CASCAIS
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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

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 Weisteiner	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	Registration	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		Marco Vicari et al.	Inês L. Fonseca		
15:45		Joaquim Jesus	Ana Filipa Leite		
16:00		Eike Flebbe et al.	Sara Santos et al.	Walkingn Tour of Cascais	
16:15		Kristian Ceppas	Q. & Answers		
16:30		Questions & Answers	**Coffee Break**		
16:45		**Coffee Break**			
17:00		Francisco Escobedo	Marco Schmidt		
17:30		Maria M. Silva	Tatiana Valadaet 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

connects Naples with the towns of Quarto and Marano. This road has been often interested by small-scale mass movements, which induced local authorities to commit a project devoted to the landslide hazard mitigation. Among the remedial measures adopted a major role was assigned to biotechnical slope stabilization works, such as vegetated timber walls and geogrids, contour wattling, brush layering and others.

Having monitored the bioengineering works some years after their realization, some conclusive remarks are referred to their effectiveness in the landslide hazard mitigation.

Keywords: bioengineering techniques, landslides, loose pyroclastic, urban area

32.1.I.1.66

LANDSCAPE ECOLOGY IN MEETING CHALLENGES IN LAND MANAGEMENT. THE CASE OF PORTUGAL

João Carlos Azevedo[1],[2], Isabel Loupa Ramos[1],[3] and João Pradinho Honrado[1],[4]

[1] APEP - Associação Portuguesa de Ecologia da Paisagem (Portuguese Association for Landscape Ecology), Portugal

[2] CIMO/ESA/Instituto Politécnico de Bragança, Portugal

[3] CESUR/IST/Universidade Técnica de Lisboa, Portugal

[4] CIBIO/FC/Universidade do Porto, Portugal

The practice of planning and management at the landscape scale has increased over the year and in some fields, such as forestry, hydrology, or biodiversity conservation, the landscape approach is already a requirement. Management at this scale is a challenging task due to the complexity of the socio-economic-ecological systems under consideration but mostly due to the level of uncertainty of current and future drivers of change and their effects. Theoretical foundations and methods to support management of landscapes can be found within landscape ecology, an emerging science field in the 1990's and 2000's but now fully established despite the diversity of perspectives. In Portugal, landscape ecology has also emerged in the 1990's but applications in real world cases are infrequent.

The goal of this work was to analyse the role of the science of landscape ecology in meeting or contributing to meet challenges in landscape management in Portugal. We analysed approaches and methods used to address the sustainable management of landscapes as well as particular case studies in forestry, fire hazard reduction, biodiversity conservation and regional planning where landscape ecology based knowledge or methods have been applied. Considering the insufficiency of applications in Portugal revealed by this work, we additionally present principles, guidelines and measures to be used in land management in general and within in the fields described above based upon the foundations and the practice in the field of landscape ecology, particularly in Portugal.

Keywords: landscape ecology, landscape management, principles and guidelines, Portugal

33.1.C.1.11

ARTIFICIAL INTELLIGENCE – BRIDGING THE GAPS IN SOIL MAPS

Fonseca, I.L.[1], Freire, S.[2], Brasil, R. [1], Rocha, J. [1]and Tenedório, J.A.[2]

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[2] Centro de Estudos de Geografia e Planeamento Regional, Faculdade de Ciências Sociais e Humanas da Universidade Nova de Lisboa, 1069-061 Lisboa, Portugal

There is a growing need for digital soil maps at scales suitable for land management and regional planning. Soils modulate hydrological fluxes, regulate ecosystems and play an important role in mediating the impact of climate change. However, most European countries still lack complete soil map coverage at medium to large scales because soil surveys are very expensive and time consuming. Artificial Neural Networks (ANNs) are a means of quickly, cheaply and accurately predicting soils by learning rules that can be extended to unmapped areas. In this study two different types of ANNs (GeoSOM and Multi-layer Perceptron) and five sampling strategies are investigated in order to predict soil types across two catchments in Northern Portugal and implement, at a later stage, the best model to