CASCAIS
MUNICIPALITY

CASCAIS WORLD FORUM 2012

SOIL BIOENGINEERING AND LAND MANAGEMENT NEW CHALLENGES

Sustaining Our Land, Water and Life in Changing Climate

II Congress APENA - VII Congress AEIP – VI Congress EFIB

Cascais, Portugal, 19-22 September 2012

Presidência da República

Under the High Patronage of His Excellency the President of the Portuguese Republic

APENA
ASSOCIAÇÃO PORTUGUESA DE ENGENHARIA NATURAL

Asociación Española de Ingeniería del Paisaje

EFIB

A) GENERAL INFORMATION

EFIB (European Federation for Soil Bioingenieering), APENA (Associação Portuguesa de Engenharia Natural), Portugal (www.apena.pt) and AEIP (Asociación Española de Ingeniería del Paisaje), together with Cascais Municipality, cordially invite you to our International Congress, under the title "Bioengineering and Land Management - New Challenges" to be held September 19 (Wednesday) -22 (Saturday), 2012, at Cascais, Portugal.

About

The theory of the four basic elements - water, soil, air, and fire, proposed by Empedocles (ca. 490–430 BC), remained commonly accepted for more than 2000 years. While science has improved dramatically, upon Empedocles' notions, researchers today are often so specialized that they lose sight of the multiple elements. We are considering these last elements as they are manifestations in relation to:

- the current challenges and trends, in Bioengineering, Ecology and Sustainability Solutions.
- the United Nations Conference on Sustainable Development (UNCSD), held in Brazil in June 2012, 20 years after the Rio Summit 1992 and 10 years after the Johannesburg Summit 2002.

Objectives:

- Provide a global venue, with scientific sessions and world-known speakers, for professionals, decision makers, researchers and students from diverse backgrounds, including the earth sciences, bioengineering, landscape architecture, natural resources, land management and public policies.
- Discuss new developments in the science and practice of low-cost, effective solutions, in bioengineering.
- Identify biodiversity and ecosystem aspects useful to establish the ecological status of landscapes.
- Promote tools for a more appropriate land management, especially in urban and peri-urban areas.
- Provide practical solutions to the imbalances between Nature and Humanity, in communion with the results of Rio +20 Summit, to be held in June 2012.

- Amplify knowledge and experience of EU Water Framework Directive (WFD) and other policies involved in soil restoration and landscape management.

Scientific Areas:

1. Landscape and Land Management
2. Slope Stabilization & Restoration
3. Fluvial and Coastal Stabilization & Restoration
4. Ecological Quality and Biodiversity
5. Combating Desertification
6. Rainwater Harvesting
7. Recuperation and Renaturalization of Degraded Areas
8. Requalification and Rehabilitation in Urban and Peri-Urban Areas
9. Greenways
10. Policy Implementation for Land Restoration and Conservation

Official languages: English, Spanish and Portuguese

Conference Venue: Centro Cultural de Cascais, Cascais, Portugal (GPS: N 38º 41' 38.92", W 9º 25' 17.38")

Co-Sponsorship:

1. Associação Portuguesa de Corredores Verdes (APCV), Portugal (www.apcverdes.org)
2. Associação Portuguesa de Ecologia da Paisagem (APEP), Portugal (www.apep.pt)
3. Centro Ibérico de Restauração Fluvial (CIREF), Portugal and Spain (www.cirefluvial.com)
4. Associazione Italiana per la Ingegneria Naturalistica (AIPIN), Italy (www.aipin.it)
5. Verein für Ingenieurbiolgie, Switzerland (www.ingenieurbiologie.ch)
6. Gesellschaft für Ingenieurbiologie e.V., Germany (www.ingenieurbiologie.com)
7. Association Française de Génie Biologique pour le Contrôle de l'Érosion des Sols (AGEBIO), France (www.agebio.org)
8. Fachvereinigung Betriebs- und Regenwassernutzung (FBR), Germany (www.fbr.de)
9. Universidade Católica Portuguesa – Faculdade de Engenharia, Lisbon, Portugal (www.fe.lisboa.ucp.pt)
10. Universidade Técnica de Lisboa – Instituto Superior de Agronomia, Lisbon, Portugal (www.isa.utl.pt)
11. Universidade de Trás-os-Montes e Alto Douro (UTAD) (www.utad.pt)
12. Universität für Bodenkultur Wien (BOKU), Austria (www.boku.ac.at)
13. Technische Universität Berlin, Berlin, Germany (www.tu-berlin.de)
14. University of California – Berkeley, USA (http://berkeley.edu)
15. Universidade Federal do Paraná, Curitiba, Brasil (www.ufpr.br)
16. University of Florida, USA (www.ufl.edu)
17. Universidade Federal de Santa Maria, Santa Maria, Brasil (www.ufsm.br)
18. University of New Orleans - Pontchartrain Institute for Environmental Sciences (UNO-PIES), USA (www.pies.uno.edu)
19. Universidade de Lisboa – Centro de Estudos Geográficos (UL-CEG), Portugal (www.ceg.ul.pt)

