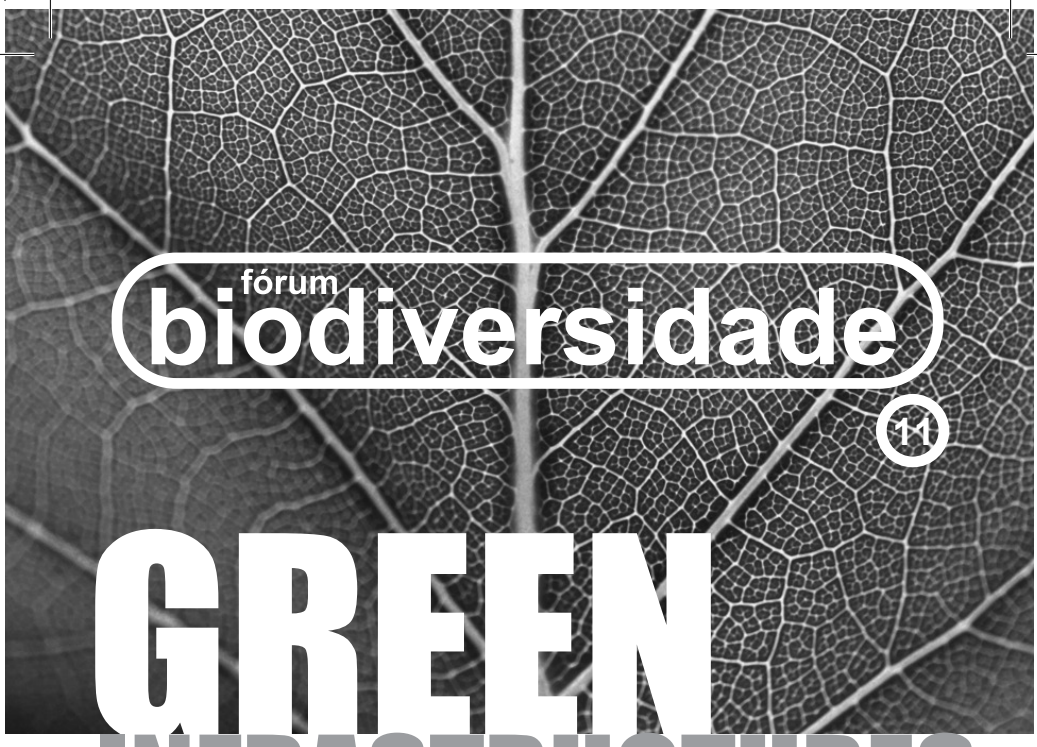

fórum biodiversidade 11

GREEN INFRASTRUCTURES FOR BIODIVERSITY

Organização:

CASCAIS

GREENFEST

fórum biodiversidade 11

LIVRO DE RESUMOS

The Infrastructures for Biodiversity

O debate em torno de questões relacionadas com a Biodiversidade é um objectivo-chave para o Município de Cascais e para a Cascais Natura. Este ano realiza-se a quarta edição do Fórum Biodiversidade sob o tema Green Insfrastructures for Biodiversity, com a colaboração da Associação Portuguesa de Corredores Verdes (APCV) e da Associação Portuguesa de Engenharia Natural (APENA). Para esta conferência, os objectivos estabelecidos foram os seguintes:

- Debater a importância dos corredores verdes como infra-estruturas fundamentais para a Biodiversidade, à escala da paisagem local e regional;
- Celebrar 2011 como o Ano Internacional das Florestas decretado pelas Nações Unidas;
- Discutir ideias inovadoras que representem exemplos de sucesso no âmbito da melhoria do ambiente e do meio natural, e que contribuam para a sustentabilidade territorial.

O Fórum Biodiversidade 2011 pretende focar-se no papel das Infra-estruturas ecológicas na promoção de uma estrutura ecológica e na coesão urbana, ambiental, económica e social. O conceito de Green Infrastructures será abordado e discutido no âmbito dos Corredores Verdes como suporte da conectividade entre os espaços verdes urbanos e destes com o meio natural, no seu papel na promoção da diversidade biológica e no aumento da qualidade de vida urbana. A última sessão será dedicada à Engenharia Natural como prática privilegiada na recuperação e na restauração ecológica de sistemas complexos alterados ou perturbados, tanto no meio urbano como no meio natural.

As conferências estão divididas por sessões que abordarão os seguintes temas:

• SESSÃO 1 - Greenways and Forests

Em muitos dos países do mundo as florestas cobrem ainda grande parte do território. Os oceanos quando somados às áreas terrestres ocupadas por florestas são os grandes núcleos de Biodiversidade global e os elementos que contribuem para a boa qualidade do ar.

Uma das principais causas para o declínio da Biodiversidade é a contínua redução de áreas de habitats naturais e semi-naturais e a sua fragmentação. A necessidade de introduzir e de proteger a Biodiversidade nos meios urbanos e rurais depende directamente da qualidade da água e de toda a área terrestre, ocupada por florestas, bosques, agricultura ou matos. A floresta contribui ainda para o Produto interno Bruto nacional (PIB) e para a riqueza das nações, desta forma, a sua importância na Economia nacional e internacional deve ser discutida e localizado o seu potencial económico a médio e longo prazo. Na sociedade contemporânea, onde a expansão urbana continua a ocupar um lugar privilegiado no investimento público e privado nacional, as Florestas permanecem como os espaços naturais por excelência e ganham uma relevância económica crescente nas actividades ligadas à Industria do turismo e de Recreio de Natureza.

Os resultados do comportamento humano são muitas vezes desastrosos para os habitats naturais, onde, juntamente com as alterações climáticas, são as principais causas de destruição de florestas em todo o mundo. Contudo, todos os espaços geográficos desenhados pelo Homem sejam, agrícolas, húmidos, florestas, áreas urbanas, representam um mosaico diverso de paisagens, onde cada componente tem a sua dinâmica e deve contribuir para um equilíbrio global. Este equilíbrio depende da

presença do maior número de parcelas geográficas, contribuindo para um provável Desenvolvimento sustentável.

Os Corredores verdes são entendidos como as infra-estruturas ecológicas ou os canais que ligam e suportam todos os sistemas de vida.

• SESSÃO 2 - Greenways and Rural Landscape

A qualidade das paisagens rurais envolve um conjunto de problemas ambientais, económicos e sociais que devem ser pensados em conjunto e não isoladamente. Para que alguns destes encontrem solução, os meios rurais devem preservar o seu potencial económico através de uma boa gestão agrícola, de gado, das florestas e dos aglomerados, funcionando como um sistema dinâmico, aberto à modernidade e inseridas nos modelos económicos, sociais e culturais contemporâneos.

Nalguns países Europeus como Portugal, existe uma distribuição desigual de população e investimento nas regiões do interior e litoral. O litoral mais povoado e rico e o interior com um défice de investimento e baixa densidade populacional. Como resultado destas migrações são as áreas agrícolas e florestais em crescente abandono, com consequências no número de fogos e os seus efeitos destruidores. Este abandono é na maioria das vezes agravado pelo fraco desenvolvimento económico das áreas mais marginais, pelo envelhecimento populacional, e pela decrescente fixação de população activa.

Uma paisagem multifuncional é resultado directo da boa manutenção e gestão territorial e deve ser composto por galerias ripícolas, áreas naturais e corredores verdes. Estes últimos devem ser considerados como pilares territoriais para alcançar a conectividade espacial entre os ecossistemas lineares presentes, onde as diferentes visões acerca do desenvolvimento rural devem ser integradas dentro de uma estratégia consensual e de compromisso, e devem compreender os corredores verdes como elementos integradores de actividades recreativas e objectivos ecológicos. Desta forma torna-se necessário reter que a uma transformação da paisagem rural pressupõe um equilíbrio entre os factores naturais, sociais e económicos, compreendendo a interdependência entre eles.

• SESSÃO 3 - Greenways and Soft Mobility

Os Europeus residentes em meios urbanos são cada vez mais exigentes em relação à disponibilidade de espaços verdes urbanos, sejam eles no centro ou na periferia, bem como um estilo de vida mais próximo da natureza, através das crescentes preocupações na utilização das energias renováveis e por opções que não impliquem o recurso a combustíveis fósseis.

Uma paisagem que associa recursos naturais e culturais é de grande atractividade para o turismo, não só local mas também regional, este dinamismo resulta de uma acessibilidade aos recursos naturais, históricos e culturais materializado através do desenho, construção e manutenção de uma rede de percursos ou infraestruturas ecológicas. Os Corredores Verdes e as ciclovias são parte integrante dessas redes. Estas condições e normas são definidas através de investigações desenvolvidas pela European Greenways Association (EGWA), cuja contribuição e enriquecimento tem beneficiado em muito estas redes e a toda a experiência Europeia.

A Europa do Sul esteve envolvida no Projecto REVER MED que tinha como objectivo implementar e alargar a Rede Europeia de Corredores Verdes, com a finalidade de ligar o sul de Portugal com o sul de Itália, atravessando toda a região mediterrânea por Espanha e França por mais de 10 000 Km. Em Portugal

Ao nível do território nacional, um dos exemplos mais emblemáticos é o "Plano Nacional de Ecopistas", desenvolvido em 2011, envolvendo mais de 700 Km de ciclovias, que teremos a oportunidade de ver explicado detalhadamente numa das night schools do dia 29 (consultar programa).

• SESSÃO 4 - Greenways and Urban Environment

Os oradores convidados para participarem nesta sessão, vão focar as suas comunicações em investigações ou case studies no conceito de corredores verdes em áreas metropolitanas. O conceito de Corredores verdes é parte da estratégia de promoção e conservação dos ambientes rurais e urbanos e é sustentado simultaneamente por conceitos espaciais e científicos, e propósitos ecológicos, recreativos, estéticos ou outros compatíveis com o uso sustentável do território.

A rede Natura 2000 é a um instrumento que visa a protecção dos recursos naturais na Europa que promove um grande estímulo ao desenho, preservação e consolidação dos Corredores Verdes, como um conceito multifuncional. Muitos exemplos mostram que a intensa expansão urbana ou desenvolvimento urbano apoiado pelas políticas de solos conduzem a diferentes formas de stress, à deficiência de áreas verdes urbanas de qualidade, trânsito, carência de habitações de qualidade e falta de condições de trabalho. Alguns estudos estatísticos e abordagens interdisciplinares afirmam que as práticas de planeamento do território surtem um efeito directo no bem-estar e na saúde da população urbana, contudo, geralmente estes estudos não são considerados na estratégia do planeamento urbano e metropolitano. De acordo com uma das comunicações em programa a falta de "Espaços verde urbano amplos" tem efeitos directos e indirectos no bem-estar e saúde das populações urbanas, na medida em que estas estão associadas a conceitos de qualidade de vida e à qualidade do ambiente urbano.

