



REPUBLIC OF TUNISIA
Ministry of Higher Education and Scientific Research

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**Water Research and
 Technology Centre**



**Laboratory of
 Wastewater Treatment**

and

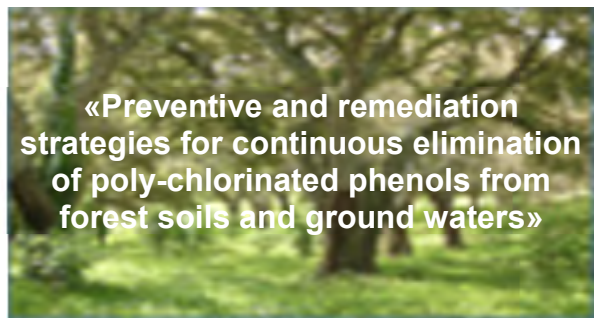


Organize

The

Final meeting of the project

NUMBER: Sfp- (ESP.MD.SFP 981674)0073



2-4 December 2010
Hotel Le Paradis Palace
 Hammamet Tunisia

Chairman



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Presentation

The most pressing environmental problems throughout the MED-European region, affecting human health and biodiversity integrity, are directly related to water and environmental degradation. The trans-boundary nature of much pollution increases the risk of long term exposure to pollutants at all levels of the ecosystem. These constitute priority environmental challenges and scientific studies are keys, developing environmental assessment methodologies and producing reliable data on pollution sources, pathways and impacts.

The research plan addresses the assessment of pentachlorophenol (PCP), a widely used herbicide, pesticide and wood preservative, which whilst banned in many countries but still has some restricted application. The program focuses on the probable presence of pentachlorophenol (PCP) in Cork Oak (*Quercus suber*) forest. The intrinsic health and environmental hazards of PCP justify the recommendation to develop research aimed at understanding the facts behind oak forest contamination with PCP. Legal restrictions on PCP use have not lead to the removal of PCP from the environment, and it is widely recognized as a persistent organic pollutant (POP) of increasing concern. Therefore it is important to consider alternative routes for PCP formation and contamination (e.g. Transboundary contamination from remote sources where PCP use is still authorized). PCP is environmentally persistent (photo stable) and its water solubility together with its moderate mobility makes soil/water interaction acute, therefore it is a suitable model molecule for assessing POPs environmental decay. *Quercus suber* forest is an important ecosystem, with internationally significant biodiversity and has been identified as a unique scenario to investigate the dynamics of PCP environmental decay, which will have additional impacts for the assessment of other important POPs.



The Sardinia and Tunisian Oak Forests

Topics

- ✓ PCP in soil and water: Regulation in the Mediterranean Countries
- ✓ PCP extraction methodology and quantification from soil and water
- ✓ Absorption and bioaccumulation of PCP in forests sub-products
- ✓ Microbiological study of soil and water contaminated by PCP
- ✓ Bio-elimination of PCP using Bacteria and Fungi

Program

Thursday, 2 December 2010 (15:00)

Chair: **Dr. Abdennaceur Hassen** (Water Research and Technology Center, Tunisia)

9:00-9:30: Welcome Speech

Chairs: Pr. Abdennaceur Hassen and Pr. Mourad Bédir

9:00-10:00: *Special Conference 1*: “Issues from the management of POPs in forest ecosystems”. **Pr. Andrew Hursthouse** (University of the West of Scotland, UK).

10:00-11:00: *Special Conference 2*: “Geochemical impact of cork forests on soil”. **Dr. Iain McLellan** (University of the West of Scotland, UK).

11:00-11:20: *Coffee Break*

Chairs: Pr. Mohamed Blaghen and Dr. Atef Jaouani

11:20-11:40: *Presentation 1*: Overview of the NATO Project sfp 981674.

Dr. Cristina Silva Pareira (IBET, Portugal)

11:40-12:00: *Presentation 2*: “Chemical and microbiological characteristics of soils of a cork oak Forest managed without POP use, following the FSC certification”. **Pr. Valeria Mazzoleni** (Università Cattolica del Sacro Cuore, Italy)

12:00-12:20: *Presentation 3*: Unraveling fungal pentachlorophenol bioremediation potential: Aïn Hamraia oak forest as a case study. **Dr. Adélia Varela** (IBET, Portugal).

Session II

Friday, 3 December 2010 (15:00 – 18:00)

Chairs: Pr. Naceur Jedidi and Pr. Valeria Mazzoleni

15:00-16:00: *Special Conference 3*: “Some insights into ecotoxicity and bioremediation of PAHs in soil”. **Dr-Eng. Helmi Hamdi** (Water Research and Technology Center, Tunisia)

16:00-16:20: *Coffee Break*

16:20-16:40: *Presentation 4*: Study on bacterial biodegradability of PCP in contaminated soils of Tabarka Forest. **Mrs. Amel Khessairi** (Water Research and Technology Center, Tunisia)

16:40-17:00: *Presentation 5*: **Pr. Mohamed Blaghen** (Morocco).

17:00-17:20: *Presentation 6*: A review of soil analysis. **Dr. Iain McLellan** (University of the West of Scotland, UK).

20:00: Gala Dinner

Session III

Saturday, 4 December 2010 (9:00 – 13:00)

Chairs: Pr. Andrew Hursthouse and Dr. Imen Chérif

9:00-10:00: *Special Conference 4*: Denaturant Gel Gradient Electrophoresis (DGGE): Application in molecular microbial ecology. **Mr. Abdelaziz Belila** (Water Research and Technology Center, Tunisia).

10:00-10:20: *Presentation 7*: Laboratory trials on the bioremediation of pentachlorophenol in agricultural soil. **Mrs. Nejla Hachemi** (Water Research and Technology Center, Tunisia)

10:20-10:40: *Coffee Break*

10:40-13:00: General discussion and concluding remarks.

Scientific Committee

Mourad Bedir (Tunisia)

Abdennaceur Hassen (Tunisia)

Cristina Silva Pereira (Portugal)

Mohamed Blaghen (Marocco)

Andrew Hursthouse (UK)

Valeria Mazzoleni (Italy)

Naceur Jedidi (Tunisia)

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