Forum Proceedings: A book of abstracts is available for each participant. Selected papers of the proceedings will be the subject of a specific book. Manuscripts to be submitted for publication in the proceedings will be collected at the Forum.

Committee Compositions:

1 Honor Committee

1. Aníbal Cavaco Silva (President of the Portuguese Republic)
2. Pedro Passos Coelho* (Prime Minister of Portugal)
3. Assunção Cristas* (Minister of Agriculture, Sea, Environment and Regional Planning)
4. Daniel Campelo* (Secretary of State for Forestry and Rural Development)
5. Pedro Afonso de Paulo* (Secretary of State for Environment and Regional Planning)
6. Paula Sarmento (President of the Institute for Nature Conservation and Biodiversity)

7. Manuel Braga da Cruz (Rector of the Universidade Catolica Portuguesa)
8. Carlos Manuel de Jesus Carreiras (Mayor of Camara Municipal de Cascais)

(*): to be confirmed

2 Organizing Committee

1. Jose Matos Silva (Chair)* (APENA, UCP); Portugal
2. Paola Sangalli (Vice-Chair)* (AEIP), Spain
3. Joao Melo (CMC), Portugal
4. Rui Cortes (CIREF, UTAD), Portugal
5. Pedro Martinho* (APENA), Portugal
6. Vasco Silva* (CMC), Portugal
7. Eike Flebbe (APENA)*, Portugal
8. Eva Hacker (EFIB), Germany
9. Pilar Barraqueta (AEIP), Spain
10. Albert Sorolla (AEIP), Spain
11. Carlo Bifulco* (APENA, AIPIN, ISA), Portugal
12. Florin Florineth (EFIB, BOKU), Austria
13. Joao Azevedo (APEP, IPB), Portugal
14. Carlos Mendonca (BMC), Portugal
15. Artur Ribeiro* (APENA), Portugal
16. Rui Teles* (APENA), Portugal
17. Pedro Tomás* (APENA), Portugal
18. Aldo Freitas* (APENA), Portugal

(*): Executive Committee

3 Scientific Committee

1. Eva Hacker (Chair) (President of EFIB, Professor at Hannover University, Germany)
2. Jose Matos Silva (Vice-Chair) (President of APENA, Professor at Lisbon Catholic University, Portugal)
3. Paola Sangalli (Founder and President of AEIP, Spain)
4. Giuliano Sauli (Founder and President of AIPIN, Italy)
5. Francisco Castro Rego (Professor at ISA- Lisbon, Director of CEABN, APCV, Portugal)
6. Rui Cortes (Professor at UTAD, Vice-President of CIREF, Portugal)
7. Mathias Kondolf (Professor at the University of California, Berkeley, USA)
8. Florin Florineth (Professor at BOKU, Vienna, EFIB, Austria)
9. Freddy Rey (Research Fellow, Cemagref de Grenoble, President of AGEBIO, France)
10. Maurício Balensiefer (Professor at UFPR, Curitiba, President of SOBRADE, RIACRE, Brazil)
11. Francisco Escobedo (Professor at SFRC, University of Florida, USA)
12. Fabrício Sutili (Professor at UFSM, Santa Maria, Brazil)
13. Joao F. Pereira (Post-Doctoral Researcher at UNO-PIES, USA)
14. Marco Schmidt (Professor at Technische Universität Berlin, Berlin, Germany)
15. Diogo de Abreu (Professor at UL, Director of CEG, Portugal)
16. João Azevedo (President of APEP, Professor at IPB, Portugal)

B) PRESENTATIONS AND ESTABLISHED TIMETABLES

Presentations will be made in the form of lectures or posters.