Nos dias de hoje, e de acordo com a lei do planeamento urbano em Portugal, os municípios devem identificar todos os recursos naturais e culturais existentes em função, potenciando o seu uso e preservação como Estruturas Ecológicas Municipais. De acordo com estas normas os levantamentos devem identificar: Galerias Ripícolas, corredores verdes de recreio, corredores ecológicos, elementos com elevados valores cénicos e culturais.

• SESSÃO 5 – Greenways and Bioengineering

A Engenharia Natural compreende um conjunto de técnicas e métodos que recorrem ao uso de elementos vivos para a construção de estruturas que permitem a recuperação de áreas degradadas e sistemas naturais. Neste fórum são apresentadas experiências nacionais e internacionais, em particular da Europa Central, Alpes e Mediterrâneo, que irão demonstrar o largo espectro de actuação da Engenharia Natural e as suas oportunidades em Portugal.

Os objectivos da Engenharia Natural incluem o estabelecimento de cobertura vegetal, a estabilização de taludes, encostas e margens, ou a criação de sistemas filtro ou fitorremediação. É também uma ferramenta adequada para a construção de infraestruturas

sustentáveis ou na mitigação de impactos, bem como a recriar a curto prazo habitats semi-naturais e a melhorar paisagens.

Neste sentido, a Engenharia Natural desempenha um papel crucial na implementação de corredores verdes ecológicos.

FÓRUM BIODIVERSIDADE

A reflexão e o debate sobre Biodiversidade e Desenvolvimento Sustentável são um dos objectivos essenciais da Câmara Municipal de Cascais e da Agência Cascais Natura. O Fórum Biodiversidade permite a realização de diversas iniciativas na abordagem desta temática, desde cursos e seminários destinados à população em geral, a conferências em áreas específicas de projecção nacional e internacional.

Todas as edições, anuais, incidem sobre um tema que será seleccionado por motivos diversos (e.g., escassez de conhecimento; surgimento de novas tecnologias; impacto na definição de políticas locais ou nacionais) e que permitem o acréscimo do nível de conhecimento da sociedade, independentemente da sua formação académica. O Fórum Biodiversidade permite discutir os temas seleccionados de forma pragmática e realista, de modo a que a gestão e conservação da Natureza e da Biodiversidade sejam directa e positivamente influenciadas pelos resultados alcançados anualmente.

fórum biodiversidade 11

PROGRAMA

DIA 28

09:00 – 13:00	Workshop APENA – Soil Bioengineering
13:00 – 14:30	Lunch
14:30	Opening session
	Carlos Carreiras – Presidente da Câmara Municipal de Cascais
	João Cardoso de Melo (Chairman) – Agência Cascais Natura (Portugal)
	João Reis Machado (Coordenador Científico) – Universidade Nova de Lisboa – Fundação para a Ciência e Tecnologia \ Associação Portuguesa de Corredores Verdes (Portugal)
	Tito Rosa – Presidente do Instituto de Conservação da Natureza e da Biodiversidade
	Pedro Afonso de Paulo – Secretário de Estado do Ambiente e Ordenamento do Território[1]
15:00	Opening speech From Agronomy to Landscape and Greenways
	Julius Gyula Fabos (Keynote Speaker) – University of Massashusetts. Amherst (USA)
16:00	**SESSION 1 - GREENWAYS AND FORESTS**
	Chairman: Francisco Castro Rego – ISA – UTL (Portugal)
16:15 – 17:00	The function and dynamics of corridors with respect to biodiversity and fire management: examples from forest and range landscapes of North America
	Stephen C. Bunting (Keynote Speaker) - College of Natural Resources, University of Idaho (USA)
17:00 – 17:15	Coffee break
17:15 – 17:45	Exploring the potential of vegetation corridors in forest fire hazard reduction at the landscape level: examples from Portugal
	J.C. Azevedo – Presidente da Associação Portuguesa de Ecologia da Paisagem (Portugal)
17:45 – 18:15	Forests are also for the people: which greenways are needed?
	José Ferreira de Castro – Instituto Politécnico de Bragança (Portugal)

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18:15 – 18:45 Greenways associated with riparian forest habitats in the Natura 2000 network: Portugal and the European context

Inês Duarte - Centro de Investigação em Ciências do Ambiente e Empresariais, Instituto Superior Dom Afonso III (Portugal)

18:45 - 19:15 Discussion

20:00 – 22:00 Night School (inscrições limitadas)

SOIL BIOENGINEERING: PRACTICAL CASES

Carlo Bifulco – CEABN – ISA – UTL

Hans Peter Rauch – University of Natural Resources and Life Sciences, Vienna (Austria)

CASCAIS LOCAL GREEN INFRASTRUCTURE: THE METHODOLOGIES

João Cardoso de Melo – Agência Cascais Natura – Câmara Municipal de Cascais (Portugal)

Alexandre Neto – Agência Cascais Natura – Câmara Municipal de Cascais (Portugal)

Vasco Silva – Agência Cascais Natura – Câmara Municipal de Cascais (Portugal)

DIA 29

09:00 **SESSION 2 - GREENWAYS AND THE RURAL LANDSCAPE**

Chairman: João Reis Machado – Universidade Nova de Lisboa – FCT \ APCV (Portugal)

09:15 – 10:15 Greenways and ecosystem services

Jack Ahern (Keynote Speaker) – University of Massachusetts – Amherst (USA)

10:15 - 11:00 Ecological Networks: Green Infrastructure for Europe

Theo van der Sluis (Keynote Speaker) – Alterra, Wageningen (Netherlands)

11:00 – 11:15 Coffee break

11:15 – 11:35 Wildlife corridors: Spatial Modeling for Human Pressures and its usefulness for Iberian Wolf Conservation

Ana Luísa Gomes – Instituto Geográfico Português (Portugal)

11:35 – 11:55 Landscape changes in Algarve region, Portugal (85 – 07) – Diagnosis, prospective and proposal for a green infrastructure in central coast

André Botequilha Leitão – CVRM– Instituto Superior Técnico, Universidade Técnica de Lisboa (Portugal)

11:55 – 12:15 Periurban Agriculture and Mediterranean Ecosystems: The Azeitão Cheese production System as an example

	of sustainable Multifunctional Agriculture in the Lisbon Metropolitan Area
	Isabel Carvalho Rodrigues - Departamento de Ciências de Engenharia do Ambiente - Faculdade de Ciências e Tecnologia - Universidade Nova de Lisboa (Portugal)
12:15 – 12:35	Rural Areas, Greenways Design and Biodiversity Resources. The Alto Minho Case Study
	José da Cruz Lopes – Instituto Politécnico de Viana do Castelo (Portugal)
12:35 – 13:00	Discussion
13:00 – 14:30	Lunch
14:30	**SESSION 3 - GREENWAYS AND SOFT MOBILITY**
	Chairman: Miguel Pereira – APCV (Portugal)
14:45 – 15:30	Regional planning for greenways
	Martin van den Toorn (Keynote Speaker) - Delft University of Technology Landscape architecture (Netherlands)
15:30 – 16:00	Bike share systems
	Soledad Moreno - Sustainable Mobility Solutions (Spain)
16:00 – 16:15	Coffee break
16:15 – 16:45	Cycle infrastructure design
	J**oan Valls** – AIML (Spain)
16:45 – 17:15	Cicloria Project
	José Carlos Mota – Universidade de Aveiro – Departamento de Ciências Sociais, Políticas e do Território (Portugal)
17:15 – 17:45	The Green Strategy for the Bikes in Lisbon 2007-2010
	Duarte Mata – Câmara Municipal de Lisboa (Portugal)
17:45 – 18:15	Discussion
20:00 – 22:00	Night School (inscrições limitadas)
	GREENWAYS: PLANNING AND METHODOLOGIES
	André Botequilha Leitão – CVRM – Instituto Superior Técnico, Universidade Técnica de Lisboa (Portugal)
	Jack Ahern – University of Massachusetts – Amherst (USA)
	CYCLE INFRASTRUCTURE DESIGN
	Joan Valls – AIML (Spain)
	GREENWAYS NATIONAL PLAN
	Luís Silvestre – REFER Património (Portugal)

DIA 30

09:00	**SESSION 4 - GREENWAYS AND URBAN ENVIRONMENT**
	Chairman: Luís Paulo Ribeiro – ISA / Topiaris (Portugal)
09:15 – 10:00	Greenway Planning and Design in Milano Metropolitan Area

	Alessandro Toccolini (Keynote Speaker) – University of Milano (Italy)
10:00 - 10:30	Ecological Infrastructure has an instrument of Urban Fringe revalorization
	Manuela Raposo Magalhães – Centro de Estudos de Arquitectura Paisagista – ISA – UTL (Portugal)
10:30 – 10:45	Coffee break
10:45 – 11:15	Is this urban greenspace good to our health?
	Paula Santana - Centre for Studies in Geography and Planning - University of Coimbra (Portugal)
11:15 – 11:45	The "Linhas Torres" path: na exemple on regeneration paths in Vila-Franca-de-Xira
	Catarina Conde – Câmara Municipal de Vila-Franca-de--Xira (Portugal)
11:45 – 12:15	The greeenways as a atrategy for the urban development in the Oeiras Municipality
	Alexandre Lisboa – Câmara Municipal de Oeiras (Portugal)
12:15 – 13:00	Discussion
13:00 – 14:30	Lunch
14:30	**SESSION 5 – SOIL BIOENGINEERING**
	Chairman: José Matos Silva – Universidade Católica de Lisboa / APENA (Portugal)
14:45 – 15:30	Greenways and multifunctional ecosystem planning in the Italian experience
	Sergio Malcevschi (Keynote Speaker) – University of Pavia (Italy)
15:30 – 15:50	Learning Soil Bioengineering Lessons from experiences in Austria
	Hans Peter Rauch – University of Natural Resources and Life Sciences, Vienna (Austria)
15:50 – 17:10	The importance of greenways as erosion control: multiple approaches for intervention
	Rui Cortes – UTAD (Portugal)
17:10 – 17:30	Soil Bioengineering and slopes: accessibility to the Vesuvius National Park
	Carlo Bifulco – CEABN – ISA – UTL (Portugal)
17:30 – 17:50	Soil Bioengineering study-cases on Southern Portugal Rivers
	André Fabião – DEF - ISA – UTL (Portugal)
17:50 - 18:10	Ecological Restauration in the Cresmina Dune
	João Cardoso de Melo – Agência Cascais Natura – Câmara Municipal de Cascais (Portugal)
18:10 – 18:30	Discussion

