THE EFFECTS OF SEA WAVES ON COASTS

B. Esin* and K. Sedat**

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** Istanbul Technical University, Civil Engineering, Maslak, Istanbul, Turkey

Wave that effect to coast organisms's life, make dynamism because of beach porosity, so oxygen changes at some water levels is studied along the coast to explaine wave effection. Coast ecosystem consist of various non-living (abiotic) and living (biotic) components. The abiotic components of the coast ecosytem include physical and chemical properties of sea water, tides, wave, beach jope and sediment characteristics. The living components are flora and fauna at coastal region. Distrubution of flora and fauna at coastal region is studied as per; their horizontal direction (dry, wet and saturated) and also depends on sand particle sizes and wave properties. Coastal organisms (the flora and fauna) have to adapt to hydrodynamic effects; to provide this effects, they will ensure their; resistence for water loss, heat balance, salinity adjustment, breathing, feeding and reproductive behaviours. In the coastal ecosystem, sea waves are effecting; feeding of living oranisms, beach properties, sea creatures in their habitat, marine water quality and dissolved oxygen values. Dissolved oxygen value as one of major necessity for organisms, sea wave effect can be determined as per this parameter. Depths of waves effect is determined at vertical lines on coastal area. In the flume, sediment profile's change show the bar and sediment movements. The vertical line of the breaking wave is determined according to distance between the bar's top and coast line. In this investigation, the change of oxygen values between sediments and in water, because of wave effect are studied. Depths of wave effects to oxygen values are found in results.

An experimental study was carried out to determine the effects of a sea waves on coastal organisms's life. The beach was bouilt as a natural sandy beach at laboratory scale. Waves will infiltrate through the ground water which leads to increase dissolved oxygen concentration in water. Beach profiles were analyzed numerically to obtain the area of erosion and offshore bar, center of gravity of the offshore bar and wave runup height. Seven vertical lines were determined and dissolved oxygen concentration and profile data were collected for each lines. Dimensionless dissolved oxygen concentration parameter is derived by using the data measured in vertical lines 3,4 and 6.

ARISTA
SUPER MARKET
ELGEKA
CAPTAIN'S
εδεσμα
Ποιότητα από το 1900
AMVROSIA
Σαράτες
ΠΑΣΣΙΑΣ
ΑΛΛΑΝΤΑ
ΑΠΟ ΤΟ 1900
ZAGORI
natural mineral water



polyeco
epe
ENVIRONMENTAL PROTECTION ENGINEERING S.A.
University of Ioannina





MESAEP
Mediterranean Scientific Association of Environmental Protection

SYMPOSIUM PROGRAM

16th International Symposium on Environmental Pollution and its Impact on Life in the Mediterranean Region

September 24th to 27th 2011
Ioannina - Greece

Organized by
MESAEP
Mediterranean Scientific Association of Environmental Protection



Editors:
George Pilidis, Werner Bergheim, Dimitris Alivertis

16th International Symposium

on

Environmental Pollution

and its Impact on Life in the Mediterranean Region

September 24 to 27, 2011, Ioannina - Greece

In collaboration with

Akdeniz University, Antalya - Aristotle University of Thessaloniki - Bavarian Research Alliance, , Munich - European Commission Joint Research Centre, Institute for Health & Consumer Protection, Ispra - Helmholtz Zentrum München - German Research Center for Environmental Health, Institute of Ecological Chemistry, Munich - Interdisciplinary Institute for Environmental Research, Milan - Politecnico di Torino - TU of Braunschweig - TU of Munich - University of Tirana

Under the auspices of

University of Ioannina - Region of Epirus - Municipality of Ioannina - Association of Greek Chemists - Technical Chamber of Greece

Organized by
Mediterranean Scientific Association of Environmental Protection

The Executive Committee, the Steering and the National Organizing Committees of the Mediterranean Scientific Association of Environmental Protection (MESAEP) have the pleasure to forward this invitation to attend the 16th International MESAEP Symposium on "Environmental Pollution and its Impact on Life in the Mediterranean Region", that will be held in Ioannina/Greece from September 24 to 27, 2011