Oral presentations will be grouped by topic and limited to 15 to 30 minutes, depending on the program.

Posters will be on display throughout the forum days. In the coffee- and lunch-breaks, participants will have greater opportunity to watch them, ask questions and clarify doubts about them.

Do not expect a mundane international event, open to everyone, but rather a Stakeholders Reunion.

There was a large affluence to this Forum. At the same time, at the request of most people, there will be no parallel sessions. And, there is no money to pay simultaneous translations and rent of the corresponding equipment. We are also aware that, in addition to the three official languages, there are colleagues, e.g., from Italy, Germany, Austria and USA, who only speak and understand well their native languages.

All this involves an **intense program**, and **good will of all**. Hence, we appeal to all participants, to collaborate with us and **meet** the tight **established timetables**.

C) APPLICATION FORM AND REGISTRATION FEES (EUROS):

First Name:_____ Last Name:_____

E-mail:_____ Tel:_____

Address:_____ Post Code: _____

City:_____ Country:_____

(Please, send copy of the Application Form and Bank Transfer, with name, to cascaiswf2012@cascaisnatura.org)

Status		Fees (Euros)
EFIB Members(')	Regular	340€
	Low/Middle Income Country*	290€
	Full-time Student**	170€
Non Members	Regular	400€
	Low/Middle Income Country*	310€
	Full-time Student**	220€
Accompanying Persons		125€

('): Members of National Associations affiliated with EFIB.

(*): See the World Bank country listing for Low-income, Lower-middle-income and Upper-middle-income.

(**): Only those who are full-time undergraduate or graduate students at the time of the conference, or who have graduated within 6 months prior to the conference date, qualify for a student rate. Once you complete your registration, please send us proof of your student status (a scanned copy of your student ID card, confirmation of enrollment, acceptance letter, etc.).

Notes:

- All fees are in Euros.
- The conference full registration fee includes participation in sessions, conference materials and catering breaks. It also includes one ticket for the Welcome Dinner, on Wednesday, September 19.
- The conference student registration fee includes participation in sessions, all conference materials and day time catering at the conference, but it does not include entry to the conference dinner. Special tickets are available until Wednesday, September 19, in the morning, for 15 Euros/seat.
- Attendees' registration and social function ticket fees do not include insurance of any kind.

Payment:

Account Holder: APENA
Address: Rua Amoreiras, 101, 1250-020 Lisbon, Portugal
Bank: CGD
National Transfers: NIB: 0035 0373 0001 0665 3300 5
International Transfers:
IBAN: PT50 0035 0373 0001 0665 3300 5
BIC/SWIFT: CGDIPTPL

D) INVITATION FOR SPONSORS

Organizations may find several opportunities and forms of participation:

- Submit a real problem, asking for proposed solutions;
- Dynamic interaction with the participants;
- Association of the organization name to the event.

E) TOURISM

Cascais, Portugal, delimited by the Atlantic Ocean to the south and west, is one of the most pleasant regions in Europe, well known as a place of vast nature, heritage and cultural attractions. Located just a few kilometers away, Lisbon is one of the oldest European capitals, with all that this implies in terms of atmosphere, trade and culture. The region offers year-round warm temperatures. September is a popular time of the year for residents and tourists alike to stroll through the streets of Cascais to enjoy artisan displays, music and dance in the downtown plazas near Town Hall.

G) PROGRAM:

