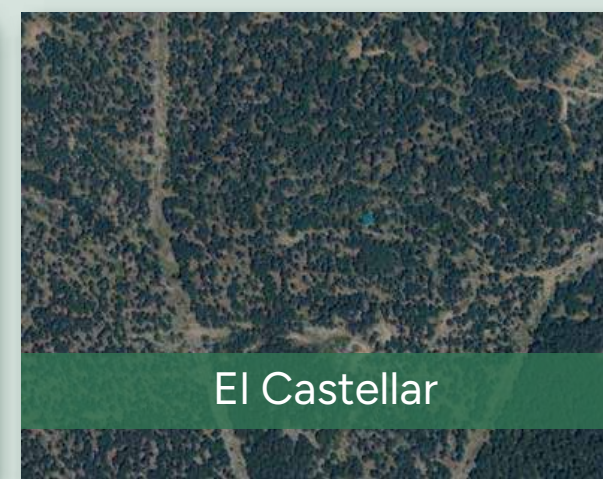


FORESTRY, AGRICULTURE AND LIVESTOCK | A DEDICATED DEMONSTRATION SITE

DEMO SITE 3 | 3 Targeted Areas



Cedrillas



El Castellar



Fortanete

- 3 targeted forest areas within the 200 ha demo site.
- Ideal pilot site for forest data collection and testing new technologies (e.g. drones, sensors and IoT) for Sustainable Forest Management, monitoring soil quality, forestry ecosystem biodiversity, measuring climate change effects and fostering wood-based products and services exploitation.
- Agriculture and livestock demonstration area 25 ha.
- Cereal crops & herbaceous: *Triticum aestivum*, *Hordeum vulgare*, *Onobrychis viciifolia*.
- Bovine livestock.
- Available to test novel technologies and monitoring systems for the implementation of sustainable farming methods within a circular approach.