Previous symposia

Athens/Greece (1981)
Heraklion/Greece (1983)
Istanbul/Turkey (1985)
Kavala/Greece (1987)
Blanes/Spain (1989)
Como/Italy (1991)
Antibes/France (1993)
Rhodes/Greece (1995)
Sorrento/Italy (1997)
Alicante/Spain (1999)
Limassol/Cyprus (2001)
Antalya/Turkey (2003)
Thessaloniki/Greece (2005)
Sevilla/Spain (2007)
Bari/Italy (2009)

Objectives

The objectives of the symposium provide opportunities for scientists of different countries to:

- exchange recent results related to the processes of environmental pollution and its effects on public health in the Mediterranean region
- discuss current technological and legal measures to avoid or reduce the degradation of the environment
- present suggestions and recommendations to the regulatory authorities on environmental quality and safety in the Mediterranean and other neighbouring countries.

This year's symposium will focus on the "Sustainable Water Management" because water scarcity increases the pressure for sustainable water management and deeper understanding is needed of how water resources deteriorate over time and space.

Main Subjects

- Sustainable water management
- Food safety and quality
- Agricultural, domestic and industrial waste
- Soil quality and pollution
- Outdoor and indoor air quality and pollution
- Environment and human health
- Impact of climate change in the Mediterranean area
- Renewable energy sources
- Environmental education
- Solid waste management (in Greek)

Symposium Location

Ioannina is the capital of the province of Epirus (North-Western Greece) and usually is called as "The city of legends & traditions", because of the rich history of the area. The city is built on the west-shore of lake Pamvotis, and lies in the middle of a plain (600m altitude), surrounded by mountains. The population reaches approximately 120,000 inhabitants and is the seat of the 4th biggest Greek University. Ioannina today is a commercial and cultural centre of North-Western Greece and is famous for its popular art of golden and silver jewelleries and wood sculpture.

The Symposium will take place at the "Grand Serai Congress & Spa".

Oral and Poster Presentations

The program of the symposium includes plenary and keynote lectures, oral presentations as well as posters. Oral and poster contributions will be regarded as scientifically equivalent in the program. Special focus will be devoted to the brief presentation of posters of original papers in full audience sessions.

All presentations (oral and posters) should be in English.

Poster or oral presentation will be accepted if at least one of the authors is registered and present at the symposium for personal communication.

The book of abstracts will be distributed in USB-stick to all participants upon registration at the Symposium. All papers presented at the symposium will be eligible, upon refereeing, for publication in the peer-reviewed international journal FRESENIUS ENVIRONMENTAL BULLETIN (FEB), the official journal of MESAEP.

Authors are requested to submit manuscripts in electronic form and to send them directly as an e-mail attachment to PSP publishing: parlar@psp-parlar.de, not later than December 17, 2011.

For the preparation of manuscripts please refer to www.psp-parlar.de. Supplementary information about the papers publication will be also given at the Symposium information desk in Ioannina