Time	Tuesday	Wednesday	Thursday	Friday	Saturday
	Sep 18, 2012	Sep 19, 2012	Sep 20, 2012	Sep 21 2012	Sep 22 2012
8:00		Registration	Registration	Registration	
9:00		Opening Ceremony	Eva Hacker	M. Balensiefer	
9:15		Inaugural Lecture: Alex McCorquodale			
9:30			Giuliano Sauli	Bet Mota et al.	
9:45		João Pereira et al.		Pilar Barraqueta	
10:00		Grecia Teran et al.	Freddy Rey	A. Kozovits	"Farewell Tour" and other Optional Tours
10:15		Rui Cortes et al	H. Peter Rauch	Bruno Barbosa	
10:30		Miguel Brito et al.	Sandro Holanda	Alberto Ayesa	
10:45		Questions & Answers	Q. & Answers	Q. & Answers	
11:00		Coffee Break	Coffee Break	Coffee Break	
11:30		Florin Florineth	Paola Sangalli	Rolf Studer	
12:00		Fabricio Sutili	Paolo Cornelini	Carla Antunes	
12:15		Clemens Weistelner	Carlo Bifulco et al.	Pino Dononzo	
12:30		Jose Cardão et al.	Gonçalo Fonseca	Ciro Costagliola	
12:45		Questions & Answers	Q. & Answers	Q. & Answers	
13:00		Lunch Break	Lunch Break	Closing Session	
13:30				Lunch Break	
14:30		Jose M. Silva et al.	M. Valenzuela		
14:45			F. Correia et al.	APENA and AEIP General Meetings	
15:00		Graça Saraiva et al.	M. Leite et al.		
15:15		Mikel Sarriegi et al.	João Azevedo		
15:30	Registration	Marco Vicari et al.	Inês L. Fonseca		
15:45		Joaquim Jesus	Ana Filipa Leite		
16:00		Eike Flebbe et al.	Sara Santos et al.		
16:15		Kristian Ceppas	Q. & Answers		
16:30		Questions & Answers	Coffee Break	Walkingn Tour of Cascais	
16:45		Coffee Break			
17:00		Francisco Escobedo	Marco Schmidt		
17:30		Maria M. Silva	Tatiana Valadao et al.		
17:45		Albert Sorolla et al.	Mariangela Leite		
18:00		Inês Correia et al.	Sofia Campo et al.		
18:15		Questions & Answers	Q. & Answers		
18:30		Round Table	Mathias Kondolf		
18:45			Anna Llobet		
19:00		Ice Breaker and Port Wine Reception	Round Table	Optional Tour "Lisbon by Night"	
20:00					
20:30		Welcome Dinner	EFIB Meeting		
	EXPO	EXPO	EXPO		

H) CHAIRPERSONS AND INVITED SPEAKERS

EVA HACKER

President of EFIB (European Federation for Soil Bioengineering), Professor at Leibniz Universität Hannover, Germany. Main Fields: Bioengineering, Conservation, Landscape Planning.

PAOLA SANGALLI

Degree in Biology, Central University of Barcelona, and Master in Landscape Design (Polytechnic University of Valencia). President of AEIP (Asociación Española de Ingeniería del Paisaje), member of EFIB (European Federation Bioengineering, AEP (Asociación Española de Paisajistas), CIREF (Centro Ibérico para la Restauración Fluvial) and FEAP (Fédération Européen Architecture du Paysage). Professor in the Master of Lanscape Architecture Juana de Vega and at the Master in Landscape Architecture -EHU-UPV (University Basque Country). Organization and lecture of short courses and conferences in Soil Bioengineering, in various countries. Professional activity and experience in nursery, landscape and garden design and in bioengineering and ecological restoration.

G. MATHIAS KONDOLF

Fluvial geomorphologist and environmental planner, specializing in environmental river management and restoration. As a Professor of Environmental Planning at the University of California, Berkeley, he teaches courses in hydrology, river restoration, environmental science, and Mediterranean-climate landscapes, advises students in these subjects, and serves as Chair of the Department of Landscape Architecture and Environmental Planning. He is currently the Clarke Scholar at the Institute

for Water Resources of the US Army Corps of Engineers in Washington, and formerly served on the Environmental Advisory Board to the Chief of the Corps.

ALEX MCCORQUODALE

Freeport McMoRan (FMI) Professor of Environmental Modeling in the Department of Civil and Environmental Engineering at the University of New Orleans. He holds a Ph.D. in Hydraulic Engineering from the University of Windsor, Canada. He is currently director of the FMI Center for Environmental Modeling at the University of New Orleans. His research interests include physical and numerical modeling of environment processes involving flood control, hydraulics of water and waste water treatment systems, transient analyses of forcemains and water distributions systems and shore protection. He has published more than 100 refereed articles and three books. He has over forty year experience as a hydraulic consultant to engineering firms and government agencies in Canada and the United States.

GIULIANO SAULI

Degree in Natural Sciences, Sciences Trieste University (thesis in botany 110/110 cum laude). Founder and President of A.I.P.I.N. (Associazione Italiana per la Ingegneria Naturalistica), since 1990, and author of more than 300 projects and 200 publications and papers. Areas of research: Soil Bioengineering, Environmental Engineering and Environmental Impact assessment.

