

APPLIED BOTANY

Botany to analyse, evaluate, preserve, restore, and enhance environment and biodiversity.



Main research activities are:

a) Evaluation of plant biodiversity for environmental restoration improvement of life quality and environmental sustainability:

- Selection of native flora able to cope with high level of environmental pollution potentially useful for heavy metals phytoremediation (specifically, phytostabilization or phytextraction) and habitat restoration;
- Focus on the plant-soil-fungal-bacterial interactions, set up of methodologies to improve bioremediation and phytoremediation with integrated synergic rhizospheric approach;
- assessment of metal accumulation in food plants and food security (agri-food)
- soil quality assessment (via ecotoxicological evaluation);
- focus on the plant response to abiotic and biotic stress in urban ecosystems, use of nature-based solutions (green and blue infrastructures) for the life quality improvement;
- characterization of herbaceous and forest communities related with ecosystem services provision, methods to evaluate potential invasiveness of alien flora and biological methods for their containment;
- conservation techniques and seed germination protocols of plant patrimonial species.

b) Survey, cartography, monitoring, analysis and set up of techniques for the conservation, evaluation and management plans of the botanical heritage, with special reference to 'NATURA2000 habitat'; impact assessment of project and plans on land use, in compliance with EU directive (dir.

1992/43/CE, 2009/147/CE; Reg. UE 1143/2014), on flora and vegetation; monitoring of environmental quality through Bryophytes and vascular plants; support to project design for 'habitat restoration' and 'plant translocation'.

c) Scientific Management of Botanical Gardens/ Parks, historic gardens, urban gardens for horticulture; support for sustainability of design phases, management, and evaluation [in collaboration with Hanbury Botanical Garden, Ventimiglia]

Keywords: agri-food, applied plant biology, bioremediation, biodiversity management and conservation, nature-based solutions, phytoremediation, habitat restoration; urban green.

Personnel DISTAV:

STAFF: Mauro Mariotti, Enrica Roccotiello, Mirca Zotti

COLLABORATORS: Grazia Cecchi (post-doc), Davide Dagnino (post-doc), Simone Di Piazza (post-doc), Sara Romeo (PhD student), Stefano Rosatto (post-doc), Claudia Turcato (spin-off); Elena Mora (technician); Carmela Sgrò (technician).

Funding bodies: Funding for University Research (FRA), Regione Liguria, European Community, COCIV.