Committees

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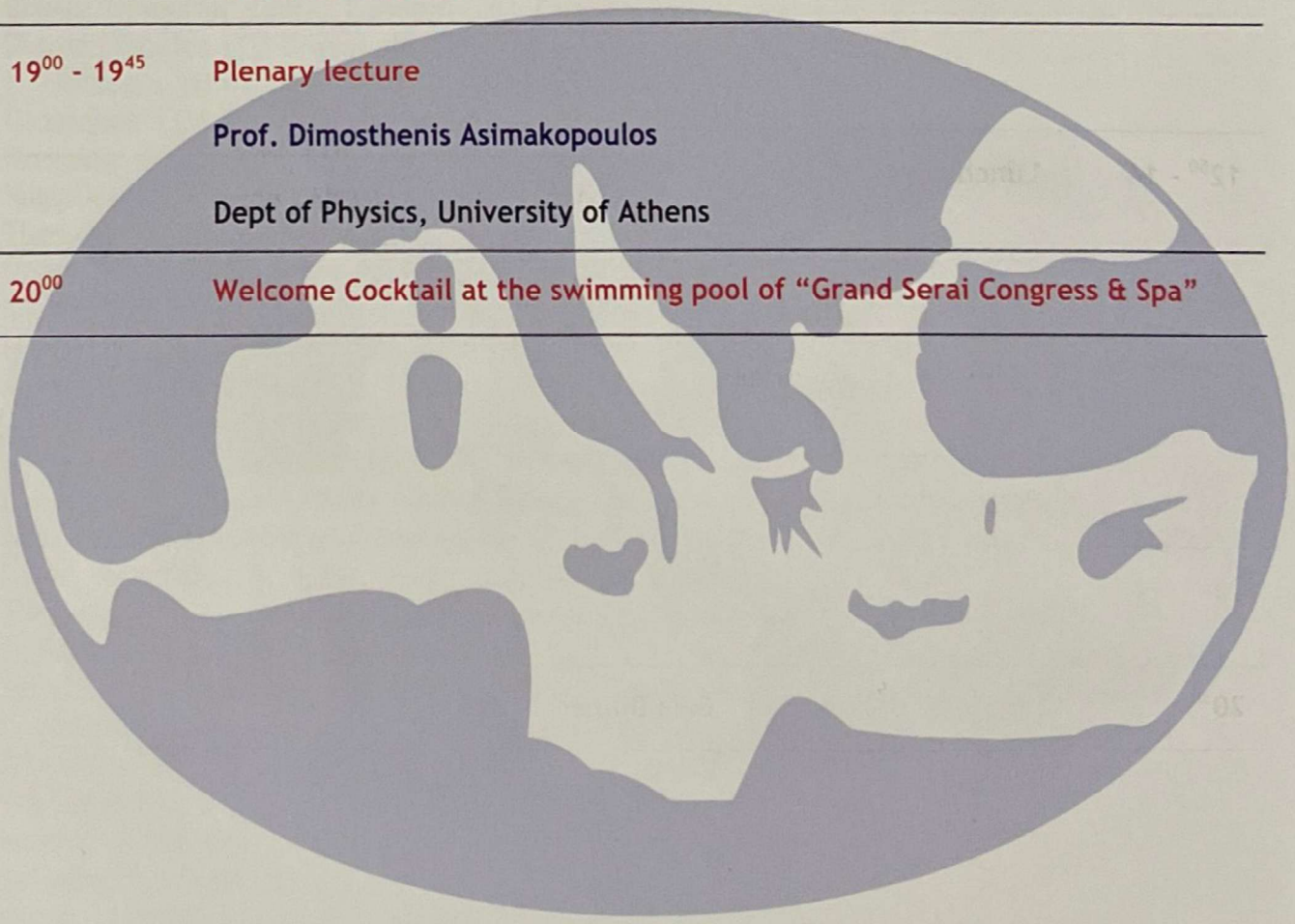
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Saturday 24th of September

10^{00} - 16^{30}	Registration at Hotel Symposium desk
18^{30} - 19^{00}	Official Opening Ceremony
	Chairpersons G. Pilidis, D. Sarigiannis and T. Albanis
	Welcome addresse
19^{00} - 19^{45}	Plenary lecture
	Prof. Dimosthenis Asimakopoulos
	Dept of Physics, University of Athens
20^{00}	Welcome Cocktail at the swimming pool of "Grand Serai Congress & Spa"



Sunday 25th of September

	Conference room A		Conference room B
9^{00} - 10^{50}	Sustainable water management	9^{00} - 10^{50}	Environmental education
10^{50} - 11^{20}	Coffee Break at Poster Room	10^{50} - 11^{20}	Coffee Break at Poster Room
11^{20} - 12^{50}	Sustainable water management	11^{20} - 12^{40}	Environmental education
12^{50} - 14^{00}	Lunch	12^{40} - 14^{00}	Lunch
14^{00}- 15^{20}	Sustainable water management	14^{00} - 14^{30}	MENA Lecture
15^{20} - 16^{00}	Coffee Break at Poster Room	14^{30} - 15^{10}	Soil quality and pollution
16^{00} - 17^{00}	Poster Discussion	15^{10} - 16^{00}	Coffee Break at Poster Room
17^{00} - 18^{40}	Sustainable water management	16^{00} - 17^{00}	Poster Discussion
		17^{00} - 18^{20}	Soil quality and pollution
20^{30}	Gala Dinner		