FLORIN FLORINETH

Head of Institute of Soil Bioengineering and Landscape Construction, Universität für Bodenkultur (BOKU), Vienna - Austria / Department of Civil Engineering and Natural Hazards / Institute of Soil Bioengineering and Landscape Construction (IBLB). Secretary of EFIB (European Federation for Soil Bioengineering). Expertise: soil bioengineering; vegetation technology; botany; erosion (erosion control); torrents and avalanches research; soil science; construction technology; green area planning; soil science; environmental organization; landscape planning.

ROLF STUDER

Dep. Chairman of EFIB (European Federation for Soil Bioengineering), Vice-President of Verein für Ingenieurbiolgie, Switzerland.

FREDDY REY

PhD Grenoble, Université Joseph Fourier Grenoble I. He works at Cemagref (Grenoble, France), as a Forest Engineer and Doctor of Management of Mountain Areas. President of AGEBIO (Association Française de Génie Biologique pour le Contrôle de l'Érosion des Sols). Areas of research: Interactions between vegetation and erosion, restoration ecology applied to community eroded mountain, ecological engineering.

MARCO SCHMIDT

Marco Schmidt studied Landscape Architecture and Environmental Planning in Berlin. He worked on various urban ecological demonstration projects, commissioned by the Berlin Senate for Urban Development and the Federal Ministry of Economics and Technology. Main focus is the evaluation of buildings especially regarding water balance modifications, energy consumption, urban heat island effect and climate change mitigation strategies which focus on evaporation rather than greenhouse gas emissions. Since 1992, teaching and research activities at the Technical University of Berlin and the University of Applied Sciences in Neubrandenburg on developing the necessary skills and best practice in ecological construction.

FRANCISCO J. ESCOBEDO

Assistant Professor and Extension Specialist at the University of Florida, School of Forest Resources and Conservation. His research and extension work focuses on urban and community forest management, hurricane effects and ecosystem services. He has worked with the UFORE model (i-Tree Eco) for the last eight years and co-developed the i-Tree Storm hurricane adaptation. Dr. Escobedo worked for 13 years with the USDA Forest Service and holds a BS degree in Soil Science from New Mexico State University, a MS degree in Watershed Management from the University of Arizona and a Doctorate in Forest Resources Management, Environmental and Natural Resources Policy from State University of New York.

PAOLO CORNELINI

Civil Engineer (1971) and Doctor of Natural Sciences (1986). Author of 70 publications in the field of environmental design and engineering nature. Co-author of Manual of environmental engineering of the Lazio Region and the Ministry of Environment. Vice President of A.I.P.I.N. (Associazione Italiana per la Ingegneria Naturalistica). Co-Lecturer in the Master of Science of Faculty of Agriculture of the University of Tuscia (Viterbo). Lecturer in more than 130 courses and seminars at universities, vocational training centers, regional administrations, professional associations.

MAURICIO BALENSIEFER

Graduate Engineer in Forestry at the Federal University of Paraná. Post-graduate degree in Forestry at the Federal University of Parana. Professor at the Department of Forest Science of the Federal University of Parana, Coordinator of Recovery of Degraded Areas - since 1982. President of the Brazilian Society for Rehabilitation of Degraded Areas (SOBRADE). 16 years experience working in coordination, development, implementation and training in Environmental Restoration. Member of the Coordinating Board of the Iberoamerican Network and Caribbean Ecological Restoration, since 2007; Representative of the International Society for Ecological Restoration, SER International for Latin America and the Caribbean (2007-2011).

JOÃO FAISCA PEREIRA

M. Sc. degree in Hydraulics and Water Resources at Instituto Superior Tecnico (IST), Technical University of Lisbon, Portugal. He got his Ph.D. in Engineering and Applied Science at the University of New Orleans in New Orleans, USA. He worked as a research assistant, in the Department of Civil Engineering and Architecture of IST, on fluvial and environmental hydraulics, hydrodynamic numerical and physical modeling. During his doctoral program, he worked as a research assistant at the Department of Civil and Environmental Engineering of the University of New Orleans. He is currently a Post-Doctoral Researcher at the Department of Civil and Environmental Engineering of the University of New Orleans.