18:30 – 19:00 Closing Session

João Cardoso de Melo – Agência Cascais Natura – Câmara Municipal de Cascais (Portugal)

João Reis Machado (Coordenador Científico) – Universidade Nova de Lisboa – FCT \ APCV (Portugal)

José Matos Silva – Universidade Católica de Lisboa / APENA (Portugal)

DIA 1

09:00 17:00 – Field Trip

09:00 Meeting Point: Centro de Congressos do Estoril

09:30 12:30 – Guided Visit to the Ecological restoration of the Cresmina Dune

12:30 – 14:00 luch

14:00 – 16:30 Guided Visit to the Nature Park – Quinta do Pisão

17:00 Arrival: Centro de Congressos do Estoril

Oradores

JULIUS GYULA FABOS (KEYNOTE SPEECH)

Emeritus Professor of Landscape Planning and recipient of an Honorary Degree from the University of Horticulture, Budapest, Hungary. B.S. in Plant Sciences, Rutgers, 1961; M.L.A., Harvard, 1964; Ph.D. in Landscape Planning and Conservation. Michigan, 1973; Fellow, ASLA, 1985; ASLA Medalist, 1997. Principal developer of the METLAND System for landscape assessment and planning; has been awarded numerous research grants.

Author and editor of more than 200 articles and research bulletins, as well as five books, the latest of which are: Land Use Planning, published by Chapman and Hall, 1985 and co-editor of the book entitled,

Greenways: The Beginning of an International Movement, published by Elsevier, 1996. Finally, his latest book is his memoir, published in 2010 by iUniverse.

From agronomy to landscape and greenways

Julius Gyula Fábos, PhD, Fellow of ASLA, Professor Emeritus
University of Massachusetts, Amherst, MA, USA

Abstract

This paper describes the evolution of my professional career, which parallels the evolution of landscape and greenway planning in the United States and indeed around the world. But prior to the describing this evolution, I felt the need to describe my roots, which led me to become both, a landscape and a greenway planner.

Naturally one can become a planner from any profession, any field. Yet, I felt fortunate to come to it from agronomy, which

introduced me well to the "living environment". As landscape architects we have always modified all planning implementation, which may be minor or major changes (modifications).

I became a landscape planter twenty years before greenway planning became known in the United States. The difference between landscape and greenway planning is simple: landscape planning plans for 100% of an area, while the focus of greenway planning is primarily dealing with the fragile portions of the drainage areas such as wetlands, overly steep areas and ridgelines.

The majority of our landscape planning research and publication resulted in detailed methodology, supported by our interdisciplinary research team, with expertise in natural social sciences and engineering. In contrast, greenway planning has been supported primarily from the natural sciences; hence greenway planning is more focused and simpler than landscape planning. Our landscape planning teams have been supported at the University of Massachusetts by 12 departments throughout the campus during the 1970's and the 1980's. In contrast, greenway planning which we have been involved with since 1985, we can do independently under our landscape architecture/regional planning department.

All greenway planning I was involved in has been done in collaboration with a colleague within my department or with Hungary. More specifically during the 1990's I collaborated with Jack Ahern which resulted in a book, entitled Greenways: The Beginning of an International Movement, and published by Elsevier in 1996. Similarly, my collaboration with Robert Ryan during the past decade resulted in two special journal issues. Landscape and Urban Planning Journal published our first special issue under the title "International Greenway Planning" during May 2004. The same journal published our second special issue during April 2006 under the title "Greenway Planning around the World". Both of these special issues are book size publications: The 2004 publication is 342 pages long and our 2006 publication is 297 pages long.

FRANCISCO CASTRO REGO (CHAIRMAN)

Forestry Engineering course at the Instituto Superior de Agronomia, Lisbon (1972-1978); PhD on Forestry and Wildlife and Range Management at the University of Idaho (1986); Professor at the Universidade de Trás-os-Montes e Alto Douro (1986-1990); Associate Professor at the Instituto Superior de Agronomia (ISA), Technical University of Lisbon (1990 to present); President of the Instituto Superior de Agronomia (1990-1994); University of Idaho Alumni Achievement Award (1995); Director of the National Forest Research Station (1995-1998); National representative in the Technical Committee of COST (EU) in the Forestry Domain (1996-2010); Coordinator of the National Commission for Forest Fires (2001-2002); Chairman of the European Forest Institute (2003-2004); Director of the Portuguese Forest Services (2005-2007); Coordinator of the EU Project FIRE PARADOX (2006-2011); Coordinator of the Centro de Ecologia Aplicada Baeta Neves – CEABN (1995 to present).

The domains of experience and expertise are mainly in Fire Ecology and Management, Landscape Ecology and Ecological Modelling.

STEPHEN C. BUNTING (KEYNOTE SPEAKER)

Ph.D., Texas Tech University, Lubbock, Texas, 1978, Range Ecology; M.S., Texas Tech University, Lubbock, Texas, 1974, Range Ecology; B.S., Colorado State University, Ft. Collins, Colorado, 1971, Forest and Rangeland Management. Assistant, Associate Professor, and Professor, Rangeland Ecology and Management, University of Idaho, Moscow, Idaho, August 1978-present. Associate Professor, Departamento Agronomia, Universidad Nacional del Sur, Bahia Blanca, Argentina, October 1989-February 1990. Research Associate, Range and Wildlife Management Department, Texas Tech University, Lubbock, Texas, June 1971-August 1978.

The domains of experience and expertise are Rangeland ecology, fire ecology

The function and dynamics of corridors with respect to biodiversity and firemanagement: examples from forest and range landscapes of north america

Stephen C. Bunting, Professor, College of Natural Resources, University of Idaho, Moscow, ID, USA (telephone: 011.208.885.7103, email: sbunting@uidaho.edu)

Abstract

Corridors have been frequently proposed to maintain and increase connectivity in landscapes that have been fragmented by natural and human-caused changes. It is assumed that corridors enhance species movement between isolated patches thus increasing population stability and movement of genetic material within a population thereby increasing landscape biological diversity and viability of key species. Corridors have been proposed at many spatial scales on landscapes varying from 10s to 1000s of km2. While corridors have been shown to function well in some instances, their effectiveness has not been extensively studied and they remain controversial for widespread application in many landscapes and for many species. Additional observations have been made with respect to the functionality of landscape corridors including: 1) no single corridor vegetation structure serves all species equally well and some landscape patterns may actually serve as a barrier to species movement, 2) the function of corridors is dynamic as landscapes change through time with disturbances and succession, 3) corridors may enhance the movement of invasive species, 4) the movement of wildfire within the landscape may be either enhanced or restricted by corridors, and 5) in some cases, landscape structure has been specifically modified to serve other purposes (e.g. fire breaks, flood zones, walkways, greenbelts). These areas may or may not function as effective biological corridors. It is clear that if corridor systems are developed, their intended purpose must be specifically identified, they must be carefully planned, and their effectiveness be monitored. The benefits to conservation of biological diversity and fire management and the costs of implementation and maintenance of corridor systems should be evaluated in comparison with other options.

JOÃO C. AZEVEDO

PhD and MSc in Forestry, Texas A&M Univ., USA; "Licenciatura" in Forest Eng., UTAD, Portugal. Professor at the Polytechnic Inst. of Bragança. PI of the Marginal Land Ecosystem Services research group and member of the Direction Board of CIMO Mountain Research Centre. Chair of APEP (IALE-Portugal).

Exploring the potential of holm oak corridors in fire hazard reduction planning

João C. Azevedo[1,2], A. Possacos[3], R. Dias[4], R. Marrão[2], C. Loureiro[5] & P.M. Fernandes[5,6]

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Abstract

In north-eastern Portugal, holm oak (Quercus rotundifolia) woodlands have persisted in the landscape despite the occurrence of frequent fires. The hypothesis that these elements have a role in fire related processes has been proposed by foresters and scientists but only recently it has been addressed. In this research we analysed the current distribution of holm oak remnants in

the region in terms of features such as slope, aspect, distance to streams, and position in the slope. We also compared their distribution in relation to the distribution of areas burned in the last decades. We found that holm oak woodlands are often adjacent to burned areas suggesting a barrier effect of these vegetation structures. Also, the woodlands are often located towards the bottom of very steep slopes. Additionally, we tested the hypothesis that these patches arrest wildfires based on a modeling and simulation approach using field data collected in edges of holm oak woodlands. Computer simulated fire behaviour provided evidence that variations in intensity and velocity across holm oak edges make it possible for these woodlands to affect significantly fire spread. Founded on these results we explored the potential for holm oak corridors to be used in fire hazard reduction planning.

JOSÉ FERREIRA DE CASTRO

José Castro é Engenheiro Florestal (UTAD, 1988), MSc em Rural Planning in Function of Environment (CIHEAM, 1996) e PhD em Ciencias del Paisaje (UAH, 2005). Exerceu na área do Inventário Florestal ligado à indústria papeleira (CELPA, ex-ACEL 1985/88) e na área do Planeamento e Projecto Florestal no sector da madeira e derivados (SONAE, 1987/88). É Professor do Departamento de Ambiente e Recursos Naturais no Instituto Politécnico de Bragança (IPB) desde 1888, responsável pela leccionação das Unidades Curriculares de Planeamento e Gestão do espaço florestal às formações em Engenharia Florestal e Engenharia do Ambiente, assim como de Ecologia da Paisagem e Turismo e Recreio da Natureza. Leccionou já em licenciaturas, mestrados e doutoramentos de outras instituições portuguesas (Universidades de Trás-os-Montes e Alto Douro, de Lisboa, Técnica de Lisboa, de Évora, do Porto, dos Açores, e Instituto Politécnico de Viana do Castelo) e estrangeiras (Universidades de León - Nicarágua, de Alcalá de Henarés e Internacional de Andalucía - Espanha, de Varsóvia - Polónia). Liderou projectos nestas áreas, como o Plano de Desenvolvimento Florestal Sustentável do Município de Vinhais (1996/99) e o Plano de Ordenamento do Parque Natural de Montesinho (2004/07). É membro do Conselho Geral do IPB e do Colégio Nacional de Engenharia Florestal da Ordem do Engenheiros (OE). Foi presidente da Associação Portuguesa de Ecologia da Paisagem e Coordenador do Colégio Regional da OE.