Poster Session
Sustainable water management, Soil quality and pollution, Environmental education

Monday 26th of September

	Conference room A		Conference room B
9^{00} - 10^{30}	Impact of climate change in the Mediterranean area	9^{00} - 10^{20}	Agricultural, domestic and industrial waste
10^{30} - 11^{00}	Coffee Break at Poster Room	10^{20} - 11^{00}	Coffee Break at Poster Room
11^{00} - 12^{20}	Impact of climate change in the Mediterranean area	11^{00} - 12^{40}	Agricultural, domestic and industrial waste
12^{20} - 14^{00}	Lunch	12^{40} - 14^{00}	Lunch
14^{00} - 16^{10}	Food safety and quality	14^{00} - 15^{50}	Renewable Energy Sources
16^{10} - 16^{30}	Coffee Break at Poster Room	15^{40} - 16^{10}	Solid Waste Management
16^{30} - 17^{30}	Poster Discussion	16^{10} - 16^{30}	Coffee Break at Poster Room
		16^{30} - 17^{30}	Poster Discussion
		17^{30} - 18^{00}	Solid Waste Management
		18^{00} - 19^{30}	Round Table Discussion on Solid Waste Management (in Greek)
19^{30}	MESAEP General Assembly		

Poster Session
Food safety and quality / Agricultural, domestic and industrial waste / Outdoor and indoor air quality and pollution / Environment and human health / Impact of climate change in the Mediterranean area / Renewable energy sources / Solid waste management

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Tuesday 27th of September

	Conference room A		Conference room B
9^{00} - 11^{10}	Outdoor and indoor air quality and pollution	9^{00} - 11^{20}	Environment and human health
11^{10} - 11^{40}	Coffee Break at Poster Room	11^{20} - 11^{40}	Coffee Break at Poster Room
11^{40} - 13^{20}	Outdoor and indoor air quality and pollution	11^{40} - 13^{40}	Environment and human health
13^{40}	Conclusions of the Symposium		
14^{00}	Excursion (optional)		

Sunday 25th of September

Conference Room A

Sustainable water management

Chairpersons: B. Topkaya, I. Sainis

9^{00} - 9^{30} *01-o-01*	**SUSTAINABLE WATER MANAGEMENT: WHAT ARE THE PRIORITIES?** Invited Speaker: C. Hayes College of Engineering, Swansea University, United Kingdom
9^{30} - 9^{50} *01-o-02*	**ECONOMIC AND ENVIRONMENTAL EVALUATION OF CONSTRUCTED WETLAND SYSTEMS FOR WASTEWATER TREATMENT** D.G. Gikas and V.A. Tsihrintzis Democritus University of Thrace, Environmental Engineering, Greece
9^{50} - 10^{10} *01-o-03*	**ASSESSMENT OF DIFFUSE POLLUTION IN THE WATERSHED SCALE: A CASE STUDY FOR WATERSHEDS OF TURKEY, SEYHAN AND CEYHAN** E. Atasoy, B.H. Gürsoy, İ. Tan, E. Kuzyaka, S. Dağlı, S. Ayaz and L. Akça Tübitak-Marmara Research Center, Environment Institute, Turkey
10^{10} - 10^{30} *01-o-04*	**DROUGHT ANALYSIS OF KONYA CLOSED BASIN (TURKEY) FOR 1972-2009 PERIOD** S. Dogan, A. Berktay, and V.P. Singh Texas A&M University, Dept. of Biological & Agricultural Engineering, USA
10^{30} - 10^{50} *01-o-05*	**IMPOSEX AS SURVEILLANCE BIOMONITORING TOOL OF POLLUTION BY THE ANTIFOULING AGENT, TBT AFTER ITS BAN: MALTA, A CASE STUDY.** V.Axiak, R.Guillaumier, P. Herrera, and N. Vella University of Malta, Dept. of Biology, Malta
10^{50} - 11^{20}	Coffee Break at Poster Room