FABRICIO J. SUTILI

M. Sc. Degree in forestry at the Federal University of Santa Maria (UFSM), and a PhD degree at the Universität für Bodenkultur (BOKU), Vienna, Austria - Department of Civil Engineering and Natural Hazards, Institute of Soil Bioengineering and Landscape Construction (IBLB). He is currently professor at the Federal University of Santa Maria (UFSM). Areas of Interest: Ecological Restoration, Soil Bioengineering and Watershed Management.

HANS PETER RAUCH

Senior Lecturer, Post Doc in Soil-Bioengineering at the Universität für Bodenkultur (BOKU), Vienna – Austria. Expertise: soil bioengineering, semi-natural hydraulic engineering, water conservation, torrent and avalanche control.

CLEMENS WEISSTEINER

PhD-student at the Universität für Bodenkultur (BOKU), Vienna – Austria. Expertise: soil bioengineering and semi-natural river engineering.

ANNA SERRA LLOBET

Visiting scholar, University of California at Berkeley, Institute of Urban and Regional Development. Post-doctoral project: Floods, risk perception and land-use planning: a comparative study between the US and the EU (2011-). Ph.D. Environmental Sciences, Autonomous University of Barcelona, Spain. M.Sc. Environmental Sciences, Autonomous University of Barcelona, Spain. Intern at the Directorate General for the Environment, European Commission, Brussels. Areas of Current Research: Flood risk assessment and management strategies focusing on Mediterranean rivers and climate change influences on extreme events, and vulnerability analyses of human societies living in flood prone areas.

PILAR BARRAQUETA EGEA

PhD in Natural Sciences from the University of Bremen, Germany (1981). Founding member of EKOS, Environmental Assessment and Research, environmental consultancy established in 1988. European managing director EECO Ecological Consulting SL since 1996. She works primarily in the environmental impact assessment of projects and strategic environmental assessment of land use and urban plans, as well as ecological restoration projects of various kinds. She belongs to several associations, such as: President of SALDROPO, Association for the study and protection of inland wetlands, Secretary of AEIP (Spanish Association of Landscape Engineering), Member of EFIB (European Federation of BioEngineering)

DIOGO DE ABREU

Director of the Center for Geographical Studies, University of Lisbon (CEG-UL). At present, with its team of 124 researchers, 43 of whom have PhDs, the CEG-UL is a reference in research and in the dissemination of geographical knowledge in Portugal. According to European standards, it is considered to be a top quality research unit. Main interests: Modeling, Urban and Regional Planning (MOPT), Migration, Spaces and Societies.

JOÃO CARLOS AZEVEDO

President of the Portuguese Association for Landscape Ecology (APEP), and Professor at the Department of Environment and Natural Resources and Mountain Research Center (CIMO), based at the School of Agriculture of the Polytechnic Institute of Braganca, Ph.D., Forestry, Texas A&M University. Main Interests: Landscape ecology, sustainability in forested landscapes, nature conservation, sustainable short rotation forestry systems, modeling.

FRANCISCO CASTRO REGO

Professor at the Instituto Superior de Agronomia (ISA), Technical University of Lisbon, Portugal, and the Coordinator of the Baeta Neves Applied Ecology Research Center (CEABN), Lisbon. He received his PhD in Forestry, Wildlife and Range Management from the University of Idaho, USA. His research has been focused primarily on fire ecology and management. He is the international coordinator of the EU project Fire Paradox and the representative of Portugal in the Committee of the Forests, their Products and Services Domain (EU-COST). Dr. Rego was Director of the Forest Research Station in Lisbon (1996-2000), Director of the Portuguese Forest Service (2005-2007), and a member of the Directive Council of the European Forest Institute since 1998, as well as its Vice-Chairman, and Chairman (2002-2004).

RUI CORTES

Professor and Vice-Director of the Center for the Research and Technology of Agro-Environmental and Biological Sciences (CITAB), at UTAD, Vila Real, Portugal, Vice-president and Portuguese delegate at the Iberian Centre for River Restoration (CIREF), President of the Audit Committee of APENA.

