



Sustainable Water Integrated Management (SWIM) - Support Mechanism



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Water is too precious to waste

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IMPROWARE



PROJECT

SOCIO-ECONOMIC IMPACTS OF WASTEWATER TREATMENT USING NATURAL SYSTEMS AND RELATED INDUSTRIAL APPLICATION AND DEVELOPMENT

Dr. Francesco Mercuri, University of Rome, La Sapienza

SOCIO-ECONOMIC IMPACTS OF WASTEWATER TREATMENT USING NATURAL SYSTEMS AND RELATED INDUSTRIAL APPLICATION AND DEVELOPMENT

The module concerned the wastewater treatment, focusing on natural systems and related industrial application of such wastewater treatment technology.

It was analyzed the socio-economic implications deriving from the exploitation of water resources and defined the phytoremediation technology as a possible solution to the problem of water availability in MENA (Middle East North Africa) countries

TOPICS

1. Socio-economic impact of the water resource in Egypt and Tunisia;
2. Socio-economic implications related to the development of the water purification systems;
3. The phytoremediation's industry;
4. Socio-economic aspects of phytoremediation systems;
5. Case Studies;

1. SOCIO-ECONOMIC IMPACTS OF THE WATER RESOURCE IN EGYPT AND TUNISIA

The seminar aimed to analyze the development of water resources through a continental perspective, focusing on Egypt and Tunisia.

These are countries that are reaching their limits of available water, and it is for this reason that additional supply conditions must be evaluated.

2. SOCIO-ECONOMIS IMPLICATIONS RELATED TO THE DEVELOPMENT OF THE WATER PURIFICATION SYSTEMS

This seminar analyzed the socio-economic implications deriving from the exploitation of water resources and will describe the different existing systems of purification of treated water, giving adequate room to the major Mediterranean practices and experiences.

3. THE PHYTOREMEDIATION'S INDUSTRY

This seminar defined the phytoremediation technology as a possible solution to the problem of water availability in MENA countries, analyzing resources, costs and additional variations characterizing the installation of a constructed wetland plant.

Within the seminar it was presented with a description of the potential arising from the application of this technology, highlighting how this is developed within the African continent.

4. SOCIO-ECONOMIC ASPECT OF PHYTOREMEDIATION'S SYSTEM

The aim of this lesson was to provide an overview of possible solutions applicable in the context of North Africa, going to compare costs and benefits related to the plant.

This lesson was useful to provide students more information on constructed wetlands system, deepening economic and social benefits arising from issues such as energy saving and reuse of biomass.

5-6. CASE STUDIES

Both lessons represent some of the possible solutions applicable in the context of North Africa.

The objective of this last part aimed to implement a greater critical spirit to every proposed design scheme, going to analyzing cost and benefits, produced and consumed energy, and relative CO² emissions.

METHODOLOGY

- The aforementioned modules will be covered through a power point presentation;
- Each week will be introduced a topics on which the learner will be able to talk about it;
- We will try to enhance the interaction between professor and students, in order to develop future collaborations.

EXPECTATIONS

The sharing of knowledge through an e-learning platform can be flywheel towards future collaborations between students, researcher and public and private institutions.