Chairpersons: C. Hayes, K. Vareli

11^{20} - 11^{50} *01-o-06*	**EXCEED - EXCELLENCE CENTRE FOR DEVELOPMENT COOPERATION SUSTAINABLE WATER MANAGEMENT IN DEVELOPING COUNTRIES** Invited Speaker: M. Bahadir Techn. University of Braunschweig, Institute of Environmental and Sustainable Chemistry,Germany
11^{50} - 12^{10} *01-o-07*	**HEAVY METALS IN SOIL, SEDIMENTS, WATER AND MUSSELS IN BUTRINTI LAGOON** A. Bani, T. Topi, J. Malltezi, and S. Sulce Agricultural University of Tirana, Dept. of Agrienvironment and Ecology, Albania

12^{10} - 12^{30} *01-o-08*	**FEEDING BEHAVIOUR OF Atherina boyeri (RISSO, 1810) IN THE LAGOONS OF NESTOS DELTA** A. Kademoglou, E.T. Koutrakis, and I. Leonardos University of Ioannina, Dept. of Biological Applications and Technologies, Greece
12^{30} - 12^{50} *01-o-09*	**EFFECTS OF SEA LEVEL RISES ON SEMI ENCLOSED COASTAL AREA: CASE OF AYVALIK BAY** T. Bagci, E. Irtem, and M.S Kabdasli Istanbul Technical University, Civil Engineering Faculty, Turkey
12^{50} - 14^{00}	Lunch
	Chairpersons: V. Tsihritzis, I. Malollari
14^{00} - 14^{20} *01-o-10*	**CYANOBACTERIAL SPECIES COMPOSITION AND BACTERIAL AND ARCHAEAL ASSEMBLAGES IN SEDIMENTS OF AN ANCIENT SHALLOW EUTROPHIC LAKE (LAKE PAMVOTIS - GREECE).** A. Touka, K. Vareli, G.Pilidis, M.-C. Mavrogiorgou, E. Briasoulis, J. Halley, E. Frilingos & I. Sainis University of Ioannina, Medical School, Greece
14^{20} - 14^{40} *01-o-11*	**BRINE DILUTION UNDER CODIRECTIONAL WAVE ATTACKS** B. Bas, M.S. Kabdasli, S.N. Erturk Bozkurtoglu, and D. Z. Seker Istanbul Technical University, Geomatics Engineering Department, Turkey
14^{40} - 15^{00} *01-o-12*	**A LARGE SCALE CONSTRUCTED WETLAND IMPLEMENTATIONS PROJECTS IN TURKEY IN SALT LAKE SPECIAL ENVIRONMENTAL PROTECTION AREA** K. Gunes, B. Oktar, S. Ayaz, A. Suha Gunay, G. Ozden, C. Senduran, T. Dikerler, E. Metin, B.l Kaya, and L. Turkben Tubitak-Marmara Research Center, Energy System & Environmental Research Institute, Turkey
15^{00} - 15^{20} *01-o-13*	**RELATIONSHIPS BETWEEN LAKE MORPHOLOGY AND MACROPHYTE SPECIES ABUNDANCE AND DISTRIBUTION IN GREEK LAKES** K. Stefanidis and E. Papastergiadou University of Patras, Dept. of Biology, Greece
15^{20} - 16^{00}	Coffee Break at Poster Room
16^{00} - 17^{00}	Poster Discussion **M. Bahadir, D. Sarigiannis**
	Chairpersons: M. Zucchetti, D. Myronidis
17^{00} - 17^{20} *01-o-14*	**ANALYZING AND MAPPING WATER BORNE COMMUNICABLE DISEASES IN TURKEY** A.Ö. Doğru, S. Alkoy, N. Uluğtekin, F. Bektaş Balçık, Ç. Göksel, and S. Sözen Istanbul Technical University, Civil Eng. Faculty, Turkey