JOSE MATOS SILVA

Professor at the Faculty of Engineering, The Catholic University of Portugal (UCP), Lisbon, Portugal, President of APENA – the Portuguese Association for Soil- and Water-Bioengineering, President of Real 21 - a non-profit NGO dedicated to the restoration and preservation of Real River (1977 -). Member of EFIB - European Federation of Soil Bioengineering (2007 -), Counselor of the Tagus River Basin Management (2009 -). Author or co-author of more than 200 publications. Main Domains of Research: Hydrodynamics, River Hydraulics, Water Resources, Environmental Engineering, History of Hydraulics, Soil and Water-Bioengineering, Land Use Planning, Sustainable Development.

ABSTRACTS OF THE ACCEPTED POSTERS

1.1.P.1.14

O PARQUE FLORESTAL DE MONSANTO
A SUA EVOLUÇÃO HISTÓRICA E UM CONTRIBUTO PARA O SEU PLANO DE GESTÃO

Teresa Grilo[1], Ana Luísa Soares[2], Sónia Talhé Azambuja[2] e Cristina Gomes[3]

[1] Aluna do Mestrado em Arquitetura Paisagista, Instituto Superior de Agronomia, Universidade Técnica de Lisboa, Tapada da Ajuda, 1349-017 Lisboa

[2] Centro de Ecologia Aplicada Professor Baeta Neves, Instituto Superior de Agronomia, Universidade Técnica de Lisboa, Tapada da Ajuda, 1349-017 Lisboa

[3] CML Divisão Gestão do Parque Florestal Monsanto, Estrada do Barcal, Monte das Perdizes, 1500-068 Lisboa

O Parque Florestal de Monsanto é o maior Parque da cidade de Lisboa ocupando uma área de cerca de 1000 ha. A história regista, já em 1868, a intenção de criar um parque florestal na descarnada serra de Monsanto. Mas só nos anos 30 se inicia a sua obra, pelo ministro das obras públicas, engenheiro Duarte Pacheco, e pelo arquiteto Keil do Amaral, altura em que se fizeram as expropriações, datando as primeiras plantações de meados dos anos 40. Nos anos 90 foram inaugurados espaços como o parque do Alto da Serafina e o Parque Ecológico. No início do século XXI a cidade de Lisboa regista um valor médio de área de espaços verdes de 9,1 m2/hab, se não incluirmos o Parque de Monsanto, e de 26,8 m2/hab se o incluirmos (Soares e Castel-Branco, 2007). Este facto justifica a importância atribuída ao tema em estudo que para além de uma análise biofísica e histórica do Parque, pretende retratar as alterações ao longo dos tempos, uma vez que tem sido alvo de grande pressão urbanística. Como objetivo final pretende contribuir com considerações relevantes para a gestão do Parque, tendo em consideração o Plano de Gestão Florestal aprovado

6.3.I.4.80

ECOLOGICAL RESTORATION OF MODIFIED WATER BODIES IN CENTRAL EUROPE

Florin Florineth

Head of Institute of Soil Bioengineering and Landscape Construction, Universität für Bodenkultur (BOKU), Vienna – Austria. Secretary-General of EFIB (European Federation for Soil Bioengineering

The aim of revitalization is to restore the ecological functionality of a river.

Steps to that aim are the restoration of the

- lengthwise continuum (longitudinal cross-linking)
- crosswise continuum
- vertical continuum
- creation of pioneer habitats
- support of natural dynamics

Potential Measures are:

- modification of the stream course (meandering instead of elongated)
- modification of the cross-sectional area (expansion and/or restriction)
- modification of the riverbed and the bank (deconstruction of the hard bank protection and if necessary replacement by soil-bioengineering constructions)

In the lecture, some examples of successful revitalization projects from Austria, Switzerland and South Tyrol / Italy are introduced and discussed.

7.3.I.5.83

PESQUISA E APLICAÇÃO DA ENGENHARIA NATURAL PARA A RESTAURAÇÃO DE AMBIENTES FLUVIAIS NO BRASIL

RESEARCH AND APPLICATION OF SOIL BIOENGINEERING FOR THE RESTORATION OF FLUVIAL ENVIRONMENTS IN BRAZIL

Fabrício J. Sutili

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Também no Brasil as técnicas de engenharia natural apresentam-se como alternativa na solução de uma série de problemas. Entretanto, não só esses modelos de intervenção são, no Brasil, pouco conhecidos, como carecesse de informações sobre as características técnicas da vegetação. Com intento de suprir parte dessa carência de informações a Universidade Federal de Santa Maria vem desenvolvendo pesquisas que investigam as propriedades vegetativo-mecânicas da vegetação ribeirinha e de encosta. Hoje, os conhecimentos reunidos garantem que a engenharia natural venha sendo aplicada com segurança na região sul do país. Uma serie de informações já foram coletadas pelo Instituto de Pesquisas da Amazônia, gerando informações também para a região norte.

