



SUSTAIN

Sustainable use of salt-affected lands



3rd Training School of the SUSTAIN COST Action on “Plant, Soil, and Water Capability Assessment”

Villa Fattoria Granducale
Ente Terre Regionali
Toscane
Alberese (Grosseto, Italy)
26-27 March, 2025



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Saline intrusion is a highly significant phenomenon that, due to climate change, is increasing in both frequency and intensity, leading to the progressive salinization of previously highly productive soils. In Tuscany, particularly due to the exceptional water scarcity in recent years, there has been a significant increase in soil salinity in coastal areas, including those used for grazing and cultivation. Increasing levels of soil salinity are progressively affecting this area, affect plant growth, soil structure, and leading to a collapse in plant biodiversity with significant economic, social, and environmental consequences.

The training activities will be conducted at the Ente Terre Regionali Toscane within the Maremma National Park, an important farming area, including farms where Maremma cattle are still bred in a semi-wild state. This area has however been severely affected by the phenomenon of saline intrusion which has resulted in great biodiversity loss and a greater risk of land abandonment and soil marginalization, with important socio-economic repercussions.

This training school focuses on raising awareness about the issue of soil salinity (especially for areas where this is a recent phenomenon) with GIS mapping and field activities focusing on soil and plant capability assessment and ecosystem services valuation techniques for salt-affected lands.

Learning outcomes:

At the end of the training, participants will:

- learn how to diagnose soil salinity using low-cost tools (e.g. the use of indicator species)
- learn of to monitor the impact of salinity on crops (with a focus on gas exchanges)
- learn how to evaluate ecosystem service
- hear from affected stakeholders on socio-economic repercussions of soil salinization processes.





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PROGRAMME



TERRE REGIONALI TOSCANE

March 26 – Day 1 (afternoon) Venue: Villa Fattoria Granducale	
14:00-15:00	Registration
14:00-15:30	Welcome and opening Dr. Katarzyna Negacz, <i>Vrije Universiteit Amsterdam, Chair COST Action SUSTAIN</i> Dr. Nadia Bazihizina, <i>University of Florence, Vice-Chair COST Action SUSTAIN</i> Dr. Giovanni Sordi, <i>Director Ente Terre Regionali Toscane</i>
15:30-15:45	Coffee break
15:45-19:00	Training on saline soil mapping with GIS and ecosystem services valuation techniques for salt-affected lands. Prof. Federico Martellozzo, <i>University of Florence</i> Dr. Katarzyna Negacz, <i>Vrije Universiteit Amsterdam</i> Dr. Zenepe Dafku, <i>University of Tirana</i>



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March 27 – Day 2 (morning) Departure: Venue: Villa Fattoria Granducale	
8:00-9:00	Registration and travel to field site
9:00-13:00	Field visit with training activities on evaluating soil, water and plant capabilities. Hands on activities will include soil analyses and vegetation survey for the identification indicator plant species and soil capabilities. Dr. Bas Bruning , <i>The Salt Doctors</i> Dr. Nadia Bazihizina , <i>University of Florence</i> Dr. Giulia Atzori , <i>Institute for Sustainable Plant Protection - National Research Council of Italy (CNR)</i> Prof. Andrea Coppi , <i>University of Florence</i> Dr. Donatella Cionfani , <i>Ente Terre Regionali Toscane</i> Dr. Alessio Mariotti , <i>Ente Terre Regionali Toscane</i>
13:00-13:30	Return to venue



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March 27 – Day 2 (afternoon)
Venue: Villa Fattoria Granducale

14:00-15:00	Lunch break	
15:00-15:45	Farmers caffè and tour de table for needs assessment session – part 1 The aim of the caffè is to bring together farmers and agricultural advisors to exchange experiences on issues with salinization in their region, to share information about the impact of salinization on soils and plant growth and give them the opportunity to raise concerns and questions they would like to discuss and bring to the table of policy makers	Moderators: Dr. Katarzyna Negacz , <i>Vrije Universiteit Amsterdam</i> Dr. Zenepe Dafku , <i>University of Tirana</i> Dr. Nadia Bazihizina , <i>University of Florence</i> Dr. Giulia Atzori , <i>Institute for Sustainable Plant Protection - CNR</i>
15:30-15:45	Coffee break	
15:45-17:00	Farmers caffè and tour de table for needs assessment session – part 2	



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