17^{20} - 17^{40} *01-o-15*
WATER RESOURCES AND DEVELOPMENT OF PROTECTED AREAS: THE CASE OF EVROS DELTA NATIONAL PARK, GREECE
G. Arabatzis and S. Tsiantikoudis
Democritus University of Thrace, Dept. of Forestry and Management of the Environment andNatural Resources, Greece

17^{40} - 18^{00} *01-o-16*
MONITORING LAND USE DYNAMICS IN A LAGOON WATERSHED USING REMOTE SENSING and GIS; A CASE STUDY
A. Ertürk, D.Z. Şeker, and A. Tanık
Istanbul Technical University, Environ. Engineering Dept., Turkey

18^{00} - 18^{20} *01-o-17*
EFFECTS OF EMERGENT VEGETATION ON SEDIMENT SUSPENSION AND DEPOSITION UNDER WAVE CONDITIONS
N. Elginoz, A. Koroglu, E. Oguz, and M.S. Kabdasli
Istanbul Technical University, Vocational School, Turkey

18^{20} - 18^{40} *01-o-18*
SILICA-MODIFIED MAGNETITE NANOPARTICLES WITH CETYLPYRIDINIUM BROMIDE FOR THE PRECONCENTRATION OF METALS AFTER COMPLEXATION WITH 8-HYDROXYQUINOLIN
A.E. Karatapanis, Y. Fiamegos, and C.D. Stalikas
University of Ioannina, Dept. of Chemistry, Greece

Conference room B

Environmental education

Chairpersons: M.I. Karayannis, P. Foster

9^{00} - 9^{30} *09-o-01*
QUANTIFYING ENVIRONMENTAL EDUCATION: THE 2-MEV-MODEL AND MORE
Invited Speaker: F. X. Bogner
University of Bayreuth, Dept. of Biology, Germany

9^{30} - 9^{50} *09-o-02*
LEARNING ABOUT NATURAL HISTORY AND ENVIRONMENTAL EDUCATION THROUGH THE USE OF DIGITAL TECHNOLOGIES
S. Sotiriou
Ellinogermaniki agogi, Greece

9^{50} - 10^{10} *09-o-03*
EDUCATION FOR ECO-FRIENDLY CONSUMER BEHAVIOUR IN AN AUTHENTIC LEARNING SETTING
G. Froehlich & F. X. Bogner
University of Bayreuth, Germany

10^{10} - 10^{30} *09-o-04*
ENVIRONMENTAL EDUCATION IN ALBANIA
P. Kotori, J. Mandili, S. Mico, and V. Tahiri
University of Vlora, Dept. of Physics, Albania

10^{30} - 10^{50} *09-o-05*
A NEW APPROACH AND CONCEPT ON REDUCING THE ENVIRONMENTAL IMPACTS OF SHIPPING: GREEN SHIP
L. Bilgili, U.B. Celebi, G.Aydin, and G.Alkan
Yildiz Technical University, Naval Architecture and Marine Engineering Dept, Turkey

10^{50} - 11^{20} Coffee Break at Poster Room

Chairpersons: G. Vassilikiotis, S. Sotiriou

11^{20} - 11^{40} *09-o-06*
CHEMICAL METROLOGY IN ENVIRONMENTAL SCIENCES
P.A. Siskos and T.I. Roumeliotis
University of Athens, Chemistry Dept., Greece

11^{40} - 12^{00} *09-o-07*
MARINE POLLUTION: KNOWLEDGE, ATTITUDES AND THEIR EFFECTS ON ENVIRONMENTAL BEHAVIOR OF GREEK PRE-SERVICE TEACHERS
T. Boubonari, A. Markos, and T. Kevrekidis
Democritus University of Thrace, Lab. of Environmental Research and Education, Greece

12^{00} - 12^{20} *09-o-08*
ENVIRONMENTAL EDUCATION ON GLOBAL CLIMATE CHANGE IN BOTANICAL GARDENS
D. Sellmann & F. X. Bogner
University of Bayreuth, Dept. of Biology, Germany