A Universidade Federal de Sergipe tem experimentado técnicas de engenharia natural para a estabilização das margens do Rio São Francisco na região nordeste do país. Atualmente esforços conjuntos entre as Universidades de Ouro Preto, Espirito Santo e Santa Maria pretendem trazer informações sobre a vegetação do bioma da Mata Atlântica na região sudeste. A lacuna de conhecimento quanto às características biotécnicas da vegetação ainda é grande e exige que as técnicas sejam utilizadas, em muitos lugares e situações, sob uma ótica conservadora, relegando a vegetação uma contribuição estrutural secundária. Com o desenvolver da pesquisa estamos tornando possível que os projetos possam cada vez mais contar com a vegetação como componente estrutural.

Palavras-chave: bioengenharia de solos, biotécnicas

In Brazil too, soil bioengineering techniques are presented as an alternative for resolving a series of problems. However,

not only is little known in Brazil about these models of intervention, but there is also a lack of information about the technical characteristics of the vegetation. To resolve this lack of information, the Universidade Federal de Santa Maria has been developing research that investigates the vegetative and mechanical properties of the riverbank and for slope protection vegetation. Today, the knowledge that has been gathered has led to soil engineering being properly applied in the South region of the country. A series of information was collected by the Instituto de Pesquisas da Amazônia (Research Institute of Amazônia), also generating information for the North region. The Universidade Federal de Sergipe has used techniques of soil engineering to stabilize the banks of the São Francisco river in the Northeast region of the country. Currently, joint efforts between the Universities of Ouro Preto, Espirito Santo and Santa Maria are underway, to bring information about the vegetation of the Mata Atlântica (Native Atlantic Forest) biome in the Southeast region. The gap in our knowledge of the biotechnical characteristics of the vegetation is still great, and requires the use of techniques, in many places and situations, from a perspective of conservation, consigning the vegetation a secondary structural contribution. With the development of research, we are making it possible for projects to increasingly include the vegetation as a structural component.

Keywords: soil bioengineering, biotechniques

8.3.I.6.26

RIVER MORPHOLOGICAL IMPACTS OF SOIL BIOENGINEERING LOW WATER STRUCTURES AT THE LIESING RIVER, VIENNA

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The Liesing River is a small scale river flowing 30 km trough strongly populated regions inthe south of Vienna and Lower Austria. From 2002 to 2006 several parts of the Liesing river have been restored excluded a small section due to the reconstruction of a new railroad bridge. This 200 m long section was the subject of soil bioengineering implementation work during a student project in 2011. Due to hydraulic conditions soil bioengineering structures were required not to exceed low water level in order to minimize impacts during floods. Therefore only dead plant material was used in combination with different soil bioengineering measures.

In order to monitor first impacts on river morphology and define mesohabitats investigations on substrate, water depth and flow rate were conducted in two sections (6 x 6m) on a raster basis of 20 centimeters (900 data points). First section contained a dead rootstock and a branch layer and second section didn't contain any soil bioengineering measures. The sections were compared to each other in order to find any differences in flow patterns. After data collection, the results have been evaluated and classified.

Analysis has shown that many still water areas and differences in water depths have been found especially behind the branch layer, which make various living spaces available for a wide range of species. It arises that even in this short period after implementation of soil bioengineering measures (about eight months) there are already marginal differences between the two sections.

Keywords: river morphology, low water level, soil bioengineering measures

9.3.C.2.50

A UTILIZAÇÃO DE TÉCNICAS DE ENGENHARIA NATURAL E HIDRÁULICA FLUVIAL NA REQUALIFICAÇÃO DUM CURSO DE ÁGUA EM AMBIENTE URBANO. O CASO DA RIBEIRA DA CASTANHEIRA (RIO TINTO)

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A obra de restauro, estabilização e reabilitação da Ribeira da Castanheira, um afluente do Rio Tinto, na área envolvente ao segmento que circunda a nova estação do Metro, assume