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Sustainable strategies for the improvement of seriously degraded agricultural areas: the example of Pistachia vera L.

AgroStrat

“Soil Monitoring System”

Deliverable of Action A2: Soil and water monitoring-Development of soil indicators.

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AgroStrategies



The project

“Sustainable strategies for the improvement of seriously degraded agricultural areas: the example of *Pistachia vera* L.”

AgroStrat

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Summary

AgroStrat is an ambitious project, which foresees the development of an integrated scenario for the sustainable management of intensively cultivated Mediterranean areas. This scenario will be integrated to strategy through a series of actions and by using as an example *Pistachia vera* L. trees (*P. vera* L.) which are intensively cultivated in Aegina Island, Greece for the last 150 years. Apart from the development of sustainable management and monitoring plan at local/regional scale appropriate for intensively cultivated areas, the project focuses also on exploitation and valorization of pistachio wastes, which at present are disposed without control on soils causing several environmental problems.

Among the other objectives, AgroStrat aims to develop and deliver a *Soil Monitoring System* in the form of guidelines for sustainable soil monitoring strategies at Agricultural Waste (AW) disposal areas. An extended System was developed which considers both non-hazardous and potential hazardous/hazardous AW. Moreover, having gained knowledge and developed decisions-making tools and web applications for soil monitoring during the completed LIFE project, namely PROSODOL (2012), the LIFE AgroStrat project proposes in this study a holistic approach for soil monitoring, by exploitation and combination of results obtained by both LIFE projects (i.e. PROSODOL and AgroStrat).

For the support of these proposals, a series of monitoring and decision support tools have been developed during AgroStrat (deals mainly with composts and non-hazardous wastes) but also during PROSODOL project (deals with hazardous wastes), which are combined in this study to provide an integrated approach for the safe and sustainable recycling of agricultural wastes on soil, which is anticipated to assist authorities and farmers to reuse organic wastes on soil by a sustainable way.

The proposed Soil Monitoring System will be combined with a GIS-based Land Information System (GIS-LIS) and land suitability maps that will allow controlled and sustainable application of treated organic wastes and will guarantee preservation of soil and water quality,

The present study includes the Soil Monitoring System as well as all appropriate technical and practical data for AW disposal or reuse in agriculture in order to assist policy makers to design and implement monitoring actions that will ensure sustainable reuse of AW and protection of natural resources (i.e. soil and water).

Contents

SUMMARY	ERROR! BOOKMARK NOT DEFINED.
1. INTRODUCTION	6
1.1 SOIL	6
1.2 SOIL FUNCTIONS	6
1.3 SOIL QUALITY, HEALTH, FERTILITY AND RESILIENCE	8
1.4 SOIL THREATS AND DEGRADATION	9
1.4.1 ORGANIC MATTER DECLINE	11
1.4.2 SALINISATION AND SODIFICATION	12
1.4.3 CONTAMINATION	15
1.4.4 DESERTIFICATION	17
1.2 AGRICULTURAL WASTES-DISPOSAL ON SOIL	21
1.2.1 GENERAL ASPECTS	21
1.2.2. Disposal of Agricultural Wastes on soil	22
2. SOIL MONITORING	24
2.1 BUILDING A MONITORING STRATEGY FOR TRADITIONALLY USED AGRICULTURAL WASTES	24
2.1.1. PHYSICAL, CHEMICAL AND BIOLOGICAL CHARACTERIZATION OF WASTES	25
2.1.2. SOIL CHARACTERIZATION-ANALYSES	26
2.1.3. ESTABLISHMENT OF SOIL/WATER QUALITY CRITERIA	26
2.1.4. DEFINITION OF QUANTIFIED CULTIVATION TARGETS	27
2.1.5. DEVELOPMENT OF CULTIVATION PRACTICES	27
2.1.6. ENSURE SAFE USE OF WASTES AND PROTECTION OF WORKERS AND CITIZENS HEALTH	28
2.1.7. ENSURE SAFE FOOD PRODUCTION	28
2.1.8. DESIGN OF A REGULAR MONITORING STRATEGY TO ASSESS POTENTIAL RISKS FOR SOIL/WATER BODIES AND SAFE REUSE	29
2.2. BUILDING A MONITORING STRATEGY FOR POTENTIALLY HAZARDOUS/HAZARDOUS WASTES	31
2.2.1. PHYSICAL, CHEMICAL AND BIOLOGICAL CHARACTERIZATION OF THE WASTES	32
2.2.2. IDENTIFICATION OF POTENTIAL AND CURRENT WASTE DISPOSAL AREAS AND RECORDING THEM IN A GIS GEO-DATABASE	32
2.2.3. CHARACTERIZATION OF DISPOSAL AREAS-RISK ASSESSMENT	37
2.2.4. EVALUATION OF RISK LEVEL	38
2.2.5. ADOPTION OF SOIL QUALITY INDICATORS AND THRESHOLDS	38
2.2.6. DEFINING THE CONDITIONS OF LANDSPREADING	39
2.2.7. Periodical monitoring-Evaluation of the results	40
3. THE STUDY AREA OF AGROSTRAT PROJECT	43
3.1. SOIL AND WATER SAMPLINGS FOR THE CHARACTERIZATION OF THE STUDY AREA	43
3.2. PISTACHIO PRODUCTION AND WASTES GENERATION	46
3.3. PISTACHIO WASTE CHARACTERIZATION	50
3.4. Soil quality of the pilot area	53
4. ADDITIONAL TOOLS FOR THE IMPLEMENTATION OF MONITORING STRATEGIES	56
4.1. THE CULTIVATION MANAGEMENT SOFTWARE	56
4.2. PORTABLE FIELD INSTRUMENTS	58
4.3. THE SOFTWARE OF PROSODOL	59
4.4. Irrigation consultancy on the web	60
5. CONCLUSIONS	61