Forests are for people: wich greenways we need?

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Abstract

During centuries forests were intensively used and managed to timber, as well as firewood and many other sub products needed to the wellbeing of populations. Last century, developments in forest sciences and engineering promote new plantations to recover ancient woodlands mainly to land protection and timber production. States implemented administrative and operational services to manage your own forests or reforestation of new reclaimed areas.

Recent changes in society lead to a more urbanised population and demand new functions from forests such as nature conservation and leisure while timber function decrease. As a consequence, the new national and regional strategic plans include new management alternatives for forests such as landscape and nature recreation.

However, to turn it in an operational way, a new forest design and management are needed according requirements and desires of people. Forestry projects require new approaches that take into account habitats and circulations to organize the land to be used by man without disturbing all other functions such as nature, wildlife, erosion control, timber production, etc. In this case, are people that will need their own greenways on forests!

INÊS DUARTE

Colaboradora do Centro de Investigação em Ciências do Ambiente e Empresariais, no Instituto Superior Dom Afonso III, em Loulé. Arquitecta Paisagista, Mestre em Gestão e Conservação da Natureza e Doutoranda em Gestão Florestal. Colaborou como Arquitecta Paisagista na EDIA, na Câmara Municipal de Faro, na CCDR Algarve e foi docente no Instituto Superior Dom Afonso III. Actualmente encontra-se em doutoramento, a desenvolver

investigação no âmbito da Ecologia da Paisagem, sob a orientação do Professor Doutor Francisco de Castro Rego.

Desenvolveu investigação e publicações no âmbito de:

- Comportamento do Sobreiro após o fogo
- Regeneração da paisagem após o fogo
- Dinâmica da alteração do uso do solo em Portugal Continental entre 1990 e 2005
- Comportamento dos habitats naturais no mediterrâneo europeu

Greenways associated with riparian forest habitats in the natura 2000 network: portugal and the european context

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Abstract

Riparian forests provide valuable habitats for wildlife and are important elements of ecological corridors allowing for the flow of organisms, water and nutrients in the landscape. Forest riparian habitats are also important in creating vegetation discontinuities that may reduce fire spread. In short, greenways associated with forest riparian habitats provide important ecological functions and their protection at national and international level is therefore important.

On the other hand, the Natura 2000 network was created to protect the most valuable and threatened habitats (and species) in Europe, with a special priority to those habitat types in danger of disappearance and in view of the proportion of their natural range which falls within the European territory of the EC Member States. Among these valuable habitats are some riparian forests.

Six forest riparian habitats included in the Habitat Directive of 1992 were analyzed for their geographical distribution in the protected sites of 24 European countries and a comparison is

made for their characteristics between Mediterranean, Central and Baltic countries. Comparisons with Portugal are also made.

At the European level, the results show some interesting features indicating, for instance, the priority habitat "alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)" as having an important distribution in Europe, while "riparian formations on intermittent Mediterranean water courses with Rhododendron ponticum, Salix and others" are not considered as a priority type but have very small areas and are an Iberian endemism.

The results also show that, in the European context, the forest riparian habitats included in the Natura 2000 network in Portugal are very representative in the total area for Europe, with four of the six habitat types considered with larger areas per site than the average in Europe. This is an important feature in allowing for more connectivity between protected areas.

In the presentation we will also show how land use changes in Portugal, from 1990 to 2005, are related with the changes in riparian forests and we will discuss some of the perspectives for the future of riparian forests in their role as greenways

SESSÃO 2 - GREENWAYS AND RURAL LANDSCAPE

JOÃO REIS MACHADO (CHAIRMAN)

He graduated in Architecture in 1960 at the Technical University of Lisbon and in 1993 He obtained his Ph. D. in Environmental Engineering Sciences at the New University of Lisbon. His Aggregation took place at this University in 2004.

He started working from 1960 to 1973 in the Municipality of Lisbon as town planner. As researcher, he worked from 1973 to 1986 at the Portuguese Ministry for National Economic Planning. Here he undertook several studies, some of them under OCDE Programs. He had then the opportunity to visit and to be acquainted with regional and urban planning at Central and Regional Planning Departments, in the United Kingdom, in France, in the Netherlands, in Italy and in other European Countries.

From 1986 onwards he was invited as Professor at the New University of Lisbon in Monte da Caparica, lecturing classes in a Master and Doctoral Course, on Regional, Environmental and Urban Planning.

From 1990 onwards, his research was focused on Geographic Information Systems (GIS) when he was preparing his Doctorate with the support of Professor Julius Fabos in the University of Massachusetts. Amherst, USA. This study was published in 2000 by the Gulbenkian Foundation, under the title "The Emergence of Geographic Information Systems in Analysis and Planning".

From 2000 onwards he is President of the Portuguese Greenways Association (APCV).

JACK AHERN (KEYNOTE SPEAKER)

Jack Ahern is a landscape architect who focuses his research on the application of landscape ecological theories, principles and methods on landscape planning and design projects. Earlier, he worked on broad-scale integrated systems of protected lands known as greenways – linking their spatial configuration and resource base with ecosystem services and human use(s). His books address multiple aspects of his applied research including: Water-Centric Sustainable Communities (2010) (Co-author), Measuring Landscapes: A Planner's Handbook (2006) (Co-author), Biodiversity Planning and Design: Sustainable Practices (2006) (Lead co-author), Greenways as Strategic Landscape Planning: Theory and Application (2002); A Guide to the Landscape Architecture of Boston (1999); Greenways: the Beginning of an International Movement (1995) (Co-author).

Jack Ahern has integrated international perspectives throughout his work including his Ph.D. from Wageningen University, Netherlands, and a Fulbright teaching and research fellowship in Portugal. He has lectured at over 20 Univesities in Europe, South America, and Asia. He is currently serving as Vice Provost for International Programs at the University of Massachusetts Amherst and welcomes new collaborations and initiatives with American, and International partners.

Ahern's current research has shifted to applied ecologically-based planning and design of urban environments for sustainability and resilience. This work continues to engage landscape ecology as a theoretical platform to integrate the emerging, fine-scaled professional practices of green infrastructure and landscape urbanism across scales to form green urban networks linked with ecosystem services, sustainability and to build resilience capacity.

Green infrastructure, ecosystem services, and biodiversity

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Keywords: biodiversity, urban biodiversity, ecosystem services, urban sustainability

Abstract

Green Infrastructure is a concept that is particularly relevant to planning and design for the sustainability of urban, human-dominated environments. Green infrastructure provides multiple functions, or ecosystem services, that can be organized to support the needs of contemporary industrial life and also the bio-physical and cultural [processes that life depends on. The ecosystem services concept, advanced by the United Nations, is useful to specify, and assess the multiple functions provided by green infrastructure – including the provision, regulation and support of biodiversity. Biodiversity is often undervalued and weighted in urban planning and design. Recent innovative green infrastructure projects have demonstrated how biodiversity functions can be integrated with other green infrastructure functions – representing a promising strategy for urban sustainability. This paper discusses the definitions of green infrastructure and ecosystem services, and with case examples, illustrates how biodiversity can be integrated with multiple forms of green infrastructure in urban areas. Keywords: green infrastructure, ecosystem services, biodiversity, urban sustainability

THEO VAN DER SLUIS (KEYNOTE SPEAKER)

Mr. Theo van der Sluis (MSc.) is landscape ecologist, involved in international projects in the field of ecological networks and biodiversity. He has extensive experience in Mediterranean and tropical ecosystems, but also boreal forests and steppe grasslands. He worked in particular in Italy and Eastern Europe on ecological network development.

As ecological advisor he worked on biodiversity & Natura2000, in particular in Ukraine, Russia, Croatia and Turkey. As senior

natural resources advisor he was involved in conservation, rural development and sustainable tourism development in Southern Africa and West Africa (Botswana, Ghana). He advised on park management, did tourism surveys and natural resources assessments.

He was project leader in many projects and has a wide international experience and knowledge of land use and ecology.

Ecological networks: green infrastructure for europe

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Abstract

Several national ecological-network programs were developed in the 1980s in Central and Eastern Europe. They were characterized by an integrated approach to land-use zoning and environmental management within a strong national development-planning system. The concept of ecological networks was officially recognized in Europe as an important approach for biodiversity conservation in the Pan-European Biological and Landscape Diversity Strategy (PEBLDS). The PEBLDS calls for the development of the Pan-European Ecological Network (PEEN).

The Netherlands are too small to maintain their biodiversity in isolation, in particular taking into account the different environmental pressures, due to its large population, traffic, and intensive farming systems. Since 1990 The Netherlands have been working on the development of ecological networks. The term 'green infrastructure' links ecological networks with Greenways. The challenges remain: different regions in Europe battle with processes of landscape change, and biodiversity is under threat. Some of the major challenges for Europe are: 1) How to translate a theoretical concept of ecological networks into a practical concept? 2) do we follow the same conceptual approach in different regions, and what can we learn from what we have achieved? 3) What does climate change mean for the European ecological networks? These challenges demand a vision towards

a cooperation model, an approach to ensure the conservation of biodiversity in a rapidly changing environment.

ANA LUÍSA GOMES

Is actually a researcher at the Portuguese Geographical Institute (IGP). Her research focuses on the development of reserve-selection techniques based on an expert system for modelling the wilderness concept, applied to the territory of Portugal Continental. She graduated (BSc), in 1987 in Environmental Engineer, (FCT/UNL). In 1996, MSc, Environmental/GIS/Multimedia (CNIG).and the she finished her PhD Wilderness/Conservation/ Spatial Modelling, (IGP).

Wildlife corridors: connecting protected areas

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Abstract

The loss, degradation and fragmentation of habitats are the main threats to the survival of many species, with the consequent reduction on biodiversity.

To reverse this biodiversity loss, it is important to guarantee the connection between the protected areas to allow migration of species and genetic exchange between populations in the fragmented habitats. Presently, the emerging climate change could push the species outside of protected areas, this migration could only be possible on a favourable territory.