12^{20} - 12^{40} *09-o-09*
A SOCIAL SURVEY ON HOW THE ECONOMIC CRISIS AFFECTS PEOPLES' ATTITUDE TOWARDS THE ENVIRONMENTAL SUBJECTS
P. Kosmopoulos, A. Kantzioura, I. Kosmopoulos, and K. Kleskas
Democritus University of Thrace, Dept. of Environmental Engineering, Greece

12^{40} - 14^{00} Lunch

Chairpersons: A. Gotti, F. Bogner

14^{00} - 14^{30} *A-o-01*
EUROPEAN ENVIRONMENTAL RESEARCH FUNDING FOR MENA COUNTRIES
T. Ammerl, A. Blume, A. Reiter, and C. Rippl
Bavarian Research Alliance, European Research Funding (Environment), Germany

Soil quality and pollution

14^{30} - 14^{50} *04-o-02*
MAPPING THE HISTORICAL LAND COVER /USE CHANGES IN ACHERON RIVER, W. GREECE
E. Kostara, A. Retalis, and E. Papastergiadou
University of Patras, Dept. of Biology, Greece

14^{50} - 15^{10} *04-o-03*	**CHEMICAL SIMPLE EXTRACTIONS OF TRACE ELEMENTS IN SEDIMENTS AFFECTED BY MINING ACTIVITIES. APPLICATION TO SIERRA MINERA OF CARTAGENA-LA UNIÓN.** C. Pérez-Sirvent, M.J. Martínez-Sánchez, M.L. García-Lorenzo, and M. Hernández-Córdoba University of Murcia, Department of Agricultural Chemistry, Geology and Pedology, Spain
15^{10} - 16^{00}	Coffee Break at Poster Room
16^{00} - 17^{00}	Poster Discussion **M. Bahadir, D. Sarigiannis**
	Chairpersons: K. Fares, N. Kalogeropoulos
17^{00} - 17^{20} *04-o-04*	**REHABILITATION OF DEGRADED SOILS CONTAINING AGED PAHS BASED ON PHYTOREMEDIATION WITH ALFALFA (MEDICAGO SATIVA L.)** H. Hamdi, S. Benzarti, I. Aoyama, and N. Jedidi Water Research and Technology Center, Borj Cedria TechnoPark, Tunisia
17^{20} - 17^{40} *04-o-05*	**SALT MARSH MACROPHYTE PHRAGMITES AUSTRALIS STRATEGIES ASSESSMENT FOR ITS DOMINANCE IN MERCURY-CONTAMINATED COASTAL LAGOON (RIA DE AVEIRO, PORTUGAL)** N.A. Anjum, I. Ahmad, M. Válega, M. Pacheco, A.C. Duarte, and E. Pereira University of Aveiro, Centre for Environmental and Marine Studies (CESAM), Portugal
17^{40} - 18^{00} *04-o-06*	**GEOPHYSICAL METHODS APPLIED FOR CHARACTERIZATION OF ALLUVIAL SOILS NEAR ROSSLAU (GERMANY)** D. Jordanova, N. Jordanova, and U. Werban Sofia University, Faculty of Physics, Dept. Meteorology and Geophysics, Bulgaria
18^{00} - 18^{20} *06-o-05*	**RESPONSE OF ANTIOXIDATIVE ENZYMES AND APOPLASTIC BYPASS TRANSPORT IN THLASPI CAERULESCENS AND RAPHANUS SATIVUS TO CADMIUM STRESS** S. Benzarti, H. Hamdi, S. Mohri, and Y. Ono University Libre of Tunis, Dept. of Civil Engineering, Tunisia
20^{30}	Gala Dinner

Posters

01-p-01 **SOME ASPECTS OF FEEDING ECOLOGY OF GRASS CARP (Ctenopharyngodon idella Valenciennes, 1844) IN POLYCULTURE SYSTEMS**
M. Bllaca and V.Spaho
Laboratory of Aquaculture and Fishery, Albania

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