



Use of dredged sediments for creating innovative growing media and technosols for plant nursery and soil rehabilitation

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The LIFE Agrised project

The AGRISED project aims at demonstrate the suitability of **dredged sediments** used with no intervention or co-composted with green waste to produce innovative technosols for reclamation of degraded land and brownfields and innovative growing media for plant nursery.

The **performance** of the innovative sediment based growing media and of reconstituted soil will be compared with the traditional land reclamation approaches and traditional growing media used for producing ornamental plants with high added.

The sediment/green waste co-composting process will produce **growing media** with better fertility, structure, water holding capacity, aeration, and biological activity than peat and coir pith. Demonstration trials will be conducted growing plants with high added value for the European market: Fraser photinia and laurustinus. The **technosols** will be used for maintenance of industrial areas and for rehabilitation of degraded soils.

The **LCA and economic analysis** about the re use of dredged sediments for the two production processes will be performed, in order to bring the innovative growing media for professional plant nursery and amendments for soils restoration close to the market.

Project coordinator

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The LIFE Agrised expected results

The specific technical results of LIFE Agrised will be:

- an innovative technology and specific protocols for more sustainable **management of dredged sediments and green-waste**, and innovative plant production using sediment-based growing media able to replace the current peat-based growing media with superior performance compared to other alternative growing media (e.g. coconut fibre);
- the evaluation of the **suitability of the co-composted sediment/green waste mixes** for sediment remediation, green waste recycling, ornamental plant production and use as amendment for degraded soil rehabilitation and as technosols for urban green maintenance;
- the characterization of the obtained materials in terms of **safety for ecosystems and human health**, and characterization of plant growth and health after prolonged growth on substrates containing co-composted sediments;
- the **improvement of the knowledge** on the treated sediments and green wastes and mitigation of their impact compared to the current management options;
- assessment of the **ecological impact** (LCA analysis);
- evaluation of eventual **reasons for hindrance** to market the innovative sediment based technosols and growing media;
- definition of **specific protocols** in the normative and legislative issues related to the use of co-composted sediments in agricultural production and soil rehabilitation.

Beneficiaries



Consiglio Nazionale delle Ricerche
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