This project aims the identification of corridors between protected areas enabling the migration of wild species. To achieve this goal, it will be developed and implemented an innovative methodology based on spatial modelling of environmental disturbances resulting from human presence and activities. This methodology will rely on the generation of a geographic surface representative of the difficulty wild species have to get far away from protected areas. This gradient constitutes the basis for

the generation of scenarios with the identification of preferred corridors to cross between the protected areas.

We intend to test this new methodology through the study of the location and movement of the Iberian Wolf. The identification of ecological corridors is considered as an important factor to help the persistence of endangered species, including the Iberian Wolf and, simultaneously, contribute to increase the biodiversity of the region, within and outside the protected areas.

ANDRÉ BOTEQUILHA LEITÃO

Associate Professor at FCT, Universidade Algarve ('04-…); Pós-PhD ('02-'04) and guest researcher ('98-'00), at Landscape Architect and regional Planning Department. (LARP); University of Massachusetts, EUA; PhD ('03) and MSc ('96) at IST, UTL. He has several publications (60) including "Measuring landscapes. A Planner's Handbook". Island Press, Washington D.C., EUA ('06).

Landscape changes in the algarve region, portugal ('85-'07) – diagnosis, prospective and a proposal for a green-infrastructure in the algarve central coast.

André Botequilha-Leitão[1,2], Rúben Cruz [2] & Francisco Aguilera-Benavente [2,3]

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Abstract

In the last two decades Portuguese landscapes are changing, in some parts dramatically, and regional asymmetries have become more profound. The rural landscapes, mostly in the interior, are

subject to either marginalization or intensification. The coastal areas are increasingly dominated by urbanization. Sustainable landscape planning is needed to counteract the negative effects of such transformations, namely landscape fragmentation, and provide alternative directions for future urban expansion.

Hereby we present some results of an ongoing project entitled "Landscape – Algarve", which focus on land use changes in the Algarve region in the last two decades, both in the rural interior areas and in the more urban, coastal areas. Based on Corine Land Cover (1985-2006) and COS Maps (1990-2007) we developed a multi-scale spatial analysis, and build a trend scenario (2025) for one of the most compromised sections of the Algarve coast, mostly rural but rapidly changing. We present the preliminary results of a proposal for a green infra-structure for this section. This proposal aims to contribute for the implementation of the Regional Environmental Structure (ERVPA) at a sub-regional level, to the debate on the actual and potential spatial consequences on coastal landscapes caused by urbanization trends and on subsequent planning strategies.

ISABEL CARVALHO RODRIGUES

Concluiu a licenciatura em agronomia no Instituto Superior de Agronomia, em 1986. Durante o estágio curricular participou no estudo em curso no Laboratório Nacional de Engenharia Civil (LNEC) sobre Reutilização de Águas Residuais na Agricultura. Entre 1986 e 1997 trabalhou no campo da formação profissional e do associativismo juvenil, em Lisboa e Coimbra. Desde 1997 desenvolve actividade no âmbito da agronomia.

Desde 1998 é sócio gerente da empresa agro-florestal Casal do Nascente – Sociedade Agrícola, Lda., onde faz o acompanhamento técnico da actividade agro-florestal desenvolvida nos concelhos de Mafra e de Torres Vedras. Graduação Profissional em Sistemas de Informação Geográfica - ArcView GIS, curso promovido por Geopoint-Geografia, Formação & Marketing, Lda., Lisboa, 2002. Mestrado em Ordenamento do Território e Planeamento Ambiental, da Faculdade de Ciências e Tecnologia da Universidade Nova de Lisboa em 2006, com a dissertação intitulada "Agricultura Peri-urbana e Ecossistemas Mediterrânicos: Palmela e a sua Vocação Agro-florestal".

Periurban Agriculture and Mediterranean Ecosystems: the Azeitão Cheese production system as an example of sustainable multifunctional agriculture in Lisbon Metropolitan Area

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Abstract

For thousands of years the Mediterranean Basin has been associated with nature transformation by men. Agriculture has contributed to shape the Mediterranean landscapes. The human involvement and particularly sustainable agriculture are crucial to achieve Mediterranean nature conservation.

Urban growth has become a problem for nature conservation. Development of big metropolitan areas is producing increasing pollution; erosion; adverse micro-climatic effects; depletion of biodiversity; etc. A system of green areas conceived as a network of greenways is essential to restore the environmental quality.

The urban sprawl of Lisbon Metropolitan Area (LMA) is leading to a loss of landscape diversity and its environmental equilibrium is very weak. Considering the Mediterranean characteristics of LMA, periurban agriculture can play an important role concerning this issue. In a context of metropolitan sprawl, the agriculture and forestry of Palmela, a municipality of LMA, was the chosen study case of problems of the Mediterranean landscape preservation. The Cheese of Azeitão production system was presented as an example of the agriculture multifunctionality in a suburban area, which is not only useful for nature conservation, but also as far as economical and social functions are concerned.

JOSÉ DA CRUZ LOPES

Born and residing in the city of Viana do Castelo. Geographer (Universidade do Porto, 1980); member nro: 162 of the Associação Portuguesa de Geografos (Portuguese Association

of Geographers). Teacher of Geography and Human Ecology in the Instituto Politecnico de Viana do Castelo (IPVC) since 1993. Master and PhD in Human Ecology by the Universidade de Evora (1992) and by the Universidade Nova de Lisboa (2001), respectively. Graduated in Environmental Politics by the Instituto Nacional de Administration, Lisbon (2006).

Director/Coordinator of the Course of Design of Environments in the Escola Superior de Tecnologia e Gestão of IPVC. Author of several works in the context s of Regional and Local Geography, Environment and Human Ecology, Tourism and Eco-development and of articles published in scientific reviews of the area of his professional activity. Also an associated investigator of Centro de Estudos da População , Economia e Sociedade (CEPESE), integrated in the Universidade do Porto.

Coordinator of the edition of the reviews of diffusion and environmental sensitization and of design for volunteers, FOLHAS d'A EIRA (four numbers) and ODNI (two numbers), respectively.

In 1993- 94 concluded the course of Auditors of National Defense. Since August , 2005, teacher –coordinator of the disciplinary group of Social and Human Sciences of ESTG-IPVC.

Rural areas, greenways design and biodiversity resources. The Alto Minho case study

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Abstract

The Alto Minho is a sub region of Minho, with an ecogeography characterized by deep valleys and high mountains. Over the last two centuries, the mountains have gradually been developed as a resource for forestry and hydroelectricity, and new roads have been built in the valleys, which have also been urbanized. This has resulted in the loss of much rural space. There remain pockets

of countryside within the valleys, but urban expansion has led to the gradual reduction and increasing isolation of rural areas.

For the past fifty years, Alto Minho has been counted as part of the Northwest Iberian Mountains. Some parts have been protected and have benefited from the European Natura 2000 Network, which has enabled the implementation of a zoning system and provided important public resources; this has helped to support biodiversity.

At present the protected area and the natural sites that is Natura 2000 is not satisfactorily connected to the other pockets of rural environment. The purpose of this paper is to discuss the extent to which it might be possible to link these areas by means of "greenways". The paper will also attempt to identify appropriate greenway locations and other question: what territorial contiguity and connection can be established between those territories under the agro-forestry mosaic that shapes our pastoral countryside in Alto Minho ?

SESSÃO 3 -GREENWAYS AND SOFT MOBILITY

MIGUEL PEREIRA (CHAIRMAN)

Arquitecto Paisagista pela Universidade de Évora desde 1997, completou ainda esse ano uma pós-graduação em Processos de Análise e Caracterização da Paisagem e Ordenamento à Escala Regional e Local pela Wageningen Agricultural University, na Holanda.

Tendo sido responsável por inúmeros estudos e projectos de arquitectura paisagista desde essa data, foi colaborador da empresa Biodesign desde 1998, e Director de Produção da empresa Galparque a partir de 2001.

Fundou a Land Design em 2005, empresa de arquitectura paisagista do universo FOCUS group, um conjunto integrado de empresas especializadas nas áreas da arquitectura, do planeamento e urbanismo, da engenharia civil, da engenharia de instalações técnicas, paisagismo, interiores e decoração, e comunicação e imagem.

Projectou e coordenou o desenvolvimento de dezenas de estudos e projectos nas mais diversas escalas e contextos, entre os quais se destacam o Longevity Wellness Resort em Monchique, as Ecopistas do Dão, Tâmega e Vouga, o Parque Ribeirinho de Faro, o edifício de escritórios do Pavilhão Virtual, no Parque das Nações, o novo Estádio do Varzim Sport Club, e inúmeros conjuntos comerciais para as cadeias portuguesas das marcas Carrefour e Intermarché.

MARTIN VAN DEN TOORN (KEYNOTE SPEAKER)

Dutch Landscape architect who studied landscape architecture in Wageningen University (Holland) and in Berkeley, University of California where he did his Masters in Landscape Architecture.

He have been teaching and doing research in landscape architecture at the Dept. of Landscape architecture at Wageningen University for 10 years till 2001. In 2001 I was asked at the Faculty of Architecture at Delft University to teach in the Master's and to participate in extending international research in landscape architecture. Since 2006 he is teaching a course on 'Theory and practice in landscape architecture' in the Master's Program at the École Nationale Supérieure de Paysage, the national school for landscape architecture in France. The main focus of his research at the moment is on 'theory and practice of landscape architecture' next to 'visualisation' and 'design education'.

Regional planning for greenways

Abstract

In this paper we will focus on the role of bicycle tracks, footpaths, boating itineraries based on case-studies from Holland. The point we want to put forward is that the concept of greenways needs to be extended into a broader context of society. How can greenways as ecological networks be integrated into the design of everyday landscapes? We will extend the concept of greenways to 'infralandscapes'; landscapes that are directly and indirectly related to infrastructures of any kind.

In the first part we will pay attention to the history, terminology and definition of greenways into a design context. In the second part we will elaborate on infralandscapes; how can infralandscapes be dealt with as object of planning and design at the regional level? In the third part we will illustrate this in a number of Dutch case-studies on bicycle tracks, footpaths and boating itineraries.

The conclusion is first of all that greenways should also be looked upon from viewpoints like use and society. This means that health and well-being will be the overall goals for planning and design. These goals can be achieved by planning and design at different levels of intervention; strategy, structure and materialisation of form. Finally landscape architecture should first of all focus on the creation of comfort, well-being and health by improving the design quality on the basis of research. Three types of research can be distinguished to enable the improvement of design quality —

apart from theory development and methodology — precedent analysis, research on evidence, post-design evaluation. The results of this research eventually will lead to generic design knowledge on use and performance. Generic design knowledge will enable designers to spend more time and effort on intuition, innovation and design quality.

SOLEDAD MORENO

Is a mobility Consultant, Project Manager, Sales and Strategic Planning, Technical and Finance Planning for Sustainable Transportation and Bike Sharing Programs. Over the past 10 years she has utilized management expertise in building small business units. She a track record of identifying new opportunities, introducing new services and systems, reducing costs, and streamlining operations in a diverse range of situations. From 2008 to present she has developed functions has Project Manager Principal at Sustainable Mobility Solutions and International Partner at Public Safety Cycling.

She has a Logistics Degree at IUA (Instituto Universitario Aeronáutico), Fine Arts Undergraduate (M.Malharro School - 1996), Dance Graduate (Mar del Plata Municipal Dance School - 1991). Her Continuing education: Event Management (1999) / Small Business Administration SBA (Instituto Movilizador de Fondos Cooperativos, Argentina, 2001). Selling Skills (Auroch Capital Systems, 2006)

Bike share systems

Abstract

Can a bike sharing system transform our cities? How? What is the potential of these services? What are the opportunities that we are missing?

This presentation attempts to contextualize these systems in order to project them into the future of each city and allow us to answer these questions

JOAN VALLS

He is a Junior Consultant in Assessoria d'Infraestructures i Mobilitat at aimsl where he has developed some work in Mobility Master Plan for some Spanish municipalities. He is a Mobility Consultant for the Urbanism Councillorship at Zaragoza Municipality and also Responsibilities at PTP Association (Pedestrian and Cyclist Mobility Section). He is now president of the Bicicleta Club de Catalunya.

He has developed a master in Master on Mobility Planning and Management at UPC. H has a degree in Biology studies by UAB and a Bachelor in IT Studies at Gesem Academy.

Cycle Infrastructure Design

JOSÉ CARLOS MOTA

Spatial Planner (1990). Master in Urban Planning and Project from University of Oporto (1990). Doing PhD Thesis about 'Collaborativa Spatial Planning Methodologies'

Lecturer and Researcher at the University of Aveiro - Department of Social, Political and Territorial Sciences.

Coordinator of 'Cycling Murtosa' Project (http://murtosaciclavel.blogs.sapo.pt/); Member of advisory group of 'CICLORIA' Project (http://cicloria.org.pt/), a 1 million euros project financed by national and European funds; Member of a university taskforce group to promote a National Cycling Mobility Platform in Portugal; Member of several civic/scientific informal task-forces: Ibero-american network 'Communities, Places & Cultural and Creative Economy', 'Cidades pela Retoma' / 'No economic recovery without cities & citizens', Amigosd'Avenida civic group from Aveiro. Coordinator of National Youth Contest 'Creative Cities' (2007-2008). President of the Portuguese National Spatial Planning Association (1996-1998).Developed consultancy to several local authorities regarding spatial planning (1990-2003).

CICLORIA Project – a new approach to Leisure Cycling

Abstract

The CICLORIA project, promoted by the municipalities of Murtosa, Ovar and Estarreja and the University of Aveiro, under a national programme supported by European funds - QREN/POVT – Urban Development Innovative Actions – Urban Mobility, aims to create the conditions to promote and develop leisure cycling mobility in the Aveiro Lagoon Region.

The approach proposed stressed the need to articulate different scientific disciplines (land use planning, tourism, biology and geology, environment, education, culture, design and communication, telecommunications, mechanic and civil engineering and health) to define an adequate and articulated framework of initiatives that aims to:

- *promote the use of the bicycle in the region, specially in a leisure and tourism perspective, but also in a promotion of healthy life styles;*
- *organize and structure the physical elements of the territory with special leisure and tourism amenities;*
- *value natural, cultural and patrimonial resources and the scientific and empirical knowledge that the region (institutions and people) have produced;*
- *mobilize the technological knowledge (specially mobile technology) to help innovative ways of enjoyment of the territory resources;*
- *promote the development of R&D linked to the bicycle, specially in the technology, design, materials and energy;*
- *stimulate community involvement, specially the educative community and social and economic stakeholders in the design and implementation of the project.*

The paper discusses the process of designing and implementation of the project developed in the last three years and suggests some key elements for future action.

DUARTE MATA

Has been working mostly connected to bicycles planning and project design and ecological structure detailing.

For Landscape Architecture Research Centre in ISA (CEAP-ISA) between 2000-2001 and 2003 and 2007 has developed several work on Cycle Network methodologies over the concepts of Ecological Structure and Greenways Design, detailed on areas such as Lisbon, Almada and Sintra, as well as Project Director for "Rail-to-Trail" projects such as "Chaves-Vila Real" or "Vouga River Railway".

At a same time has been dedicated to Landscape Project Design, first on Private Companies and strongly after 2005 as Consultant, focusing his activity on issues as Landscape Sustainability Projects or Integrated Public Space solutions.

Between 2007 and 2009 and after 2010 has been working on Lisbon Municipality Environmental and Green Areas Department as adviser for "Lisbon Green Plan" issues as well as for Lisbon Cycle Network implementation process.

Participated on several Conferences, Workshops and Seminars and written several papers and articles on techical and general magazines.

Bicycle and greenways in lisbon: strong environmental tools to make change happen.

Abstract

There are many strategies to improve cycling in cities, but a few to start it from the beginning. Lisbon faces this last situation, with a question:

How to implement bicycles as commuting in a city that lost bicycle tradition during part of 20th Century?

Probably many answers could be given, but economical crisis has accented the necessity to emphasis multifunctional solutions, on investments that solve at the same time different problems. While bicycle needs to start from the "zero level", which means to create attractive and legible infrastructure, able to become a new "system" over current structures, ecological connections needs to regenerate in order to guarantee continuity, resilience, functionality and attractiveness in to disperse green areas and, at the same time, recovering more sustainable typologies to urban contexts, that contributes also to reducing public expenditure on garden and parks maintenance.

SESSÃO 4 - GREENWAYS AND URBAN ENVIRONMENT

LUÍS PAULO RIBEIRO (CHAIRMAN)

Licenciado em Arquitectura Paisagista pelo Institutio Superior de Agronomia, Universidade Técnica de Lisboa em 1987. Possuí um mestrado pela Universidade Técnica de Lisboa em 1992 e Doutoramento pela Universidade de Massachussetts em 1997. É sócio Fundador da Topiaris.

ALESSANDRO TOCCOLINI (KEYNOTE SPEAKER)

Full Professor of Landscape planning and Landscape design at the Univesity of Milan, Faculty of Agriculture. Director of the Department of Agricultural Engineering. Professor at the Politecnico of Milan. Author of more than 100 reports on the following topics: rural planning methods, GIS for rural environment, landscape design, rural buildings. Tutor of more than 70 Graduate dissertations. Responsible of a research unit in the CNR-RAISA project (1991-1995); responsible of several research projects of the University of Milan. Responsible of the GIS-CAD laboratory of the Department of Agricultural Engineering - University of Milan. Prof. Toccolini has passed study periods in several foreign Universities, has presented papers in many Conferences in Italy and abroad, has taken lectures and seminars at the University of Amherst e Miami(USA), Godollo (Hungary), Nitra (Slovakia), Madurai (India). Expert of the Public works ministry in the field of landscape planning. Member of the Accademia dei Georgofili, Member of the Italian association of agricultural engineering (AIIA), National institute of urbanism (INU), Italian society of landscape architects (AIAPP), American Society of Landscape Architects (ASLA)

Greenway planning and design in Milano metropolitan area

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Greenways in Italy are defined as "System of paths dedicated to an easy and non-motorized mobility, which is able to connect people with landscape resources (natural, agricultural, historical and cultural) and town services, both in urban and rural areas". (AIG, 1999)

Abstract

The Italian greenway movement begins in 1998 when the Italian Greenways Association was founded. The purposes are:

- *connecting and implementing the initiatives in progress in Italy about the creation of greenways*
- *promoting initiatives in order to spread the interest in the creation, improvement and protection of greenways*
- *promoting rural development through a sustainable tourism based on a greenway network*
- *encouraging a stronger relationship between population and its territory through the protection and reuse of local historical and cultural resources.*
- *The paper presents some experiences in urban context:*
- *Milano urban grenways plan*
- *Lake of Como greenway (tourist area near Milan)*
- *Martesana irrigation canal (east Milan rural area*

MANUELA RAPOSO MAGALHÃES

Licenciada e Doutorada em 1997, em Arquitectura Paisagista pelo Instituto Superior de Agronomia (ISA) da Universidade Técnica de Lisboa; Técnica Superior do Fundo de Fomento da Habitação, Serviço de Estudos do Ambiente e Direcção Geral de Ordenamento do Território (1971-1988); Adjunta do Secretário de Estado do Ambiente (77 e 78); Chefe da Divisão de Estudos de Ordenamento da Direcção Geral do Ordenamento (82 e 83); Assistente no curso de Arquitectura Paisagista do ISA (1988 e Fev/97); Professora Auxiliar no curso de Arquitectura Paisagista do ISA (regente das cadeiras de Ordenamento do Território I, II e

III) – (Fev/97 a 2011); Regente da cadeira de Planeamento Biofísico da licenciatura em Engenharia do Ambiente do Instituto Superior Técnico (1997-2009); Presidente da Comissão de Licenciatura de Arquitectura Paisagista do ISA-UTL (2001-2007); Coordenadora da Secção Autónoma de Arquitectura Paisagista do ISA-UTL (2001-2003); Membro do Conselho Científico do Instituto Superior de Agronomia; Fundadora e Coordenadora do Centro de Estudos de Arquitectura Paisagista "Prof. Caldeira Cabral" (desde 2001); Coordenadora de vários Projectos de Investigação da Fundação de Ciência e Tecnologia.

Ecological infrastructure hás na instrument of urban fringe revalorization

Abstract

Os conceitos de Corredor Verde, Greenway, Estrutura Ecológica, Green Infrastructure

A Estrutura Ecológica a nível Nacional, Regional, Municipal e Local e o seu papel na reestruturação urbana e peri-urbana.

Metodologia da sua delimitação e aplicação ao Concelho de Sintra

PAULA SANTANA

Paula Santana received her PhD in Human Geography from the University of Coimbra, and is currently a Professor in-cathedra of Geography and a Researcher at the University of Coimbra, at the Geography and Planning Centre Studies (CEGOT).

She is broadly interested in urban social geography, but her research centres on determinants of health, health behaviour, environmental and place effects on health. She also researches health inequalities and immigrant health and health service utilization. In teaching, she combines aspects of health geography, urban planning, and environmental risk factors.

Paula coordinates several national projects (funded by Science and Technology Foundation and Health Minestry) and parti-

cipate in several international projects (funded by European Union, European Science Foundation, Medical Research Council, the United Nations Environmental Program, the Social Sciencesand Humanities Research Council of Canada and the Instituto de Cooperação Científica e Tecnológica Internacional.

In the last years, she won three important prizes: the Bial Prize for Clinic Health 2006, a mension of honour in the Bial Prize for Clinic Health 2008 and the Portuguese Healthy Cities Network Scientific Recognition 2008.

Is this urban green space good to our health? Evaluation method

Paula Santana[1], Cláudia Costa[2] & Adriana Loureiro,[2]
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[2] Geography Department, University of Coimbra, 3004-530 Coimbra.

Abstract

Walkable Urban Green Spaces (WUGS) have both direct and indirect effects on health, in the sense that they are associated not only with good health status amongst local residents, but also with improved environment quality. However, in the implementation of a new WUGS those effects are not taken into account.

This paper aims to contribute towards a clarification of that relationship and its impact upon the population's health in the Municipality of Amadora.

The results of the study suggest that: 1) the offer of WUGS in the vicinity of residential neighbourhoods increases the contact between different population groups and encourages the practice of physical exercise, walking and recreational activities, thereby helping to improve the health of people living nearby; 2) there are strong interrelationships between levels of physical activity and emotional state and self-accessed health state for those who use the WUGS.

It is hoped that this paper encourages further work on the subject, a task witch clearly requires an interdisciplinary approach.

CATARINA CONDE

É licenciada em Arquitectura Paisagista pela Universidade Técnica de Lisboa / Instituto Superior de Agronomia em Junho de 2003. Desde Janeiro de 2003 que desempenha funções na Câmara Municipal de Vila Franca de Xira. Encontra-se neste momento a frequentar o mestrado em Reabilitação Urbana e Arquitectónica (pré-bolonha) pelo ISCTE – Instituto Universitário de Lisboa, 2010. Neste momento desempenha funções de Chefe de Divisão de Quintas Municipais e Espaços de Lazer e Coordenadora da Divisão de Ambiente e Sustentabilidade.

Percurso das linhas de torres: um exemplo de regeneração de percursos culturais em vila franca de xira

Abstract

Nas últimas décadas, o crescimento desregrado das cidades e das áreas industriais deu origem a grandes modificações da paisagem conduzindo, frequentemente, à destruição de recursos e, por conseguinte, a uma diminuição da qualidade paisagística desses locais. Neste sentido, o planeamento de futuras actividades no território deve ter por base conceitos que promovam a sustentabilidade das paisagens e se privilegiem um desenvolvimento que permita às gerações futuras o acesso a situações de bem-estar, sem com isso ultrapassar a capacidade de carga que a paisagem apresenta, face às utilizações que lhe são impostas.

Deste modo, a implementação de estratégias para a regeneração de percursos e do património a eles associados, quer seja na vertente ecológica, ambiental, cultural ou histórica, possibilita efectuar ligações entre os diferentes espaços, originando uma dinâmica de fluxos e contribuindo para a criação de imagens visuais, sensoriais e cognitivas e, consequentemente, para o enriquecimento do conhecimento do território em que o Homem se insere.

Com o assinalar dos 200 anos da 3ª Invasão Francesa e, consequentemente, com o da construção da 1ª Linha Defensiva, no Concelho de Vila Franca de Xira, a implantação de um percurso interpretativo, nesta região, constituiu um importante incentivo à conservação e regeneração deste património cultural e ambiental.

A implementação deste corredor verde contribui não só para a reabilitação faseada das inúmeras construções militares (fortes, redutos, baterias, etc.), há décadas ao abandono e em avançado estado de degradação, como também permite a salvaguarda das características ambientais e ecológicas da sua envolvente e potencia a ligação entre a área urbana e a paisagem rural interior do Concelho de Vila Franca de Xira.

A regeneração deste percurso possibilita que o mesmo desempenhe um importante papel, junto da comunidade local, ao promover um desenvolvimento sustentável desta região, criando oportunidades de recreio e lazer, estimulando a aprendizagem directa da história e das estruturas biológicas e geológicas locais e favorecendo o desenvolvimento do turismo da região.

ALEXANDRE LISBOA

Licencia-se em Arquitectura Paisagista, Universidade de Évora, em Janeiro de 1996. Em finais de 1994 inicia estágio curricular na CM Oeiras, continuando esta colaboração até entrar para os quadros desta autarquia. Em 1994 inicia actividade profissional em colaboração com colegas, na área do Projecto de Arquitectura Paisagista, desenvolvendo perto de uma centena de estudos e projectos, dos quais se destaca um segundo lugar no Prémio Nacional de Arquitectura Paisagista Urba Verde. Em Abril de 2002 inicia funções, deixando a sua actividade liberal, como chefe da Divisão de Espaços Verdes da CMO, posição que ainda ocupa. Esta actividade leva-o a dirigir mais de 200 funcionários, entre os quais, cerca de duas dezenas de técnicos superiores nas áreas das ciências agrárias (Arqtos. Pais. e Eng Agrónomos). No desenvolvimento desta missão podem-se destacar os cerca de 300 estudos e projectos de AP concebidos e/ou coordenados por si, bem como os trabalhos pioneiros ao nível da gestão das manutenções de espaços verdes urbanos, na requalificação urbana, nos espaços de jogo e recreio, na gestão da água, na arborização urbana, nos parques caninos, nos jardins sustentáveis, no vinho de Carcavelos e, naturalmente nos corredores verdes. Actualmente encontra-se a exercer as funções de Chefe de Divisão de Espaços Verdes da CMO, desenvolvendo os temas já referidos.

The greeenways as a strategy for the urban development in the oeiras municipality

Abstract

Os Corredores Verdes como estratégia de desenvolvimento urbano no Concelho de Oeiras, é um desafio e uma oportunidade para um desenvolvimento equilibrado do território, potenciando a utilização dos espaços ditos "sobrantes" como estrutura consolidadora do crescimento urbano, tendo como Visão o reequilíbrio do Habitat Humano.

JOSÉ MATOS SILVA (CHAIRMAN)

José Matos Silva is full professor of Hydraulics and Environment and Energy at the Catholic University of Lisboa, at the Engineering Department. His main fields of research are currently Hydraulics, River Hydraulics, Soil Bioengineering, and Sustainable Development. On these topics he wrote books and produced applications for regional, national, and international authorities.

He is president of APENA, the Portuguese Association of Soil Bioengineering, and president of REAL 21, the Association for the Protection of Real River.

SERGIO MALCEVSCHI (KEYNOTE SPEAKER)

Sergio Malcevschi is professor of Environmental Evaluation at the University of Pavia, at the Department of Earth and Environmental Sciences. His main fields of research are currently Environmental Impact Assessment of plans and projects, and the application of ecological networks as programming tool. On these topics he wrote books and produced applications for local and regional authorities.

He is scientific director of the journal "Valutazione Ambientale", is past president of the Associazione Analisti Ambientali, and participates in the executive council of CATAP (Coordination of technical and scientific Associations for the Environment and the Landscape).

Greenways and multifunctional ecosystem planning in the italian experience

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Abstract

The use of following keywords is analyzed, both in English and Italian versions: "ecological networks", "ecological corridors", "green infrastructures", "greenways". Their role is emphasized in the government and governance of anthropogenic driving forces.

Through examples at different administration levels, five different ways are presented in which ecological networks have been considered in Italian planning: faunal species-specific networks, networks of protected areas, structural networks of natural areas, enjoyed landscapes networks, polyvalent ecological networks.

General contents and the main actions of Lombardy's RER (Rete Ecologica Regionale) are presented, which currently represents the most advanced multi-purpose regional network in Italy.

HANS PETER RAUCH

Hans Peter Rauch is Consulting engineer landscape planning and Senior scientist at University of Viena, at the Institute of Soil Bioengineering an Landscape Construction. His main fields of research are currently: Development of soil bioengineering techniques, interaction of soil bioengineering systems and natural processes, modelling and life cycle assessment of soil bioengineering systems, hydraulic impact and maintenance of riparian vegetation.

Current projects are:

- Application of soil bioengineering measures in ecological river engineering in the district of Huairou (Province Beijing)
- Woody plants on dikes and levees;
- Cause analysis and analysis of the functional chains of soil erosion increases between the high mountain and the subalpine belt;
- Influence of selected parameters of biomass development of Salix purpurea;
- Soil bioengineering techniques for soil protection in the area of the Amazons (Brazil).

Learning soil bioengineering lessons from experiences in austria

Hans Peter Rauch[1],

[1] University of Natural Resources and Life Sciences, Vienna, Department of Civil Engineering and Natural Hazards, Institute of Soil Bioengineering and Landscape Construction
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Abstract

Soil bioengineering pursues the same objectives as conventional civil engineering structures. A really essential distinction is use of different construction materials. Soil bioengineering solutions are based on the application of living plants and other additives as construction materials to achieve technical as well as ecological oriented and natural landscape solutions. This technique is often used as a part of an implementation strategy in a modern holistic river engineering approach. The results are living "soil bioengineering systems" providing technical as well as ecological and socioeconomic function. In the past the performance of the work was mostly based on local experience, whereas nowadays the application of soil bioengineering is designed on engineering principles. All soil bioengineering measures have to be evaluated according to hydraulic and morphological impacts. The paper highlights essential aspects for successful applications, assesses soil bioengineering techniques according to relevant decision criteria and analysis of strengths and weaknesses of implemented projects to contribute to a structurally engineered based standardization development of soil bioengineering techniques.

RUI CORTES

Professor Catedrático do Departamento de Ciências Florestais e Arquitectura Paisagista da Universidade de Trás-os-Montes e Alto Douro (UTAD), onde actualmente lecciona.

Formou-se em Engenharia Florestal (1978) e Doutorou-se (1989) e fez provas de Agregação (2006) em Ciências Florestais na UTAD,

Desde o início da sua actividade profissional tem combinado a docência com a investigação nas áreas de Ecologia de ecossistemas aquáticos e monitorização ecológica da qualidade da água. Neste momento desenvolve os planos de monitorização dos recursos hídricos da Região Hidrográfica do Norte.

Também tem desenvolvido projectos ao nível do Ordenamento de Bacias Hidrográficas, Plano Nacional da Água e requalificação de cursos de água, em particular com aplicação de técnicas de Engenharia Natural.

Actualmente é membro do Conselho Nacional da Água e do Conselho de Região Hidrográfica do Norte e consultor do INAG. Na UTAD é vice-presidente do Conselho Científico da ECAV e do Centro de Investigação em Tecnologias Agro-Ambientais e Biológicas (CITAB).

The importance of greenways in river restoration: multiple approaches for intervention

Abstract

The ultimate goal in all the projects of river restoration is the creation of a layer of riparian vegetation. Riparia is composed of multiple patches linked by transference of water, nutrients and energy. This layer assures then distinctive ecological functions like the establishment of longitudinal and transversal connectivity but creates also the habitat where is located most of the diversity in aquatic systems. Besides, in disturbed catchments, riparian zones act as buffers against non-point pollution from adjacent upland runoff and it is the most effective system to assure a convenient protection against fluvial erosion. However, the creation of riparian zones in highly disturbed rivers is a long way involving several steps, where the application of soil engineering techniques is often essential. This presentation intends to analyze, from different study cases located in various geographical areas and impacted by different stressors, the role of these green corridors and the procedures to achieve the improvement of the ecological functions of running waters.

CARLO BIFULCO

Researcher at "Centro de Ecologia Aplicada Prof. Baeta Neves", ISA-UTL, Lisbon. Ph.D. student on Forestry Engineering and Natural Resources Management, his main skill is on Soil Bioengineering.

Executive member of Astroni natural reserve and Director of Vesuvius national park (1997-2005); he was in charge of soil bioengineering works, amounting 3.000.000 euro.

Manager of international cooperation projects (2000-2010) in Italy, Portugal, Morocco, Armenia, and Romania, about: soil bioengineering, protected area management, environmental European legal system, and park staff training.

Visiting lecturer on soil bioengineering, he taught in Italian and Portuguese universities and others institutions. Author/editor of three books and more than forty papers and communications in reviews, workshops, and national or international congresses.

The book Interventi di ingegneria naturalistica nel Parco nazionale del Vesuvio is available at http://www.vesuviopark.it/pnv/comunicazione/libriPage.asp?idnews=62

WWF-Campania Regional Chairman (1992). Member of Legambiente Scientific Committee (1998-2005). Member (qualified lecturer, from 2005) of the Italian Soil Bioengineering Association (AIPIN). Member of the Portuguese Soil Bioengineering Association (APENA). Member of the Naples Engineers´ Register.

Soil bioengineering and slopes: accessibility to the vesuvius national park

Carlo Bifulco1
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Abstract

One of the most famous volcanoes of the world, the Vesuvius, where in the XIX century were established volcanology and seismic science, since 1987 is a national park, famous also for its nature, forests, and organic agriculture.

That protected area is an island surrounded by railways, highways, thirteen municipalities, seven hundred thousand people. That volcano is named the "Mountain" by the people that forget the hazard to live here. All those infrastructures around the volcano were converted in an opportunity to have in every municipality a park's gate, its own access to the national park. Every settlement could improve belonging feelings to the volcano, knowledge of it, and sustainable tourism. Pedestrian paths to the top of the volcano and around it were built, or restored using abandoned trails. A path's network was planned, linking towns, climbing up and down the mountain.

The most important problems to solve interesting forgotten and old trails, and new paths were recover and prevention of erosion and landslides. For these aims soil bioengineering techniques and models were copied from the Austrian practices, using trees and shrubs from Vesuvius flora. The cuttings were planted horizontally in the ground, in the winter, as the models recommended, but roots, branches and leaves, grown in the spring didn't pass beyond the summer. The Mediterranean aridity and the porous soil of the Vesuvius slopes, far from streams or any other water, killed the cutting's shoots.

To make application of soil bioengineering on Mediterranean slopes possible far from water, the Austrian models were improved using rooted plants instead of the cuttings, putting the plant, with its trunk and its roots underground and horizontally. Not all the plants are good for that use, usually a plant with the trunk under the soil decline and die. A first investigation was about the species adapted to that purpose. Fraxinus ornus, Coronilla emerus, Colutea arborescens and Ligustrum vulgare gave the best results.

With the soil bioengineering in this way adapted to the Mediterranean climate conditions, fifty-four km of trails were achieved, landscape was restored, erosion was controlled and landslide risks

were reduced. With the new models works amounting to three millions of euro were carried out. Those new models also gave the possibility of working beyond the reliable winter months; moreover that experience demonstrated the importance and the prevalence of the human work over the other cost factors to achieve nature recovering.

Vesuvius practices were a model for the entire region: the regional government issued a regulation about soil bioengineering works, based on the costs published on the Vesuvius national park publications.

A second phase of investigation was funded taking the opportunity of Mediterranean cooperation programs, where soil bioengineering practices were exchanged between partners and thoroughly examined. Some works were destroyed and after rebuilt to measure the real growth of the roots along the trunk of the plant, put under the soil. Special paths for blind people and disabled persons using wheel-chair were performed.

Now a similar investigation is ongoing in Portugal with some species of the Portuguese flora, to apply also to arid slopes of Portugal the Mediterranean soil bioengineering model.

ANDRÉ FABIÃO

Licenciado em Engenharia Florestal pela Escola Superior Agrária do Instituto Politécnico de Castelo Branco. Mestre em Gestão e Conservação de Recursos Naturais pelo Instituto Superior de Agronomia da Universidade Técnica de Lisboa e pela Universidade de Évora.

Desde 2003 que exerce funções de Bolseiro Técnico de Investigação no Instituto Superior de Agronomia, tendo estado ligado a vários projecto de investigação e protocolos de colaboração em diferentes áreas. A sua actividade técnica/científica tem incidido principalmente na temática da gestão, conservação e restauro de áreas ribeirinhas, com especial ênfase na produção em viveiro e instalação em local definitivo de espécies lenhosas ripícolas autóctones. No âmbito dos projectos Ripidurable (Interreg IIIC) e Ricover (Interreg IVB Sudoe), colaborou na organização e exe-

cução de Cursos Práticos de Engenharia Natural, incluindo na elaboração de conteúdos formativos teóricos, com o objectivo de disseminar a aplicação deste tipo de técnicas no restauro fluvial. Também tem desenvolvido actividades na área da aerobiologia e da gestão do arvoredo urbano.

É autor ou co-autor de diversos artigos publicados em revistas nacionais e internacionais, bem como de vários capítulos de livros.

Soil bioengineering case studies on southern portugal rivers

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Abstract

Two soil bioengineering workshops were held within the RIPIDURABLE (INTERREG IIIC) and RICOVER (INTERREG IVB SUDOE) Projects, aiming to demonstrate this type of methodologies to potential stakeholders. The first one took place in Alpiarça (Tagus river basin) in April 2008 and the second took place near Querença (Algarve) in March 2011. Several soil bioengineering techniques were used on both locations, including brush mattresses, log cribwall (only in Alpiarça), geotextile rolls (planted and non-planted), live fascines, wattle fences, live stakes and others. In Alpiarça there were some problems with vandalism (which caused the destruction of the brush mattress) and the majority of the live willow stakes in the log cribwall did not survive the first summer. Nevertheless, the remaining techniques were successful and gave a significant contribution for margin stabilization and landscape improvement. At present, the Querença works are still being accessed, and are being evaluated for survival after the first summer.

JOÃO CARDOSO DE MELO

Conclui pela Universidade de Évora a licenciatura em Arquitectura Paisagista no ano de 1999. Participa em workshops ao abrigo do programa ELEE em Dublin, Irlanda e Leeds, Reino Unido. Ingressa na Lusinfor empresa de construção de espaços verdes. No ano de 2000 entra no atelier ABAP, onde desenvolve projectos de Arquitectura Paisagista a várias escalas. No ano de 2006 abre o seu atelier onde desenvolve também projectos de Arquitectura Paisagista. Executa ainda consultoria, acompanhamento e fiscalização de obras.

No ano de 2006 é convidado a participar na constituição da agência municipal do ambiente da Câmara Municipal de Cascais, Cascais Natura, onde se encontra até hoje. Desenvolveu projectos de conservação e recuperação de espaços naturais em particular na área do Parque natural Sintra-Cascais. Co-autor do projecto "eco-cabana", galardoado com o prémio "Ideias Verdes". Em 2008 recebe em parceria o prémio "Best Practice Award" promovido pela Countdown 2010 no âmbito do projecto pan-europeu promovido pela IUCN que visa deter a perda de biodiversidade. Coordena o estudo para a Estrutura Ecológica Municipal de Cascais e desenvolve em co-autoria a "Estratégia de Visitação do Parque Natural Sintra-Cascais" que submete a candidatura ao QREN e PIT, aprovada em 2009. Coordenou ainda a proposta para a Estrutura Ecológica do Concelho de Cascais e o desenvolvimento de uma rede de Parques Urbanos de Cascais, entre outros projectos.

Ecological restauration in the cresmina dune

O sistema dunar Guincho-Cresmina, por ser dinâmico e activo, apresenta um delicado equilíbrio ecológico, que, pelos seus valores naturais e características específicas, exige medidas de recuperação e salvaguarda. É notório que o uso desregrado e a ocupação com infraestruturas levou à modificação da dinâmica deste sistema e à sua degradação. As intervenções efectuadas visam essencialmente controlar os impactos no cordão dunar, nomeadamente através da instalação de estruturas biofísicas na frente da duna no sentido de reter areias ena plantação de espécies características que permitem acelerar o processo de formação e estabilização dunar. Associado a estas acções de gestão de habitat colocaram-se vedações a delimitar o local de

intervenção e instalou-se um circuito de passadiços sobrelevados que permitem condicionar o acesso ao local limitado aos trilhos de visita. O núcleo interpretativo que pretende apoiar a visitação e interpretação da dinâmica dunar está associado à rede de percursos pedonais.